



Undergraduate Student Catalog

2011 - 2012



جامعة قطر
QATAR UNIVERSITY

2011-2012 UNDERGRADUATE CATALOG
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A MESSAGE FROM THE PRESIDENT

Welcome to Qatar University! It gives me great pleasure to introduce this document which showcases the exciting program offerings available to students. Using this catalog, you will find a wealth of useful information for guidance as you chart your course of study.

The contents of this document highlight the central pillars of Qatar University's mission, namely the provision of high-quality education and the pursuit of an active role in the development of Qatari society. The courses described here have been designed, reviewed and assessed to meet the highest educational standards, with a strong focus on the knowledge- and skill-bases needed for a graduate to be competitive in today's labor market or in higher education pursuits. The broad range of programs, many of which have attained independent external accreditation from recognized professional associations, has been crafted with a view to cater to the needs of the labor market and the country's ambitious development course. Over sixty specializations from seven colleges provide a rich array of relevant, useful, and interesting choices. Furthermore, Qatar University boasts a diverse community of faculty and students from the region and beyond, all working together in an atmosphere of tolerance, respect, and common purpose.

University life offers much more than a path towards a degree. Rather, there is a rich variety of activities, student life programs, and services, of which I hope you will take advantage. Together, the academic and student life teams work to support you and to give you, the student, a comprehensive and well-rounded experience at QU as a first step in the process of life-long learning and growth.

I hope you will take full advantage of this catalog to learn all about the University and its programs and services, which are designed to serve both academic and extracurricular interests and plans.

We are all here to help on your journey, and I wish you a rich and rewarding experience ahead.

Sheikha Abdulla Al Misnad

President, Qatar University

UNIVERSITY LEADERSHIP

The University Leadership comprises of the Board of Regents as the premier authority along with the President and the five Vice Presidents responsible for the different domains of higher education at the university. A brief description of each is elaborated below.

BOARD OF REGENTS

The Board of Regents is the highest level of authority at Qatar University, overseeing all its policies and operations. The Board is responsible for approving the university's annual budget and any major changes in university policy, degree programs and other administrative and logistic arrangements.

H.H. the Heir Apparent Sheikh Tamim Bin Hamad Al Thani is the Chairperson of the Board, providing leadership and guidance to both the Board members and to the organization as a whole.

H.E. Ahmed Bin Abdullah Al-Mahmoud, Minister of State for Foreign Affairs, is the Board's Vice Chair.

BOARD MEMBERS

H.H. Sheikh Tamim Bin Hamad Al Thani

H.H. the Heir Apparent
Chairperson

Dr. Hessa Sultan Al-Jabir

Secretary General, ictQatar
Member

H. E. Ahmed Bin Abdullah Al-Mahmoud

Minister of State for Foreign Affairs
Vice Chair

Mr. Hamad Rashid Al Mahanadi

General Manager, RasGas
Member

H. E. Saad Ibrahim Al-Mahmoud

Minister of Education and Higher Education
Secretary General, Supreme Education Council
Member

Prof. Sheikha Abdulla Al-Misnad

President, Qatar University
Member

H.E. Sheikh Faisal Bin Qassim Al Thani

Chairman, Qatari Businessmen Association
Member

Dr. Peter Heath

Chancellor, American University of Sharjah
Member

Dr. Abdulla Bin Ali Al Thani

Vice-President, Education - Qatar Foundation
Executive Committee Chair

Dr. Roger Benjamin

President, Council for Aid to Education (CAE)
Member

H.E. Sheikh Hamad Bin Jabor Bin Jassim Al Thani

Director of the General Secretariat for Development Planning
Member

Prof. Abdel Aziz El Said El Bayoumi

Academic Advisor to QU President
Secretary General, Board of Regents

Mr. Ahmad Mahdi Al Majed

Businessman
Member

PRESIDENT

Professor Sheikha Abdulla Al-Misnad

The President is the Chief Executive Officer of QU, with overall authority of its administrative and academic processes and adhering to the principal goals of the organization's Strategic Plan. This includes overseeing QU's commitment to its vision and mission, and serving as its official spokesperson and representative at all public appearances in Qatar and abroad.

The President participates in all deliberations at the Board of Regents' meetings and executes ensuing recommendations made by the Board. The President submits an annual operating budget for the Board's approval, as well as nominations for the positions of Vice-Presidents at the organization.

Prof. Al-Misnad assumed her position as QU's 5th President in 2003, having served as its Vice President for Research and Community Development from 2000 to 2003. A QU alumna, she rejoined the university as a teaching assistant in 1977. In 1986, she became a member of the University Council and later was the Head of the then-Department of Foundations of Education from 1992 to 1995.

Always a strong advocate of education and life-long learning, Prof. Al-Misnad received her Doctor of Philosophy in Education in 1984 from the University of Durham UK, and has maintained an active role on the Board of Directors of Qatar Foundation for Education, Science and Community Development since 1999. She became a member of the United Nations University Council in 2004, and was awarded an honorary doctorate in civil law in January 2008 from her alma mater, in recognition of her "Outstanding achievements in the field of education".

Adding to her many achievements, in 2010, Prof Al-Misnad was appointed a member of the Board of Trustees of the American University of Cairo and was honored with the 2011 Woman in Education Service Excellence Award in the 10th Middle East Women Leaders Awards held by the Middle East Excellence Award Institute on March 8.

VICE PRESIDENTS

Dr. Homaid Abdullah AlMidfaa

Vice President and Chief Financial Officer

The VP and CFO is responsible for the general supervision of the administrative and financial affairs of Qatar University. Dr. Al-Midfaa has held this position since 2003. After completing his PhD in Non-Organic Chemistry from London University in 1988, he began his career at QU as Assistant Professor of Chemistry at the Department of Chemistry in the then-College of Science. Before assuming his current role on August 25, 2003, Dr. Al-Midfaa held several administrative positions, among which were Director of the Research and Applied Sciences Center, and Dean of Student Affairs.

Dr. Sheikha Bint Jabor Al-Thani

Vice President and Chief Academic Officer

The VP and CAO is in charge of the general supervision of all academic programs, research, continuing education and libraries at Qatar University. Dr. Al-Thani began her career at QU University as Assistant Professor of Algebra at the Department of Mathematics in the then-College of Science, after completing her PhD in Algebra from the University of Exeter UK in 1992. She has held her current position since July 2005, following her tenure as Dean of the College of Arts & Sciences.

Dr. Omar Mohamed Al-Ansari

Vice President for Student Affairs

The VP for Student Affairs officiates the general supervision of all student initiatives at Qatar University, including admission, registration and academic records, student life, campus activities, student academic support and related student services. Dr. Al-Ansari was appointed Associate Vice President for Student Affairs in 2003 and assumed his current position in 2007. He holds a PhD in Civil Engineering from University of Texas at Austin.

Dr. Hassan Rashid Al-Derham

Vice President for Research

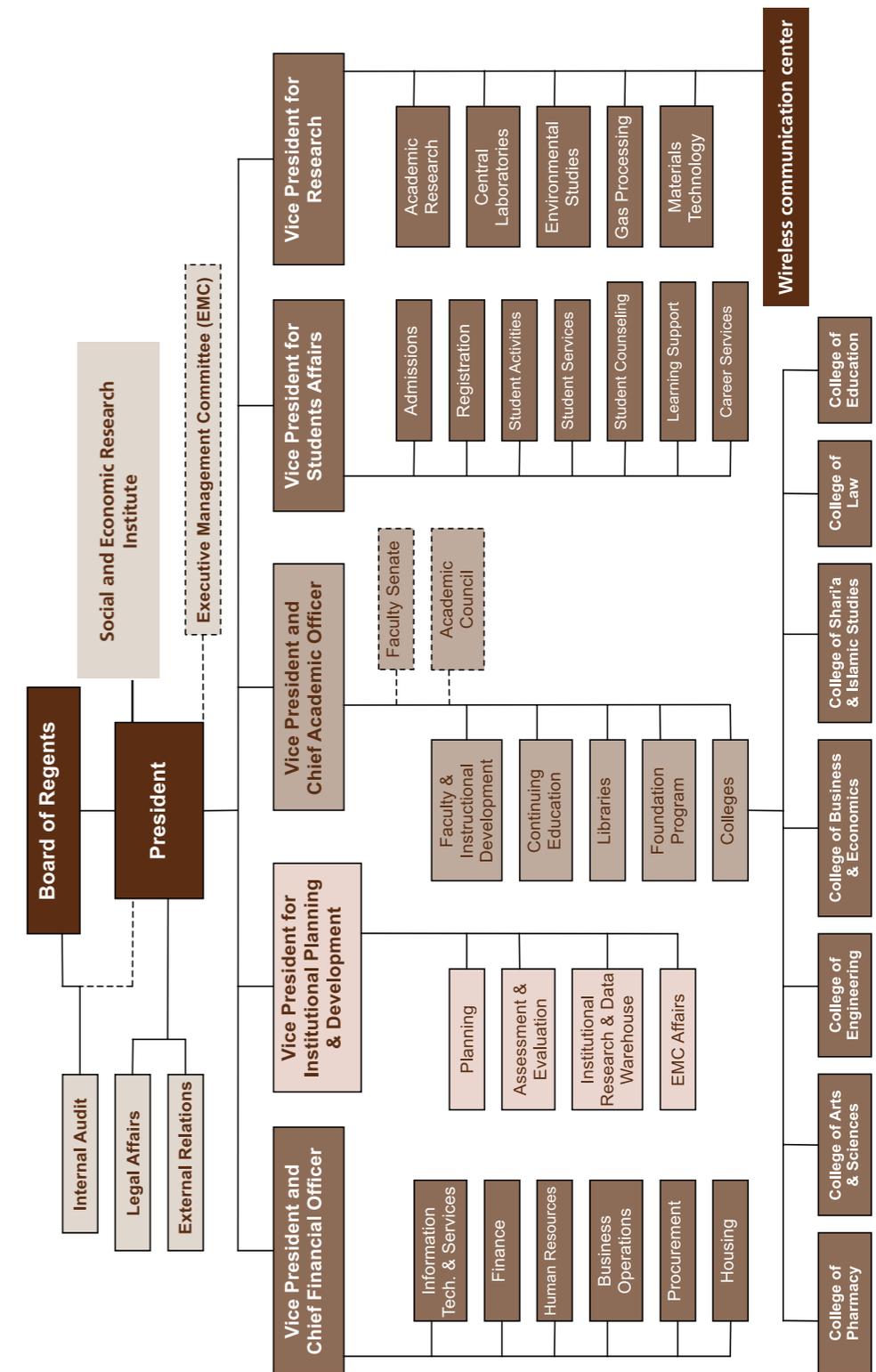
The VP for Research is responsible for encouraging, promoting and facilitating research activities within the QU community. A PhD in Civil Engineering from University of Glamorgan (currently University of South Wales) UK, Dr Al-Derham has held this position since 2007 following his earlier responsibilities as Associate Vice President for Research. In addition to overseeing the organization's research centers and units, Dr Al-Derham holds the Chair on both the Quality Management and Quality Assurance Committees.

Professor Saif Said Al Sowaidi

Vice President for Institutional Planning and Development

The VP for Institutional Planning and Development supervises the facilitation and integration of accountability, assessment, planning, accreditation and institutional research, and provides essential support to QU administration and community. Dr. Al Sowaidi has held this position since November 2008. Prior to this appointment, he served as a consultant to QU President. His preceding titles also included Vice President for Administration and Associate Dean at the College of Business & Economics (CBE). A PhD graduate in Economics from University of Durham UK, Dr. Al-Sowaidi has served as a Professor of Economics at the College of Business & Economics since 2004.

ORGANIZATIONAL STRUCTURE





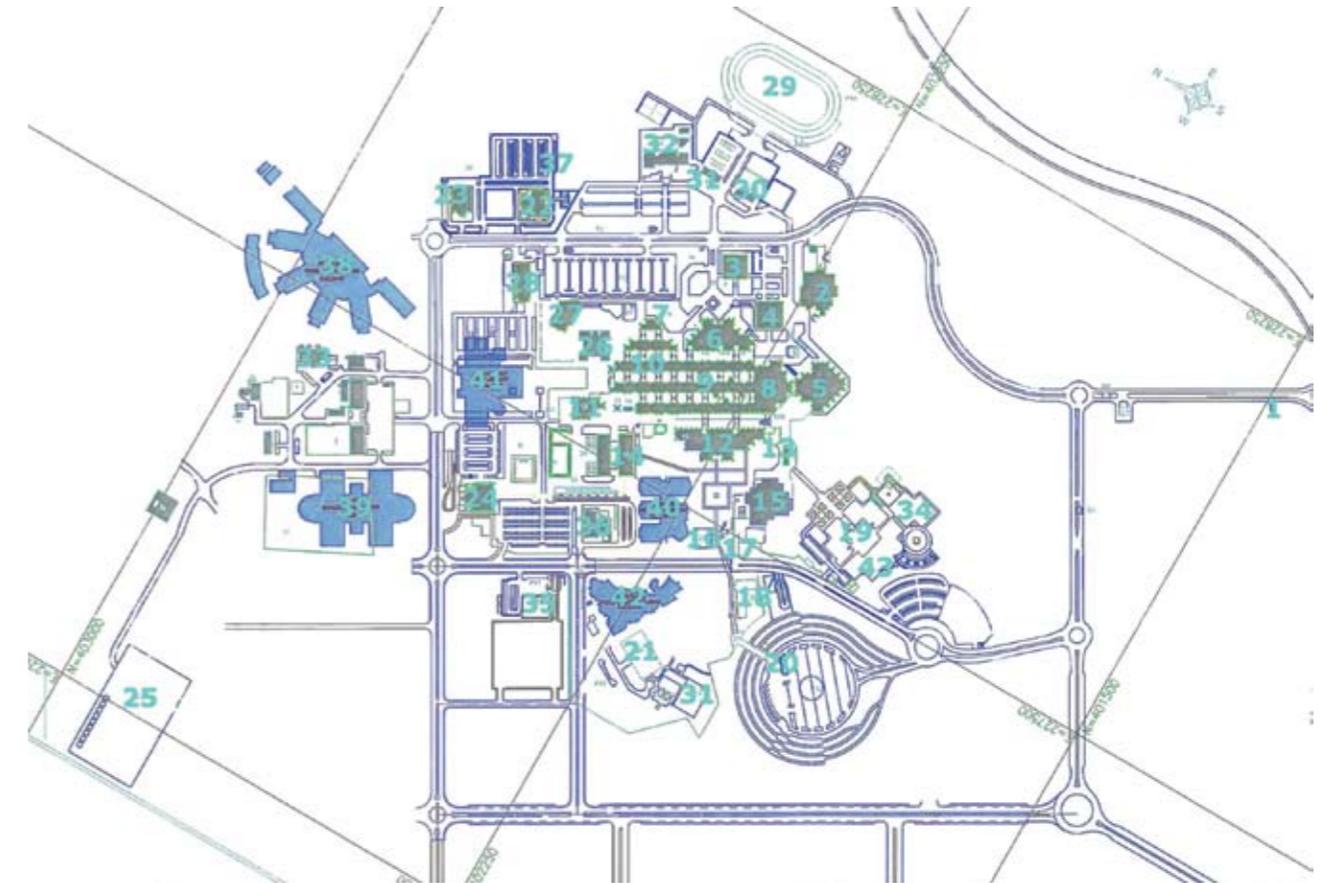
DIRECTORY

Offices	Number	Email
Qatar University Main Line	44033333	info@qu.edu.qa
Academic Programs and Learning Outcome Assessment	44034007	aploa@qu.edu.qa
Admissions Department	44033737	admissiondir@qu.edu.qa
Undergraduate Admission Section	44033733/3741	admission@qu.edu.qa
Recruitment & Orientation Section	44033751/2752	studentrecruitment@qu.edu.qa
Scholarships Section	44033747/3748	scholarships@qu.edu.qa
Transfers Section	44033744/3745	transfer@qu.edu.qa
Graduate Admission Section	44033754	graduate@qu.edu.qa
Business Operation Department	44033500	bodhelpdesk@qu.edu.qa
Career Services Center	44033883	careerservices@qu.edu.qa
Central Laboratory Unit	44033927	clu@qu.edu.qa
College of Arts & Science	44034500	cas@qu.edu.qa
Arabic for Non-Native Speakers Program	44034530	arabicprogram@qu.edu.qa
Department of Arabic Language	44034820	headdeparabic@qu.edu.qa
Department of Biological & Environmental Sciences	44034530	biology@qu.edu.qa
Department of Chemistry & Earth Sciences	44034650	headdepchemistry@qu.edu.qa
Department of English Literature and Linguistics	44034917	malghadeer@qu.edu.qa
Department of Health Sciences	44034800	health@qu.edu.qa
Department of Humanities	44034700	headdephumanities@qu.edu.qa
Department of International Affairs	44034930	iap@qu.edu.qa
Department of Mass Communication & Information Science	44034860	headdepmasscommunication@qu.edu.qa
Department of Mathematics, Statistics & Physics	4403-4604	math-physics@qu.edu.qa
Department of Psychological Sciences	44035200	
Department of Social Sciences	44034750	headdeptsocsci@qu.edu.qa
Sports Science Program	44034960	sportscience@qu.edu.qa
College of Business & Economics	44035000	bus-econ@qu.edu.qa
Department of Accounting and Information Systems	44035051	accounting_IS@qu.edu.qa
Department of Finance and Economics	44035080	fin-econ@qu.edu.qa
Department of Management and Marketing	44035030	manmark@qu.edu.qa

Offices	Number	Email
College of Education	44035125	Dean-Edu@qu.edu.qa
College of Engineering	44034100/4104	dean-eng@qu.edu.qa
Department of Architecture and Urban Planning	44034340	architecture-urban@qu.edu.qa
Department of Chemical Engineering	44034130	che@qu.edu.qa
Department of Civil Engineering	44034170	civil@qu.edu.qa
Department of Computer Science and Engineering	44034240	cs@qu.edu.qa
Department of Electrical Engineering	44034200	electrical@qu.edu.qa
Department of Mechanical Engineering	44034300	mecheng@qu.edu.qa
College of Law	44035252	law@qu.edu.qa
College of Pharmacy	44035333	pharmacy@qu.edu.qa
College of Sharia & Islamic Studies	4403 4418	shareastd@qu.edu.qa
Department of Islamic Culture and Dawa	44034450	lanak@qu.edu.qa
Department of Islamic Studies	44034470	shareastd@qu.edu.qa
Environmental Studies Center	44033939	esc@qu.edu.qa
External Relations Department	44033050	ccer@qu.edu.qa
Faculty Senate	44034015	fs22@qu.edu.qa
Finance Department	44033111	Finance@qu.edu.qa
Fire Emergency	44033999	
Gas Processing Center	44034370	gpc@qu.edu.qa
Health Clinic	44033285	hhashad@qu.edu.qa
Health Emergency	44035050	wmedclinic@qu.edu.qa
Housing Department	44033160	housing@qu.edu.qa
Human Resources Department	44033240	hroffice@qu.edu.qa
Continuing Education	44034020	ceo2007@qu.edu.qa
Core Curriculum Program	44034041	quccprogram@qu.edu.qa
Faculty and Instructional Development	44034030	ofid@qu.edu.qa
Foundation Program	4403 5300	foundation@qu.edu.qa
Honours Program	44034998	quhonors@qu.edu.qa

Offices	Number	Email
Information Technology Services	44033400	s.alathba@qu.edu.qa
Information Technology Services	44033400	s.alathba@qu.edu.qa
Internal Audit Office	44033095	
ITS - Helpdesk	44033456	helpdesk@qu.edu.qa
Legal Office	44033010	labibg@qu.edu.qa
Materials Technology Unit	44033988	
Office of Academic Research	44033919	olfat@qu.edu.qa
Office of Quality Management	44033910	oqm@qu.edu.qa
Office of QU Scholarships (postgraduate studies abroad)	44034009	quscholarships@qu.edu.qa
President's Office	44033000	president@qu.edu.qa
Procurement Office	44033222	Procurement@qu.edu.qa
Registration Department	44033777	registrationdir@qu.edu.qa
Records and Archiving Section	44033796/3775	records@qu.edu.qa
Registration Section	44033774/3789	registration@qu.edu.qa
Schedules Section	44033791/3785	schedules@qu.edu.qa
Security Emergency	44036999	
SESRI Office	44033020	sesri@qu.edu.qa
Student Activities Department	44033800	studentactivities@qu.edu.qa
Annual Events and Special Projects Section	44033826	annualevents@qu.edu.qa
Exchange Programs Section	44033813/3806	studentexchange@qu.edu.qa
Sports and Recreation Section	44033819	sports@qu.edu.qa
Student Development Section	44033812	studentdevelopment@qu.edu.qa
Student Counseling Center	44033755	studentcounseling@qu.edu.qa
Student Learning Support Center	44033873	learningcenter@qu.edu.qa
Academic Support Unit	44033760	learningcenter@qu.edu.qa
Central Advising and Retention Unit	4403-3875	elmaatic@qu.edu.qa
Writing Lab	44035347	writinglab@qu.edu.qa
Student Services Department	44033838	studentservices@qu.edu.qa
International Students Section	44033868/3869	internationalstudents@qu.edu.qa

Offices	Number	Email
Primary Services Section	44033862/3790	primaryservices@qu.edu.qa
Special Needs Section	44033843/3854	specialneeds@qu.edu.qa
Student Fund Section	44033858/3859	studentfund@qu.edu.qa
Textbooks Section	44033840/3849	textbooks@qu.edu.qa
Student Helpdesk Section	44034444	studenthelp@qu.edu.qa
Vice President and Chief Academic Officer	44034000	vpacademic@qu.edu.qa
Vice President and Chief Financial Officer	44033100	vpadmin@qu.edu.qa
Vice President for Institutional Planning & Development	44033670	vpipd@qu.edu.qa
Vice President for Research	44033900	vpr@qu.edu.qa
Vice President for Students Affairs	44033700	vpstudents@qu.edu.qa



- 02. Men's Activities Building
- 15. Women's Activities Building
- 04. Administration Building
- 24. Admissions & Registration
- 18. Al-Bidaa Building
- 33. Book Store
- 14. Business Operations
- 25. Bus Depot
- 34. Computer Center
- 09. Men's College of Arts & Science
- 19. Women's College of Arts & Science
- 22. Men's College of Business
- 36. Women's College of Law, Sharia & Business
- 39. College of Business (New Building)
- 08. College of Education
- 10. College of Engineering
- 40. College of Engineering (New Building)
- 37. College of Law
- 43. College of Pharmacy
- 11. Engineering Workshops
- 13. Fine Arts Workshops
- 23. Men's Foundation/ Office of Research/Procurement
- 35. Women's Foundation Building
- 07. Gulf Studies, Parallel & Continuing Education
- 21. Women's Gymnasium
- 28. Ibn-Khaldoon Hall & QNB
- 03. Information Technology Services /Help Desk
- 26. Men's Library
- 05. Women's Library & Exhibition Hall
- 41. Library (New Building)
- 06. Men's Main Building (Law & Sharia)
- 01. Main Gate
- 16. Medical Clinic
- 27. Mosque
- 20. Women's Parking & Access
- 17. Prayer Hall
- 42. Restaurant Complex
- 38. Research Facility (New Building)
- 30. Sport Courts
- 32. Swimming Pools
- 31. Tennis Pavilion
- 29. University Stadium

**Academic Advisor**

Faculty member/administrator assigned to counsel students on academic matters. The student is called the "advisee".

Academic Calendar

Annual listing of all official dates and deadlines for the academic year.

Academic Load

Total credits for which a student is registered in a given semester or term.

Academic Record

Records directly related to the education of a student and maintained by the Registration Department.

Academic Standing

Determined by academic regulations governing good standing, probation and dismissal.

Academic Year

The period of time beginning with the first day of class of a fall semester and those which follow, up to, but excluding, the first day of class of the fall semester of the following year.

Add and Drop

A period of time at the beginning of each semester/term when students can adjust schedules by dropping or adding courses or changing sections of a course.

Admission

Formal acceptance as a student.

Alumni

Those who have graduated from Qatar University.

Audit a Course

Permission to attend and participate in a course without receiving academic credit.

Bachelor's Degree

A four-year minimum undergraduate degree.

Catalog Year

A student's Catalog year denotes which specific set of graduation requirements will apply to that student. Unless altered, a student's Catalog year is the year when the student was admitted to study at QU.

Common Examinations

Examinations for courses with multiple sections scheduled at a common time at the request of the college/department.

Concentration

Sub-specialization within a major that allows a student to focus on a particular aspect of the major field of study.

Core Curriculum Requirements

Requirements common to all undergraduate students designed to provide both breadth and specialization in their academic degree programs.

Co-requisite

A course required to be taken simultaneously with another course.

Course

A unit of study that may utilize lecture, discussion, laboratory, seminar, independent study, internship, or other similar teaching formats to facilitate learning for a student.

Course Schedule

A list of courses offered during a semester that specifies the days, hours, locations of classes, and the names of the instructors.

Credit Hour

The equivalent of a 50-minute lecture or two to three hours of laboratory per week for one regular semester.

Curriculum

A structured set of learning objectives built in a specified set of courses.

Degree Audit

Methodical examination and reviewing of students' compliance with their degree requirements.

Department

An academic unit of a college or an administrative unit of the university.

Directed Study

An investigation under faculty supervision beyond what is offered in existing courses. Directed study may include, but is not limited to graduation, research or capstone projects.

Dismissal

The involuntary removal of a student from the university for unacceptable conduct or unsatisfactory academic achievement. A student is academically dismissed when he/she fails to achieve academic good standing in three consecutive semesters or four non-consecutive semesters.

Elective Course

A course selected at a student's discretion and may require approval of the academic advisor.

Extracurricular

Enrichment and leadership development activities that are part of student life but are not part of the academic program, such as student activities, athletics and music.

Fee

Charges for services; does not include course tuition.

First Year Student

A student admitted to QU who either has never attended a university or who has earned less than 24 credit hours at another university.

Foundation Program Courses

Pre-Undergraduate remedial courses numbered 099 and below. Students may be waived out of these courses by placement tests. Foundation courses do not count in the credits earned toward a degree, but they do count in the Foundation Program grade point average.

Full-Time Student

An undergraduate student who is registered for 12 or more credit hours in a given semester.

Good Standing, Academic

The academic standing of an undergraduate student who has achieved a cumulative GPA of 2.00 or higher.

GPA

Grade point average of the grades of QU courses within a specific level of study.

Grade Points

Numerical value associated with each grade.

Hold

A mechanism preventing a student from either registering in classes or receiving a University service. More common hold types include admission holds, department holds, advisor holds, and tuition holds. The student should see the department that placed the hold for resolution.

Honors Course

Honors section of core curriculum course or courses that are used to meet elective requirements. Only Honors students may enroll in an Honors course.

ID Card

University student identification card providing and controlling access to university facilities and services.

Incomplete

A temporary grade that a student may request from the instructor if he/she attends but fails to complete all the course requirements.

Major

A curriculum component of an academic program intended to provide in-depth study in a discipline or a professional field of study.

Minor

A secondary curriculum component of an academic program intended to provide a limited depth and/or breadth of -study in a discipline or a professional field of study.

Non-degree Student

Designation used for students who are admitted to QU and who are enrolled in courses but are not pursuing a degree program.

Petition

A written request seeking a waiver of, or an exception to, a university regulation, policy or deadline.

Placement Test

A proficiency examination given to determine a student's ability in a subject area. Placement test scores determine whether the corresponding preparatory course will be waived.

Prerequisite

A course required to be completed before a certain course may be taken.

Probation, Academic

Status of any undergraduate student who has less than a 2.00 cumulative GPA.

Probation, Disciplinary

A formal notice affecting the non-academic status of the student resulting from unsatisfactory conduct .

Readmission

The act of admitting a student back to the university through the Admissions Department after an interruption of studies for more than one semester.

Re-enrollment

A student who withdrew from QU without approval may seek re-enrollment through the Registration Department.

Registration

The process of enrolling in classes.

Regular Student

A degree-seeking student.

Required Courses

Courses other than free electives prescribed by the college/school necessary for the completion of a particular degree program.

Second Degree Student

A student who has completed an undergraduate degree and who is admitted to QU to pursue an undergraduate degree in a different major.

Semester

Either of the two (Fall and Spring) 16-week periods of instruction followed by an examination period into which the academic year is divided. A summer session is decided and offered on an annual basis.

Student Classification

QU students are classified as either regular degree-seeking or visiting / non-degree students.

Student Schedule

A listing of the courses a student is taking in a given semester that specifies the days, hours, locations of classes and the names of the instructors.

Study Abroad Student

A QU student who is taking courses at another university during a regular semester.

Transcript

The official result of the student's academic achievement.

Transfer Credit

Credit from coursework completed at another institution that is accepted at QU and which may or may not be applicable toward a specific QU degree.

Transfer Student

A student who previously attended another university and has been admitted to QU after satisfying the QU transfer admission requirements. Credits completed at the student's prior university may or may not be transferable to QU.

Tuition

The fees charged for courses each semester.

Undergraduate

A student who is working toward completion of a bachelor's degree.

Visiting Student

A student from another accredited institution who plans to graduate from that institution and who is admitted to QU for a maximum of 48 credit hours or 4 semesters of course work, whichever comes first.

Warning

An official written notification that the student's behavior violates the Student Integrity Code.

Withdrawal from a Course

After the regular drop/add period, students may withdraw from one or more courses before the withdrawal deadline for the semester, provided that the total number of credit hours carried does not fall below the minimum credit hour requirement of the program.

Withdrawal from the Semester

Withdrawing from all registered courses for the semester of withdrawal.

Withdrawal from the University

Suspends enrollment in QU for a period not to exceed four semesters.



DISCLAIMER

The Undergraduate Catalog is intended to reflect current academic policies, procedures, degree offerings, course descriptions, and other information pertinent to undergraduate study at Qatar University. This catalog identifies the minimum University requirements. Individual programs may prescribe additional requirements. Students should consult with their respective college and/or program director for a comprehensive listing of major/programmatic requirements.

As it is not possible in a publication of this size to include all of the rules, policies and other information that pertain to students and Qatar University; more current or complete information may be obtained from the appropriate college, academic department, or administrative office.

The QU Undergraduate Catalog contains the most accurate and recent information available for students of the university. However, due to potential issues in publication, readers are cautioned on the following:

1. Errors of typographical or editorial nature, or technological compatibility issues may be present due to the publication process, and the University assumes no responsibility for such errors.
2. There is an inevitable delay between the time new policies are approved and their appearance in the publication.
3. Degree-seeking students are held to the provisions of the catalog in effect at the time of their first semester of enrollment. Students who re-enroll, will be subject to the new terms and conditions of their first semester back.
4. The University reserves the right to change any provisions of this catalog at any time, including, but not limited to, course offerings, degree requirements, fees, and calendar listings, as required by the University or the State of Qatar.

The Undergraduate catalog is made available in printable format and online at www.qu.edu.qa/students. In the event that information in the online catalog differs from that of the printable form, the online catalog shall prevail as the governing document for the current academic year.

The content of this catalog is for internal use only. However, since it may become accessible to others outside the University, QU reserves all rights to the contents of this document. For further information, please visit the following website <http://www.qu.edu.qa>.



CHAPTER 1 ABOUT THE UNIVERSITY

Since its inception in 1973, Qatar University (QU) has served as Qatar's most prominent and sole national institution of higher education. With over 8000 students and a 13:1 student-teacher ratio, the University serves as a national beacon for higher education and academic excellence. Currently, it hosts seven colleges under its umbrella: Arts and Sciences, Business and Economics, Education, Engineering, Law, Pharmacy, and Sharia and Islamic Studies.

The University's Foundation Program serves as the point of entry for newly admitted students to hone requisite skills in English, Mathematics and Computing before pursuing college programs at QU.

With over 60 specializations, Qatar University offers the widest range of academic programs in the State of Qatar. The majority of its courses are toward undergraduate degrees, however, following the goals outlined in QU's Strategic Plan to meet Qatari market needs for advanced-level professionals, Masters programs are offered at several colleges – Arts and Sciences, Education, Business & Economics, Engineering, and Pharmacy. The College of Pharmacy recently launched its Doctor of Pharmacy (PharmD) program starting fall 2011, joined at the same time by a PhD in Engineering offered by the College of Engineering.

In recent years, QU has added Bachelors' programs in Primary Education and Sport Science, and Masters' programs in Accounting, Pharmacy, Engineering Management, Urban Planning, Gulf Studies, Educational Leadership, Special Education, Environmental Engineering, and Environment Sciences. Undergraduate degrees in Islamic Finance & Banking, and Entrepreneurship are also being developed.

QU has committed considerable resources to upgrading its classroom and campus infrastructure with modern technology (such as Lecture Capture and Blackboard), advanced research labs, new and environmentally-friendly buildings, and well-equipped library facilities. These improvements have made a positive impact in both teaching approaches and the students' enjoyment of learning. In keeping with respective advancements in accreditation and research standards, these areas are also undergoing a process of aggressive development and evaluation. Qatar University has a diverse student body comprising over fifty-two nationalities, the majority of which are Qatari nationals. Women make up approximately 70% of the student population.

QU boasts an alumni body of over 30,000 graduates. Its fifth and current President, Prof. Sheikha Abdulla Al-Misnad, is a QU graduate of the Class of 1977. Also an alumna is Her Highness Sheikha Mozah Bint Nasser Al Misned, Class of 1986.

VISION

Qatar University shall be a model national university in the region, recognized for high-quality education and research and for being a leader of economic and social development.

MISSION

Qatar University is the national institution of higher education in Qatar. It provides high quality undergraduate and graduate programs that prepare competent graduates, destined to shape the future of Qatar. The University community has diverse and committed faculty who teach and conduct research, which address relevant local and regional challenges, advance knowledge, and contribute actively to the needs and aspirations of society.

HISTORY

The University originally began as the College of Education in 1973, instated by an Emiri decree. It was the first national higher education institution to be established in the state of Qatar. The country's burgeoning economic growth saw a push toward educational reform to provide post-secondary education opportunities for Qatari citizens with the goal to build a workforce of competent and skilled graduates in line with labor market needs and adhering to the principles of Qatar National Vision 2030.

Intrinsic to QU's aims to become a beacon of academic excellence and best practices aligned with international standards, is its adherence to preserving the language, history, and cultural traditions of Qatar and the Islamic world.

ACCREDITATION

Qatar University regards international accreditation as a crucial step in achieving its goal as an institution of quality and excellence. With this in mind, QU has embarked on a long-term project of achieving international accreditation status for its colleges, programs and courses. It has been successful in gaining accreditation from leading international accrediting bodies for its Biomedical Sciences Program, Chemistry Program, Pharmacy College and four of its programs at the College of Engineering, with the most recent successes being the IRTE recognition accorded the College of Education, RSS accreditation of the Statistics Program, College of Business & Economics by ACCSB, Foundation Program Department of English by CEA, and the ISO/IEC 17025-2005 accredited status accorded the laboratories of the Environmental Studies Center, Central Laboratories Unit and Materials Technology Unit. Similar exercises are ongoing for the Department of Mass Communication and Information Science, College of Law, the remaining Engineering programs, and several programs under the College of Arts & Sciences.

Additionally, an institution-wide exercise is currently in progress to gain accreditation status with the US-based Southern Association of Colleges and Schools (SACS).

QU REFORM

Qatar University embarked on a comprehensive reform project in 2003, with a focus on three main goals: autonomy, academic reform, and administrative and financial reform. The objective was to modernize its academic programs, and upgrade and decentralize its administrative

processes and procedures with a central objective towards overall efficiency and creating an enjoyable and motivating academic experience for its students.

The project was led by H.H. the Heir Apparent Sheikh Tamim Bin Hamad Al-Thani, QU President Prof. Sheikha Abdulla Al-Misnad, and the Office of Institutional Planning and Development (OIPD).

Reform efforts resulted in the establishment of a Board of Regents that essentially guides Qatar University's policies and operations.

In 2009, the Rand-Qatar Policy Institute (RQPI) published its report on QU's reform initiative, stating that "Qatar University has taken steps unprecedented in the region to transform itself into an institution that is at the cutting edge of higher education philosophy and practice".

The report concluded that the institution had implemented 35 of 45 key reform recommendations proposed by the RQPI experts who conducted the research, with the remainder of reforms in progress. The Reform plan was the forerunner for the University's comprehensive Strategic Plan 2009-2013 which highlighted a priority focus on promoting quality education, research, community service, and institutional efficiency.

An important aspect of the reform exercise was QU's strengthened commitment to its students. In recognition of the importance of students' involvement on campus, student services were given greater focus and support. These primarily took form in the establishment of the Student Learning Support Center, Student Counseling Center, Career Services Center, Help Desk Section, and latterly, a Student Call Center, and a student website. Through the Student Affairs newsletter, the student population has been enabled to keep abreast of developments on campus and within the community.

The institution has recently established the Qatar University Student Representative Board (QUSRB) whose guiding principle is to serve and act in the interest of the students, as well as the QU community in general. Student participation in university affairs is further bolstered by an annual "Meet the President" event, in which QU's President engages in an in-depth dialogue session with students on QU projects, plans, and developments.

RESEARCH

The institution considers research a priority area to develop and expand for the benefit of its students, faculty, the university as a whole and the Qatari community in general. This is evidenced by the incorporation of research in every aspect of the academic experience; a fact reflected in its research funding, which amounted to USD 60 million in 2009-2010.

The institution's commitment to promoting a culture of research is also emphasized through its annual Qatar University Research Forum (QURF), and the introduction of several new research centers of excellence, such as the Social and Economic Survey Research Institute (SESRI), the QU Wireless Innovations Center (QUWIC), and the planned QU Marine Station.

QU has had considerable success in gaining a large percentage of NPRP (National Priorities Research Program) and UREP (Undergraduate Research Experience Program) awards under the Qatar National Research Fund (QNRF). During the 2009/2010 academic year, QU received the highest number of awarded proposals (51%) among academic institu-

tions in Qatar in the 3rd cycle of the NPRP; double that of the 2nd cycle, and more than five times the 1st cycle. The total award amounted to approximately US\$ 55 million. QU students won 1st prize in the 2nd Undergraduate Research Experience (UREP) competition last year. The institution has also parlayed its research priorities into partnerships with government, business, industry and civil society organizations. Examples include the establishment of Chair positions in Sustainable Development (Shell) at the College of Arts and Sciences, Aluminum Production (QP/Hydro), Environmental Engineering (Maersk Oil Qatar) and Architecture (Dohaland) at the College of Engineering. In similar partnerships with experts and industry leaders, several colleges and centers have established programs, projects and courses, such as the Plant Design contest, Gasna and Life is Engineering projects at the College of Engineering, clinical training agreement between the College of Pharmacy and Ebn Sina Medical; an MoU between the Environmental Studies Center and ExxonMobil on the coastal and marine ecology of northern Qatar, and agreement between the Materials Technology Unit and Qatar Science and Technology Park (QSTP) to establish a Polymer Center, to name a few.

STUDENTS

Qatar University prides itself on the quality of its students and alumni. It started with 150 students in 1973, and has grown to a total of approximately 9000, including the Foundation Program in the academic year 2010-2011. The University is committed to ensuring that campus life is an enriching environment for encouraging volunteerism, civic responsibility, and leadership, as reflected in students' participation in the Qatar Career Fair, planning and execution of Eid charity projects, organization of the National Day parade at QU, and involvement in projects connected with Qatar's bid for hosting the World Cup 2022. In 2009-2010, QU awarded 385 scholarships across colleges and disciplines. It also awarded internal grants totaling over QR10,934,150. The grants create a positive competitive environment, encouraging students to engage and excel in projects of academic and social import, and advance the institution's reputation for talented studentship. In recent years, a number of student events and extracurricular activities such as the Cultural Village, Sponsorship and Internship Day, Clubs Day, have become staples on the academic calendar. QU also encourages exchange visits with foreign universities and study and training trips for its students to gain exposure and perspective on an international level.

EDUCATION SYSTEM AT QU

This is based on the US semester system of two periods of study in fall and spring, and course work measured in credit hours. The academic year comprises 16 weeks of study in addition to a summer session. Credit hours are established depending on the scope of the course. The normal duration of the course of study at QU may vary according to each program's requirements. However, the length of study may not exceed eight years from the date of enrollment at the Undergraduate level and four years from the date of enrollment at the Graduate level. This excludes the period spent in the Foundation Program. Students must complete a minimum of 120 credit hours to graduate.

Courses are chosen from the institution's Core Curriculum, College and Program disciplines (Major/Minor), and Electives. A degree is awarded to each student who has fulfilled all the academic requirements of his/her program with a minimum cumulative GPA of 2.00 on a 4 point scale. The graduation ceremony is held annually.

FACULTY

QU aims to attract qualified professionals and experts in their respective fields to ensure a continuum of academic excellence throughout the colleges, and guaranteeing the value and quality of the student experience. The faculty framework at QU includes (by qualification) Professor, Associate Professor, and Assistant Professor. These positions are supported by lecturers and teaching assistants. Visiting professors also bring added expertise to the teaching/learning experience.

LANGUAGE

Arabic remains the official language of administrative communication. While English proficiency is a requirement for prospective students and faculty in most majors, and many courses are conducted in English, the institution upholds its responsibility to promote the Arabic language in all its aspects.

The Foundation Program is the point of entry for the majority of students, except those who have satisfied the score requirements on the TOEFL or IELTS. Beginning fall 2011, students registering at College of Sharia & Islamic Studies and the Arabic Language Program are exempted from the requirements of the Foundation Program. Through the Core Curriculum, each student, regardless of major, is required to complete six credit hours in Arabic Language. Islamic education is presented through the College of Sharia & Islamic Studies, the Arabic Language Program, and Arab and Islamic history is celebrated at such annual events as Arabic Language Day and Cultural Village. Additionally, QU extends its role through its Arabic for Non-Native Speakers (ANNS) program, wherein students from around the world participate in an intensive, year-long Arabic language course, in tandem with visits to cultural and historical sites in Qatar. The Program offers Beginner, Intermediate and Advanced levels, in which students concentrate on language functions and communicative skills of speaking, reading, writing and listening comprehension.



CHAPTER 2 CAMPUS SERVICES

THE CAMPUS

Qatar University is situated on the northern edge of Doha, approximately 16 kilometers from the center of the city. In addition to the main campus, the University has an experimental farm located 65 km north of Doha.

QU's main campus is built on a total area of approximately 8 square kilometers, with architecture which integrates distinction and modernism with the ideals of traditional Qatari design. Students enjoy a wide range of services offered on campus to enrich their academic and social experiences. Many of these services can be utilized by students whether during the day or after class hours, and students are encouraged to reach out for these excellent resources.

INFORMATION TECHNOLOGY

Information Technology Services is committed to the provision of the best infrastructure, applications, and services to faculty, students and staff of Qatar University. All QU students, faculty and staff are given secure access to the following University services:

- **myQU:** myQU is the University's web portal, a web-based tool that provides centralized access to e-mail, calendars, administrative services and classroom tools, and information through a single username and password. To access myQU, use a web browser to go to <http://my.qu.edu.qa> and log in with your QUID and password.
- **myBanner:** Banner is an effective information system providing students, faculty and staff with online access to course registration, Drop and Add services, class schedules, grade viewing, and online tuition payment.
- **QSpace:** Qatar University's Institutional Repository: QSpace, is a digital archive comprising the University's intellectual output. QSpace manages, preserves and makes available the academic works of faculty, graduate students and research centers.
- **Email:** The University provides all students, faculty and staff with a University email account. This account can be accessed via standard email clients as well as through the myQU portal. The QU e-mail account is the official form of communication between QU and students; therefore, students are expected to access their QU e-mail frequently.
- **Blackboard:** Blackboard Learning System is a course management system that provides students with course materials, discussion boards, virtual chats, online assessment and a dedicated academic resource center. Students can login to Blackboard using their QU ID accounts at: <http://elearning.qu.edu.qa>.

- **Wireless Network:** The campus wireless network is the largest wireless network at any campus in Qatar and allows students, faculty, and staff to connect to the internet from any point on campus
- **Help Desk:** The IT Services Helpdesk assists students with questions related to laptop and desktop computing, remote access issues, connecting to the QU network, password and login information, email, virus and spy-ware issues.
- **Lecture Capture Software:** To enhance the university teaching and learning experience, many lectures are captured using lecture capture software (echo360R). Lecture capture is available to the students and faculty as a streaming media file via Blackboard after each class. Lectures are posted permanently, so students can refer back to a particular lecture at any time during their tenure at QU.

IT Helpdesk contact information:

Phone: (+974) 4403-3456

Email: helpdesk@qu.edu.qa

Website: <http://its.qu.edu.qa/>

Hours: 7:30am – 2:30pm, Sunday – Thursday

FACILITIES AND RESOURCES

Athletics

Qatar University provides students, faculty, staff, and the Qatari community with a wealth of athletic and recreational facilities to enrich their academic experience. Equipment, play courts and coaching are available for many popular pastimes. QU supports several sports facilities including the stadium, the aquatic complex which offers a variety of cardiovascular machines, free weights, and weight machines, and a women's sports facility that hosts a wide range of games and activities, and contains a gymnasium.

All facilities are open weekdays from 8:00 am to 8:00 pm. For further information, please contact the Sports and Recreational Section at sports@qu.edu.qa or 4403-3800.

Banking

Students and employees are offered convenient access to banking services through two local bank branch offices and several ATM machines in key locations on campus. Qatar National Bank (QNB) and Al-Rayyan Bank both offer a full range of services, and their campus branches are open weekdays from 8:00 am to 1:00 pm.

Bookshop

The Bookshop is located in the Food Court Building and sells a wide selection of stationary and classroom supplies, study and research aides, paint and art materials, Arabic and English language books and magazines and computer equipment. The bookshop also offers copying services.

Bookstore

Provides a variety of Arabic and foreign language textbooks for sale to students. As part of a University-wide initiative to boost learning skill acquisition and enhance research, the Bookstore provides a subsidy equal to 50% of total price for text books costing more than QR 50. For more information, please visit:

<http://www.qu.edu.qa/students/services/textbooks/index.php>

Cafeterias

Qatar University offers a number of dining locations within various buildings around the campus. In 2009, a modern dining facility was completed on the Women's Campus, housing fast food restaurants and coffee/ juice shops, in addition to functioning as a location for light entertainment activity. It also houses a bookshop, bank, and administrative offices. For more information, please see:

<http://www.qu.edu.qa/students/services/food/index.php>

Computer Labs

A large number of academic computer laboratories are available throughout campus for student research and assignments. Students should contact academic departments directly for specific information regarding individual college computer labs and resources.

Copy & Print Center

This center provides copying, printing and scanning services to students and is available at the following two locations: the ground floor of the Women's Activities Building and on the first floor of the Men's Activities Building.

Internet Lounges

Internet lounges are available to students in both the Women's and Men's Activities Buildings. These lounges are equipped with over 40 computers and provide students with access to professional and academic software for course assignments. The internet lounges also offer wireless connectivity and are open weekdays from 8:00 am to 5:00 pm.

Lockers

Registered student may request lockers, which are available in both the Men's and Women's Activities Buildings.

For more information, please visit:

<http://www.qu.edu.qa/students/services/lockers/policies.php>

Mosque

The University mosque serves not only as a religious and spiritual center, but a striking visual landmark at the edge of the campus, and a beautiful reminder of the country's traditions and heritage. Although the women's campus does not have a central mosque or prayer facility, prayer rooms are available in many of the buildings. These rooms are appropriately furnished for prayer services and reserved for women.

Post Office

The on-campus Post Office is the branch of Q-Post, which offers a variety of solutions to meet the student or faculty mailing needs, whether they are sending urgent or valuable mail, parcels or international mail. This office is located in the Women's Activities Building.

Qatar University has four research centers and units: the Gas Processing Center, Environmental Studies Center, Central Laboratory Unit, and Materials Technology Unit.

Gas Processing Center (GPC)

The GPC addresses the problems, challenges, and opportunities facing the state of Qatar's gas processing industry. The Center directs its resources towards two areas; asset management/process optimization, and sustainable development.

Environmental Studies Center (ESC)

The ESC conducts many aspects of environmental analysis on the important natural flora and fauna of the region. The Center is often contracted by government or private agencies outside QU for consultation and potential impact assessment of industrial development. The Center utilizes a large range of technical equipment, including a modern ocean vessel for conducting experiments and gathering data.

Central Laboratory Unit (CLU)

The CLU provides analytical and technical support and consultancy to serve research activities and testing needs. The Unit also works to optimize and upgrade the practical performance of technical staff and students, as well as to provide hands-on experience on using the analytical instruments for university members.

Materials Technology Unit (MTU)

The MTU consists of six laboratories, which together provide a large number of services, including failure analysis, materials selection consultation, non-destructive and mechanical testing, long-term industrial studies, and many more. In addition, the MTU offers training courses to university members, for which details and applications are available at the Unit's website.

Office of Academic Research (OAR)

Established in 2007, the OAR reports to the Office of the Vice President for Research. Since then, the OAR has served as a vital source to faculty regarding the preparation and submission of proposals, sources and opportunities of funding, review of budgets, compliance with University and sponsor policies and procedures and promoting technology throughout the University.

Office of Quality Management (OQM)

In conjunction with the Vice President for Research, the senior management and staff of centers and units affiliated with the Office of VP for Research, the OQM seeks to enhance the organizational effectiveness, expand its capability, and engender a culture of continual improvement and performance excellence.

The OQM was established to ensure consistent management policies and practices, establish a linkage between the testing and quality control results, encourage best practice sharing experiences, and eliminate duplication of efforts. In other words, it serves to help guide the centers and units on their journey toward performance excellence. To achieve great performance, the Office works with research centers and units to make smart investments in our most valuable resource; our people, and to envision Qatar University mission to provide our customers with best quality services.

Social and Economic Survey Research Institute (SESRI)

Reporting directly to the Office of the President, the SESRI was established in 2008 with a mandate to conduct high quality survey research on issues related to the development and welfare of Qatari society in the social, economic, and cultural areas. With a sophisticated Survey Operations Unit and an experienced staff of researchers and research assistants, SESRI conducts national and regional studies utilizing best practices in survey research. It provides faculty and interested students with a platform to collaborate on diverse projects with topics ranging from education and values to gender, health and labor migration. Students wishing to pursue research at the university are encouraged to visit and learn more about the centers, and work with their instructors to develop projects that suit their goals. QU offers a number of grants and funding resources, in addition to being a leading presence in obtaining external grants and recognition from organizations such as NPRP and UREP. Additional information is available on the QU website at: <http://www.qu.edu.qa/offices/research/index.php>.

CONTINUING EDUCATION OFFICE (CEO)

The CEO is a link between the University and society. The Office identifies and meets the actual training needs of society through specialized training programs, in addition to preparedness programs for professional and international certifications. It enables the greater community to benefit from the expertise, experience and resources available at the university.

Since its inception in 1995, the CEO has provided tailor-made continuing education courses and training workshops, in cooperation with various academic departments. For years, these training programs, based on actual needs of society, reflect the growing demand by individuals and institutions for further programs established by the office.

The following programs are offered:

• General

Courses are offered in English (business or general), and Arabic. These are available to both the QU community and the Qatari public at large. Registration and course documentation are available online.

• Contract (Special)

Specific courses are tailored for government or private agencies. A minimum number of attendees must be present, and the course is not open to anyone outside that particular organization.

• Certification Programs

A number of helpful certification programs (CPA, ICDL, etc.) are available for employment qualifications and enhancing personal proficiency. These are available to the public, and may be studied for individually, at home.

For more information on these programs and how to apply, please visit the Continuing Education Office Website:

http://www.qu.edu.qa/offices/ceo/programs/certificate_programs/index.php.

LIBRARY

As an institution committed to academic excellence, as well as the preservation and expansion of Arabic culture, Qatar University maintains a robust library system to meet the needs of students, employees, and the Qatari community.

The QU Library has locations on both the men and women's campus, with a large new facility also underway. The University faculty, staff and students are able to check out, reserve, and even request books from other libraries through interlibrary loan services. Photocopy and computing services are also available during standard library working hours 7:30am – 7:30pm.

The QU Library also features a prominent set of E-Resources, including subscriptions to many renowned Journals, E-books, and other electronic publications. These resources may be freely accessed anywhere. Additional information is available at:

<http://www.qu.edu.qa/library/index.php>.

MEDICAL CLINIC

The clinic at QU is an outpatient clinic staffed by physicians, nurses and pharmacists who provide medical care to students, faculty and staff of the University in accordance with policies set by Qatar Supreme Council of Health.

A team of dedicated staff is constantly on hand, working to secure the safety and well-being of the University's attendants, as well as contributing to health education and awareness programs.



Services

In order to best address the needs and health of the University's attendants, the clinic is continuously expanding the scope of its services. Presently, the following are addressed:

1. Emergency medical response at accident sites.
2. Routine medical procedures for patients, including medical checkups, diagnosis and prescription of treatments.
3. Antenatal healthcare to promote the health of the mother and her fetus during pregnancy.
4. Transfer of urgent or critical medical cases to Hamad Hospital emergency sector, accompanied by a clinic nurse.
5. Referral of patients to different specialist clinics approved by the Supreme Council of Health.
6. Follow-up care for students with health conditions during their exam periods.
7. Provision of medical supplies and services during the formal holidays and graduation parties as required.
8. Contributing to University-wide Health Education and awareness programs.

Location and Working Hours

Main Clinic: Located on the women's campus – main square. The clinic currently accepts walk-ins and appointments for female students/employees; anyone may call the clinic to request support at their locations.

Working hours: 7:30am – 7:30pm

Gymnasium's Clinic: Located in the women's Gymnasium building, where nurses are available to provide basic medical services, as well as first aid regarding sports injuries.

Working hours: 7:30am – 2:30pm

College of Arts and Science's Clinic: Located in the women's College of Arts and Science building (at the main entrance), where nurses are available to provide basic medical services.

Working hours: 7:30am – 2:30pm

Men's Clinic: Located in the Men's Student Activities building (on the ground floor), where nurses are available to provide basic medical services.

Working hours: 7:30am – 2:30pm

STUDENT HOUSING

Students attending Qatar University are eligible to apply for student housing. The University provides a safe and secure environment for students to enjoy their academic experience away from home. Although at present, student accommodation is off-campus, it offers a highly convenient location, positive learning environment and is enhanced with reliable transportation to-and-from the university.

Rooms are fully furnished and offer comfortable and practical living space for active students. Lounges and common areas are located throughout the building, enabling students to get together for studies and recreation. A computer lab is also available.

In order to ensure the best possible experience for everyone, QU has implemented guidelines and safety policies, which can be found online:

<http://www.qu.edu.qa/offices/housing/>

CAMPUS PARKING

Many parking lots are available for vehicles of faculty, staff, students and visitors, including areas designated specifically for students or employees. The University has prepared for the expansion of campus by adding more parking spaces, and reducing walking distances to the premises wherever possible.

CAMPUS SECURITY & SAFETY

The Department of Security and Safety is committed to providing students with a safe learning environment while keeping the university community informed about campus security. Visitor permits are issued to individuals, companies, graduated students and conference attendees. For additional information, refer to the Business Operations Department website at:

<http://www.qu.edu.qa/offices/businessop/services/index.php>

TRANSPORTATION

Qatar University provides the following transportation services:

- Bus transportation for female students to and from the university.
- Bus transportation between the student residences and the university for men and women.
- Bus transportation for scientific and educational trips organized by various university departments.
- Campus Express: This is a free shuttle bus service that safely transports students around campus.

For additional information, please see the Transportation Services website at:

<http://www.qu.edu.qa/students/services/tra/index.php>



CHAPTER 3 STUDENT SUPPORT AND SERVICES

COMMUNITY INVOLVEMENT AND SERVICE LEARNING

Qatar University provides students with a support system and services that encourage them to make valuable choices towards their social, emotional and learning experiences, as well as their overall development. QU is devoted to the building of a conscientious community, and involves students in various community service initiatives which result in individual growth.

Qatar University's students are encouraged to participate in a wide array of Community and Learning Service Programs aimed at fostering civic engagement and responsibility, both in appreciation of the uniqueness of Qatari culture, as well as their exposure to a diversified experience.

STUDENT ACTIVITIES

QU recognizes that much of the learning that a student experiences on campus takes place outside the classroom. It is the belief of the University that student activities assist in the growth of students to their fullest potential. Student activities aim to support the academic goals of the student by providing activities and programs designed to promote and maximize students' curricular and co-curricular experience in education, recreation, social interaction, and personal growth. For additional information, please visit the Student Activities Department's website at www.qu.edu.qa/students/activities.

STUDENT LIFE

Campus Events

All students are encouraged to develop their unique personal as well as academic potential by participating in a wide variety of University sponsored student activities, programs, and events that combine culture, learning and entertainment. Such events include the National Day Festival, Cultural Village, Talent Show, Annual Play and Club Days in addition to a wide variety of other co-curricular opportunities that are publicized on campus throughout the year.

Sports and Recreation

QU offers students, alumni, faculty and staff a wide range of opportunities for competitive and recreational sports. Throughout the year, students are given the opportunity to compete against other QU teams, teams of other universities, or the community.

These programs are designed to promote a team-oriented atmosphere and leadership opportunities for all participants. The University also provides instructional classes in swimming, first aid and similar classes that interest students. Additionally, certified workshops and training sessions in a variety of fields are frequently available.

Moreover, the QU community has accessibility to three well-equipped sports facilities, including an aquatic complex for men, and a stadium and Indoor Sports Complex for women. The aquatic complex includes

a diving pool, an Olympic size pool, and a children's/training pool. A variety of sports can be played in the outdoor courts, including tennis, volleyball, and basketball. In addition, an all-year football field and athletic track is also available for student use. A well-equipped gymnasium receives a large number of students and QU staff or faculty. Table tennis, billiards, and other recreational games are available in the Student Activities Buildings. Daily passes and yearly membership are available to the QU community and the public at nominal fees. For more information or any inquiries please contact sports@qu.edu.qa.

Culture and Exchange Programs

Qatar University students enjoy a diversity of programs and trips through which they can explore other institutions and cultures. The Student Activities Department facilitates and supports incoming and outgoing exchange students as well as any QU student who should travel to benefit from the educational opportunities offered through Qatar University.

Numerous and diverse off-campus opportunities are also available, including:

- Academic/research conferences where students represent Qatar University by presenting and defending their research in various forums, both regionally and internationally.
- Cultural / Educational excursions where select Qatar University students visit reputable educational institutions. Students from these institutions reciprocate by visiting QU. An example of this type of program is the program with Peace College located in North Carolina, USA.
- Students may be selected to officially represent QU regionally or internationally in sports, recreational or educational activities. Currently, QU students regularly participate in the Cultural and Scientific Week in Saudi Arabia, as well as sport tournaments in Egypt and Oman.
- For-credit study abroad and exchange programs.

Students who are interested in any off-campus opportunity can apply online or contact studentexchange@qu.edu.qa

Student Services

Student Affairs offers extensive student services and programs designed to create a stimulating and supportive environment that enhances the personal development, learning, educational success and career preparation of students.

Academic Support Services

The Student Learning Support Center (SLSC) provides academic support services to all students at QU. The SLSC is a supportive environment where students can seek assistance with course assignments, the transition to college academic life, or other academic issues. SLSC programs include: Peer Tutoring, the Writing Lab, Academic Success and Writing Workshops, and Academic Counseling. All programs are designed to help students become independent and successful learners by improving their study skills and self-confidence, increasing their knowledge of course material, encouraging a positive attitude toward education, and preparing them for lifelong learning.

The SLSC provides peer tutoring in a variety of undergraduate courses and all Foundation Program courses, and special programs are offered to assist students in improving their English speaking ability. Individual academic counseling is also available to students who are struggling in their courses.

The SLSC Writing Lab supports student writers in their efforts to become better writers, rather than to produce perfect papers. At the Writing Lab, students receive assistance with every stage of the writing process, from generating ideas to completing a final draft. Students are welcome to use the Writing Lab services for any course at QU. The SLSC is located in both the Women's and Men's Activities Buildings, and all services are free of charge to QU students. For additional information on academic support services at QU, visit the Student Learning Support Center website at:

<http://www.qu.edu.qa/students/services/slsc/index.php>.

Career Services

The Career Services Center provides counseling, training and professional development services and helps to prepare students to engage and compete for the best career opportunities. It specializes in providing QU students with student employment during their study at QU. Additionally, the Center provides students with sponsorship and internship opportunities and supports a list of publications on career guidance which may be borrowed by students. For additional information, visit the Career Services Center website at:

<http://www.qu.edu.qa/students/services/csc/index.php>.

Counseling Services

The Student Counseling Center provides the QU community with a variety of counseling and psychological services. These services include individual and group counseling, psychological testing, and psycho-educational programs.

The aim of the Center is to promote the personal and social growth and development of the QU student, and to help him/her adjust to the demands of university life and education. For additional information regarding the services provided by the student counseling center, please visit their website at: <http://www.qu.edu.qa/students/services/scc>.

Helpdesk

The Student Helpdesk Section aims to provide students with a single point of reference for all general inquiries. The Helpdesk provides the following services to QU students:

Reception Desk

The Reception Desk responds directly to general questions and complaints, and attempts to solve problems on behalf of students. In addition, the Reception Desk also provides general information to visitors to the University.

Students Call Center

The Student Call Center receives calls from prospective, current or graduate students, parents and any external stakeholders and provides them with answers on issues related to all services offered by the University, and if necessary, transfers their calls to the concerned depart-

ments. The Student Call Center is available during university working hours on: 4444-4403. The Call Center serves as a vital link for internal and external university communications, and remains an important part of the services offered by Qatar University, as it reduces the efforts on students and reduces the pressure on the rest of the departments in the Student Affairs Sector, colleges and various offices at the university.

International Students

The International Students Section provides support services designed to assist international students with any academic, personal, financial and immigration related questions or issues, and presents students with an opportunity to become involved in the QU community. Currently, our international students come from around 70 countries.

The International Students Section is responsible for the welfare of the students whose residency permit is sponsored by Qatar University, and assists international students to secure their entry visa, residency permit, and exit permit; issue annual airline tickets for eligible scholarship students; issue formal sponsorship letters, and coordinate accommodation with the QU Housing Department.

The International Students Section also oversees admission to the Arabic for Non-Native Speakers Program. For additional information, please visit their website at: <http://www.qu.edu.qa/students/services/is>.

New Student Orientation

New Student Orientation is a full-day event designed to assist new Foundation Program and Undergraduate students become familiar with the exciting and challenging opportunities that Qatar University offers.

Throughout the orientation day activities, students will be organized into smaller college groupings, allowing them to become familiar with their academic program and to better connect with their academic advisors, college peers, and ultimately, with Qatar University. Attendance at the New Student Orientation is mandatory for all new Foundation Program and undergraduate students. Students who fail to attend their assigned orientation day may not be able to attend Qatar University and will need to re-apply for admission in a future semester. For more information, please visit the New Student Orientation website at: http://www.qu.edu.qa/students/admission/new_student_orientation.php.

Special Needs

Qatar University is committed to providing all academically qualified students with educational opportunity. Every effort is exerted to ensure fair and appropriate access to programs, services, facilities, and activities for students with special needs. The Special Needs Center provides services and support technologies that are tailored to the needs of individual students throughout their tenure at the University. Currently, support services are provided to students with visual impairments (blindness or low vision), physical impairments, and Dyslexia. Some of the services and accommodations provided include academic testing accommodations, use of assistive technology, student note-takers/note taking technology, alternate text formatting for print materials; priority registration; and advocacy with faculty to assure appropriate academic accommodations. For additional information on services offered by the Special Needs Center, please visit their website at: http://www.qu.edu.qa/students/services/special_needs/index.php.

إدارة التسجيل Registration Department



CHAPTER 4 ADMISSION

ADMISSION TO QATAR UNIVERSITY

Applications from candidates who satisfy QU's minimum admission requirements are considered for admission. The minimum admission requirements are based on a number of academic qualifications that will ensure students success during their course of study. In addition to these qualifications, admission takes into consideration the capacity of each college and program, as well as the needs of the local community. Students are admitted to QU for the semester of their application on a competitive basis.

HIGH SCHOOL REQUIREMENTS

In general, QU may admit students who have completed a minimum of 12 years of formal education and who have graduated from various secondary school programs of study, according to the requirements indicated below. It is important to note that the high school requirements mentioned in this section may change according to the competitiveness of the applicant pool and the available capacity in each college or program. Additionally, each college may have different high school requirements and colleges do reserve the right to stipulate additional requirements to the admission minimums listed below before the applicant is considered for admission.

QATARI SECONDARY SCHOOL CERTIFICATE

1. General Secondary Schools

A student's performance in grade 12 is considered during the admissions process. The student is required to submit official documents showing his/her scores in all subjects taken in grade 12. A minimum score of 70% for Science stream and 75% for Arts stream is required in order to be considered for admission to QU. Different colleges or programs may require scores higher than these minimum percentages stated here.

2. Independent Schools

Effective the 2009/2010 academic year, graduates from Independent Schools are considered for admission according to Qatar Senior School Certificates (QSSC) on the basis of the total result for the final year of high school. Students obtaining the Independent Certificate prior to the 2009/2010 academic year will be considered on the basis of the Table of Score Equivalency in the respective academic year.

PRIVATE AND INTERNATIONAL SCHOOL CERTIFICATES

The more common high school equivalency requirements are listed below. Additional high school equivalency information is available from the Admissions Department.

1. American High School Diploma

A graduate of an American secondary / high school or a holder of an AP (Advanced Placement) certificate must have fulfilled the following conditions:

- Attended a minimum of 12 years of schooling.
- Been awarded with a High School Diploma in a General Studies Curriculum with a minimum cumulative GPA of 2.00 on a 4.00 scale "C", and a minimum of 70% during the final year of high school.
- Passed at least six different subjects, one of which must be science (biology, physics, chemistry), one mathematics (algebra, trigonometry, geometry), and one humanities or social sciences at the junior or senior year.
- Successfully completed at least one course in the English Language.
- Passed with a minimum grade of "C" or equivalent in one mathematics and two science subjects at the junior or senior level (applicable for those applying to programs requiring a science track certificate).
- Advance Placement (AP) courses, if taken, should be completed with a minimum grade of 3.

2. British Secondary School Certificates

A student who has sat for one of the British Secondary School Examinations must have fulfilled the following requirements:

- Completed grade 12 or year 13, depending on the system from which the applicant has graduated.
- Passed at least six IGSC (O Level) subjects with a minimum grade of "D", one of which should be English, one science (biology, chemistry, or physics), and one math.
- Passed a minimum of two subjects at the Advanced (A) or (AS) level or a combination of (A) and (AS) level subjects with a minimum grade of "D".
- Passed with a minimum score of "C" in two science subjects and one math subject at the pre-calculus level (applicable for those applying to programs requiring a science track certificate).

3. International Baccalaureate (IB) Certificate

A student holding a full IB Diploma or an IB Course Certificate and who has passed six subjects, at least two of which must be at the HL and the other four at the SL level, is eligible for admission to QU. These subjects should include a second language, one math, and one science. The student should have attained a total score of 24 out of 42, excluding grades for Theory of Knowledge (TOK) and Extended Essay. In this case, a student is eligible for admission to QU based on the following equivalencies which are recognized by many universities:

Grade	Percentage Equivalency
Grade 7	100%
Grade 6	90%
Grade 5	80%
Grade 4	70%
Grade 3	60%
Grade 2	50%
Grade 1	40%

The composite score of a student is calculated by summing the equivalent of each subject grade and dividing this sum by the total number of subjects.

Example:

Math = 5, English = 7, Physics = 3, Economics = 4, History = 4, Chemistry = 4.
 Composite Score = $80+100+60+70+70+70 = 450 \div 6 = 75\%$.

Students who wish to enroll in a college and program requiring a scientific track certificate must have satisfied the following conditions:

- A minimum score of 4 in math and two science subjects. Two of these subjects must be at HL (colleges will determine which courses must be taken and at what level).
- A minimum score of 3 in the other four subjects.

Students who wish to enroll in a college and program requiring an art track certificate must satisfy the following conditions:

- Scored a minimum of 3 in two subjects at HL. These two subjects may be:
 - o One language subject and one individual and society subject at HL
 - o Two languages at HL
 - o Two individual and society subjects at HL
- Scored a minimum of 3 in four additional subjects, one of which should be Arabic for native speakers. The other three subjects must be math, science, and a subject from Group 6. These subjects may be passed at the SL or HL level.

HIGH SCHOOL PERCENTAGE EXCEPTION

Applicants who do not satisfy the initial high school percentage requirements listed above may still apply to the college and major of their choice by completing 12 years of formal education and satisfying the following English and Mathematics competency requirements:

Competency	Minimum Requirement
English Competency	IELTS 5.5 or TOEFL 500
Mathematics Competency	ACT 24 or SAT 550

The Dean of the college will consider such requests against the quality and depth of the applicant pool, the available capacity within the applicant's intended major, and high school subject grades.

ADDITIONAL REQUIREMENTS

In addition to the minimum high school requirements listed above, the following may also be requested by individual colleges before the applicant can be considered for admission: (for the requirements of specific programs, please consult the relevant academic college):

- Scores received in specific subjects.
- A writing sample (essay) of the student. The student may be required to verify that it is his/her own work.
- An interview
- Screening tests

TRANSCRIPT REQUIREMENTS

Qatar University requires that all transcripts submitted in support of an admission application be final, official and authenticated according to the following sets of standards:

1. Qatari Secondary High Schools

All applicants who attended a Qatari government high school must ensure that the following transcript requirements are met:

1. Transcript is final.
2. Transcript is official.

2. Qatari Private High Schools and Universities

All applicants who attended a private high school or university located in Qatar must ensure that the following transcript requirements are met:

1. Transcript is final.
2. Transcript is official.
3. Transcript is stamped and signed by an appropriate high school or university official.
4. High school transcript is certified by the Qatar Ministry of Education for Private Schools.

3. International Private High Schools and Universities

All applicants who have attended a high school or university outside of Qatar, must ensure that the following transcript requirements are met:

1. Transcript is final.
2. Transcript is official.
3. An Arabic or English translation of the final transcript must accompany the transcript if it is issued in a language other than Arabic or English.
4. All high school transcripts must be certified by either the Ministry of Education or the Ministry of Foreign Affairs in the country in which the school is located. The transcript must also be certified by either:
 - Qatar Embassy in that country; or
 - Embassy of that country located in Doha.
5. If the university is accredited by an international accrediting association (accreditation recognition must be listed on the official transcript), no further attestation is required.
6. If the university is not accredited internationally, the transcript must be certified by the Ministry of Higher Education or equivalent in that country in which the university is located. The transcript must also be certified by either:
 - Qatar Embassy in that country; or
 - Embassy of that country located in Doha.

UNDERGRADUATE APPLICATION CATEGORIES

Applicants are offered undergraduate admission to Qatar University under one of the following six categories:

1. First Year Admission

All applicants who have never attended a university, or who have not earned at least 24 credit hours at a university, and are applying to Qatar University as either Foundation Program or Undergraduate applicants are classified as First Year applicants. First Year applicants may apply for either fall or spring admission and are required to submit the following:

- Complete Admissions Application and Signature page.
- Final and official high school transcript.
- Health Certificate.

- Photocopy of the applicant’s Qatar ID card. (Applicants from outside Qatar should provide a copy of their passport)
- Two passport sized photographs.

First Year undergraduate applicants must satisfy all undergraduate admission requirements for the semester of intended admission and must submit all appropriate application materials and supporting documents to the Admissions Department by the admission deadline. First Year admits are not eligible to receive transfer credit consideration for coursework completed prior to their semester of admission to QU.

2. Transfer Admission

All applicants who are currently attending or have previously attended another university and have earned at least 24 credit hours are considered transfer applicants, and may apply for transfer admission to the University. Transfer applicants may apply for either the fall or spring semester and are eligible for Undergraduate admission only.

All transfer applicants who meet the following minimum criteria will be considered for admission.:

1. Earned a General Secondary School Certificate or its equivalent.
2. Have completed a minimum of 24 credit hours of undergraduate coursework with a minimum cumulative GPA of 2.50 at a university accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
3. Have met Qatar University’s English, Mathematics and Computer Science competency requirements. Applicants who do not satisfy these competency requirements, are not eligible for Foundation Program admission.

Transfer applicants are required to submit the following documents to the Admissions Department:

- Complete Admissions Application and Signature page
- Official and certified university transcript
- Official English, Mathematics and Computer competency test scores
- Health Certificate
- Photocopy of the applicant’s Qatar ID card (Applicants from outside Qatar should provide a copy of their passport)
- Two passport sized photographs

Undergraduate transfer applicants must satisfy all QU undergraduate transfer admission requirements for the semester of intended admission, and must submit all appropriate application materials and supporting documents to the Admissions Department by the admission deadline. Applicants who were subject to disciplinary action or non-academic dismissal at a prior university/college may not apply or enroll as a transfer student.

Transfer of Credit

Transfer credit may only be considered if the applicant is admitted as a transfer student and has completed a minimum of 24 credit hours of undergraduate coursework with a minimum cumulative GPA of 2.50 at a university accredited by an international accrediting association, or by

the Ministry of Higher Education or equivalent in that country. Transfer applicants must submit an official transcript from each institution previously attended, as well as a catalog course description or course syllabus for all courses for which transfer credit is sought.

Grades and quality points earned in courses accepted for transfer will not be included in the grade point average to be maintained at Qatar University, but the credits will count toward the total number required for graduation.

A maximum of 50% of required credit hours with a minimum grade of “C” or higher may be considered for transfer credit evaluation. Credit hours earned more than five years prior to time of application cannot be transferred. Individual colleges determine the exact number of credit hours that may be transferred and applied towards their specific degree programs.

ADVANCED DIPLOMA DEGREE FROM CNA-Q

Under a special articulation agreement, students who have completed an advanced diploma degree from the College of the North Atlantic – Qatar (CNA-Q) are eligible to seek admission to a limited number of Qatar University degree programs.

To be considered for admission to Qatar University under this articulation agreement, applicants must satisfy the following requirements:

1. Have earned a minimum cumulative GPA of 3.50 in any of the following CNA-Q advanced diploma degree programs:
 - Business Management (Accounting)
 - Business Management (Human Resource Management)
 - Business Management (Marketing)
 - Electrical Engineering Technology “power and controls”
 - Mechanical Engineering Technology
 - Instrumentation Engineering Technology
 - Internet Applications Developer
 - Programmer Analyst (Business)
 - Computer Support Specialist
2. Must have satisfied Qatar University’s English, Mathematics and Computer competency requirements. Applicants who have not satisfied these competency requirements are not eligible for Foundation Program admission. All applicants under this articulation agreement are required to submit the following documents to the Admissions Department:
 - Complete Admissions Application and Signature page
 - Final, official and certified university transcript
 - Official English, Mathematics and Computer competency test scores
 - Health Certificate
 - Photocopy of the applicant’s Qatar ID card (Applicants from outside Qatar should provide a copy of their passport)
 - Two passport sized photographs

CNA-Q articulation agreement applicants must satisfy all QU undergraduate admission requirements for the semester of intended

admission, and must submit all appropriate application materials and supporting documents to the Admissions Department by the admission deadline.

Transfer of Credit from CNA-Q

CNA-Q courses with a minimum grade of ‘B’ may be considered for transfer evaluation. Credit hours earned more than five years previously cannot be transferred. Credit earned at CNA-Q in excess of five years prior to admission to Qatar University is not eligible for transfer. Specific courses and the maximum number of credit hours from CNA-Q that may be considered for transfer credit evaluation are prescribed by the articulation agreement. Grades and quality points earned in courses accepted for transfer will not be included in the grade point average to be maintained at Qatar University, but the credits will count toward the total number required for graduation.

3. Visiting Students

Applicants who are currently attending another university and who do not intend to graduate from Qatar University may be considered for admission as a Visiting Student. Visiting admission is available for the Fall, Spring and/or Summer semesters and visiting students may register in a maximum of 48 credit hours or 4 semesters of course work at Qatar University, whichever comes first. Visiting students may be enrolled as either full-time or part-time students.

All visiting applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Have completed a minimum of 24 credit hours of undergraduate coursework with a minimum cumulative GPA of 2.50 from a university accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
- Complete Admissions Application and Signature page.
 - Official and certified university transcript.
 - Health Certificate.
 - Photocopy of the applicant’s Qatar ID card. (Applicants from outside Qatar should provide a copy of their passport)
 - Two passport sized photographs.

Undergraduate visiting applicants must satisfy all QU undergraduate visiting admission requirements for the semester of intended admission and must submit all appropriate application materials and supporting documents to the Admissions Department by the admission deadline. Although visiting students are not considered degree-seeking students at Qatar University, visiting students are held to the same academic and Student Code of Conduct standards as all other Qatar University degree-seeking students. All QU coursework taken by a visiting student remains on the academic record. If a visiting student is dismissed from Qatar University, this dismissal is permanent and the student is not eligible to return to Qatar University at any point in the future.

Visiting students may apply for transfer admission to Qatar University. To be considered for transfer admission to Qatar University, applicants must satisfy the following requirements:

1. Have completed a minimum of 24 credit hours of undergraduate coursework with a minimum cumulative GPA of 2.50 from a university accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Have completed a minimum of 24 credit hours of undergraduate coursework in residence at Qatar University with a minimum cumulative GPA of 2.00.
3. Met Qatar University’s English, Mathematics and Computer Science competency requirements.
4. Satisfy all QU undergraduate transfer admission requirements for the semester of intended admission and must submit all appropriate application materials and supporting documents to the Admissions Department by the admission deadline.

Visiting students, who are granted transfer admission to Qatar University and who satisfy the following guidelines, may be eligible for transfer credit consideration towards a QU degree:

1. A maximum of 36 undergraduate credit hours earned at Qatar University in courses passed with a grade of “D” or higher may be applied.
2. In addition to applying their QU credit, visiting students granted transfer admission to QU may also seek to transfer undergraduate course credit from prior universities to their Qatar University degree. All transfer of credit regulations apply.

4. Non-Degree Students

The University offers non-degree admission to a limited number of individuals who may enroll in undergraduate credit courses at QU but who are not considered pursuing an undergraduate degree program. Non-degree students may register in a maximum of 48 credit hours or 4 semesters of course work at Qatar University, whichever comes first. Non-degree students may be enrolled as either full-time or part-time students.

All non-degree applicants who meet the following minimum criteria will be considered for admission to Qatar University:

1. Have completed a minimum of 24 credit hours of undergraduate coursework with a minimum cumulative GPA of 2.50 from a university accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Satisfied the following minimum English, Mathematics and Computer Science competency requirements:
 - 1) English Competency: IELTS = Band 5.5 or TOEFL = 500
 - 2) Mathematics Competency: ACT = 24 or SAT = 550
 - 3) Computer Competency: IC 3 = 2350

Applicants who do not satisfy these competency requirements are not

eligible for Foundation Program admission.

All non-degree applicants are required to submit the following documents to the Admissions Department:

- Complete Admission Application and signature page
- Final, official and certified university transcript
- Official English, Mathematics and Computer competency test scores
- Health Certificate
- Photocopy of the applicant's Qatar ID card (Applicants from outside Qatar should provide a copy of their passport)
- Two passport sized photographs

Non-degree applicants must satisfy all QU undergraduate admission requirements for the semester of intended admission, and must submit all appropriate application materials and supporting documents to the Admissions Department by the admission deadline.

Non-degree students are held to the same academic and Student Code of Conduct standards as all other Qatar University degree-seeking students. All QU coursework taken by a non-degree student remains on the academic record. If a non-degree student is dismissed from the University, this dismissal is permanent and the student is not eligible to return to Qatar University at any point in the future.

At Qatar University, non-degree students may apply coursework taken during a non-degree status towards a second bachelor's degree. Non-degree students may apply a maximum of 48 undergraduate credit hours earned at Qatar University in courses passed with a grade of "D" or higher toward a second bachelor's degree. All second bachelor's degree requirements apply.

5. Second Bachelor's Degree

A student who has previously earned a bachelor's degree and wishes to pursue further undergraduate work in a different major, may apply for admission to a second bachelor's degree at Qatar University.

All applicants seeking a second bachelor's degree who meet the following minimum criteria will be considered for admission to Qatar University:

1. Earned bachelor's degree with a minimum cumulative GPA of 2.00 from a university accredited by an international accrediting association or by the Ministry of Higher Education or equivalent in that country.
2. Satisfied Qatar University's English, Mathematics and Computer Science competency requirements. Applicants who do not satisfy these competency requirements are not eligible for Foundation Program admission.

All second bachelor's degree applicants are required to submit the following documents to the Admissions Department:

- Complete Admissions Application and Signature page.
- Final, official and certified university transcript.
- Official English, Mathematics and Computer competency test scores.

- Health Certificate.
- Photocopy of the applicant's Qatar ID card. (Applicants from outside Qatar should provide a copy of their passport)
- Two passport sized photographs.

Second bachelor's degree applicants must satisfy all QU undergraduate admission requirements for the semester of intended admission and must submit all appropriate application materials and supporting documents to the Admissions Department by the admission deadline.

In order to earn a second bachelor's degree from Qatar University, the following requirements must also be met:

- Pursue a different major than was earned in the first bachelor's degree.
- Complete a minimum of 60 credit hours at QU with at least 30 credit hours taken in residence at the 200 level or above.
- Meet all course and credit hour requirements in the major, as well as residency and degree requirements for the second bachelor's degree program as defined in the catalog under which the student is admitted.
- Earn a cumulative grade point average of 2.00 or higher in all course work completed at Qatar University.

The Qatar University cumulative Grade Point Average (GPA) and earned credit hours will be assessed continuously through the period of study of the student at the Undergraduate level. Qatar University will assess appropriate tuition and associated fees for all students taking any coursework after the completion of the first degree.

Re-admission to Qatar University is competitive and considers the academic qualifications of applicants, as well as the capacity of each college and department for the intended semester of admission. Applicants seeking re-admission must satisfy all undergraduate admission requirements for the semester of intended admission and must submit all appropriate application materials to the Admissions Department by the admission deadline.

Academically Dismissed Students

Students who are academically dismissed from Qatar University may seek re-admission by satisfying QU's transfer admission requirements. Courses and grades earned prior to the student's academic dismissal will remain on the QU transcript but the student's attempted hours, earned hours, and cumulative grade point average will start fresh upon re-admission. Re-admitted students may be considered for possible transfer credit according to QU's transfer credit rules.

No-Show Students

Students admitted to Qatar University who fail to register for classes by the end of the Drop/Add period for the semester of their admission, are considered no-show students resulting in their admission being revoked and their admission file destroyed. No-show students who wish to attend Qatar University in a future semester will need to re-apply for admission.

COMPETENCY REQUIREMENTS

All students are expected to possess minimum basic skills in order to be eligible for enrollment in their desired academic programs. In order to be considered for undergraduate admission to Qatar University, all applicants with the exception of students applying to the College of Sharia, and Arabic Language Specialty must demonstrate proficiency in English, Mathematics, and Computer Science by satisfying the following minimum competency requirements:

1. English Competency

- Achieving a minimum score of 500 on the paper-based Test of English as a Foreign Language (TOEFL); or
- A minimum score of 61 on the internet-based TOEFL (IBT); or
- A minimum score of 173 on the computer-based TOEFL (CBT); or
- A minimum score of Band 5.5 on the International English Language Testing System (IELTS) test.

2. Mathematics Competency

- A minimum score on the Mathematics portion of the Scholastic Aptitude Test (SAT) or on the Mathematics portion of the American College Test (ACT) is required as follows:

Minimum SAT or ACT Requirement	College
SAT score of 460 or ACT score of 19	College of Arts & Sciences (Arts Majors)
	College of Education
	College of Law
SAT score of 500 or ACT score of 21	College of Business & Economics
	Sports Science program
SAT score of 550 or ACT score of 24	College of Arts & Sciences (Science Majors)
	College of Engineering
	College of Pharmacy

3. Computer Science Competency

- A minimum total score of 2350 on the Internet and Computer Core Certificate Test (IC3).

Applicants who fail to satisfy the minimum English, Mathematics and Computer Science competencies listed above, will be considered for admission to the Foundation Program. Students in the Foundation Program will be given the opportunity to acquire these skills and satisfy the required minimum competencies. The maximum period of enrollment in the enrolling in the Foundation Program is four semesters.



ADMISSION DATES AND DEADLINES

Admission into the incoming class is both extremely competitive and limited. Therefore, applicants are strongly encouraged to submit their admissions application and all required documentation as early as possible. Qatar University will not accept applications after the published application deadline. A comprehensive listing of admission application deadlines can be found on the Qatar University website at:

www.qu.edu.qa.

Admission decisions are generally announced about one month after the admissions application deadline. Students who do not qualify for admission into their desired major will have an opportunity to submit a Change Major request after the admission decisions are made available. Students need to report to the Admissions Department to receive their admission decision.

STUDENT CLASSIFICATION

Students are classified according to the following categories:

1. Regular Degree-Seeking Students

Regular students are those admitted to an academic program at QU that leads to a degree.

1. Regular Full-Time Students

Regular full-time students are those who are expected to maintain a minimum load of 12 credit hours per semester.

2. Regular Part-Time Students

Regular part-time students are those who are expected to maintain a maximum load of 11 credit hours per semester. Additionally, all regular part-time students must pay the required tuition fees prescribed by QU.

- Regular Part-time status may be granted to a student with special community and family circumstances following a review of his/her academic profile.
- Part-time status can be changed to full-time status upon the student's request and upon the recommendation of his/her academic advisor.

2. Visiting and Non-Degree Students

Visiting and non-degree students are not classified as regular degree-seeking, as their admission status does not allow them to earn a degree from QU. Visiting and non-degree students may register in a maximum load of 18 credit hours per semester. Visiting and non-degree students are held to the same academic and Student Code of Conduct standards as all other degree-seeking students at Qatar University. All University coursework is applied to the academic record of the student, and remains on the transcript. If a visiting or non-degree student is dismissed from the University, this dismissal is permanent and the student is not eligible to return to Qatar University at any point in the future.

SELECTING A MAJOR

Students are asked to declare the major they wish to pursue when applying for admission to Qatar University. However, admission to a declared major is contingent upon meeting the requirements of the relevant program and the program capacity in that year. Some colleges admit their students initially to a general program prior to admitting them to a specific program of study. Such admission is contingent upon the admission criteria mentioned earlier, the student's performance in the Foundation Program, and in the general program of his/her prospective college. All students, however, must declare their selected major before completing 36 credit hours of full-time enrollment.

NEW STUDENT ORIENTATION

All admitted students must attend the New Student Orientation prior to the commencement of the Fall or Spring semester. **This is an important program offered to new students and attendance is mandatory.** The purpose of the New Student Orientation is to give students an overview of the programs, services, academic advisement, career services, campus life, registration process, and social services that are available. Once admitted, every student is assigned to an academic advisor who will meet with and review the academic record and placement test results, and make recommendations regarding the appropriate courses that the student needs to register for, in each semester.



CHAPTER 5 TUITION, FINANCIAL AID, AND ACADEMIC SCHOLARSHIPS

TUITION FEES

Foundation Program and Undergraduate Students

Tuition fees at QU are based on the academic major (e.g. science, business, engineering, etc...) of the course in which the student is registered. The fee payable for a given course will be the same for all students registered in the course, irrespective of their major area of study, and according to the schedules shown in this section. Qatari students are exempted from tuition fees unless explicitly expressed under certain conditions. Tuition-exempted students are required to pay tuition fees for all courses they repeat beyond 12 credit hours. Tuition fees are due prior to the first day of classes.

Course Major	Tuition Fees per credit hour in QR
Art	400
Education	400
Law	400
Shari'a and Islamic Studies	400
Business	500
Foundation Program	500
Science	500
Engineering	600
Pharmacy	600

*Tuition fees listed above are effective for students admitted since Fall 2009. Students admitted in prior semesters may be assessed differently.

Tuition fees for Qatari students attending part-time are QR.100 less per credit hour than the amounts shown above.

Diploma Level Students

The tuition fee for students enrolled in Diploma Programs is QR 1,000 per credit hour.

Master Level Students

The tuition fee for students enrolled in any of the Master Programs is QR 1,250 per credit hour.

Doctorate Level Students

The tuition fee for students enrolled in any of the Doctorate Programs is QR 1,250 per credit hour.

Arabic for Non-Native speakers Program Students

The tuition fee for students enrolled in the Arabic for Non-Native Speakers Program is QR 600 per credit hour.

Tuition Exemption

Qatari and tuition-exempted students are relieved from Foundation Program and Undergraduate tuition fees unless explicitly expressed under certain conditions. Qatari and exempted students who do not complete their bachelor's degree requirements by the following credit hour limits will be assessed tuition fees for all additional credit hours taken until graduation:

Student's Category	Credit Hour Limit
Undergraduate students	Graduation with a maximum of one major and one minor + 12 credit hours.
Students who changed their major and/or minor after being admitted at the Undergraduate level	Minimum credit hours required for graduation in the declared major and minor, if any + 12 credit hours.
Transfer students	Credit hours remaining (beyond the transferred credit) for one major and one minor (if any) + 12 credit hours.

Tuition Fees Refund Policy

Students who drop one or more courses, or withdraw from the semester after the add and drop period, are subjected to the penalties shown in the following table.

Semester	Time of Drop or Withdrawal after End of Add/Drop Period	Penalty
Fall and Spring Semester	Up to 2 weeks	20%
	After 2 weeks and up to 4 weeks	50%
	After 4 weeks and up to 8 weeks	75%
	After 8 weeks	100%
Summer Semester	Up to 1 week	20%
	After 1 week and up to 2 weeks	50%
	After 2 weeks	100%

- If a full week falls within an official holiday, it is not counted in the weeks shown in the above table.
- Penalties shown in the above table apply to both tuition-paying and tuition- exempted students.

OTHER UNIVERSITY FEES

Lockers

University lockers are available at a rate of QR 25 per semester; no refund is available.

Textbooks

For textbooks costing QR 50 or more, the student is charged 50% of the book price. Students are charged full price for text books priced below QR 50. This is a non-refundable payment.

University Housing

Students living in the student accommodation facilities provided by the University are charged QR 1200 per month for room, board and transportation to and from the university. This is a non-refundable charge.

University Transport

Transportation provided by the University is available at a rate of QR 700 per semester. This is a non-refundable charge.

FINANCIAL AID

Qatar University provides a variety of financial aid options to students. These programs are available to students whose financial situation may prevent them from continuing their university education. For additional information regarding financial aid, please contact the Financial Aid Section by e-mail at studentfund@qu.edu.qa , or visit their website at: http://www.qu.edu.qa/students/services/financial_aid/index.php.

SCHOLARSHIPS

Qatar University offers numerous scholarships to attract and support academically qualified students. Although scholarships are granted on a competitive basis, QU does consider financial need when considering scholarship awards. All scholarships cover tuition fees; however, some scholarships may also include one or more of the following:

- Accommodation in university housing and transportation to and from the campus.
- Annual ticket to the home country for non-resident students in Qatar.

Scholarship Types

The following competitive and non-competitive academic scholarships are offered by Qatar University:

Undergraduate Scholarships:

GCC Countries

These scholarships are awarded to GCC nationals who earn their Qatari secondary certificate or equivalent from a country other than the State of Qatar. Certain GCC scholarship recipients may be nominated through their embassies.

GCC Students

These scholarships are awarded to children of Qatari mothers married to GCC nationals, or female GCC students married to Qataris.

Children of QU Employees

These scholarships are granted to children of QU employees.

Qatari National's Children

These scholarships are allocated for non-Qatari students of a Qatari mother or a Qatari father. Recipients of these scholarships are only exempted from tuition fees and there are no other benefits.

H.H. Emir Scholarship for Academic Excellence

These scholarships are awarded on a competitive basis to 10 male and 10 female students of expatriates residing in Qatar.

Islamic and Other Countries

These scholarships are available to students from the Islamic world and countries other than those of the GCC.

Outstanding Performance

These scholarships are awarded to QU students who have shown outstanding academic performance in their course work at QU.

Qatar Inhabitants

These scholarships are granted to bearers of the Qatari inhabitant document (Qatar inhabitants).

Short Arabic Language (for Arabic Non-Native Speakers)

Granted to students enrolled in the Arabic for Non-Native Speakers program.

In order to maintain a scholarship award, students must satisfy the minimum GPA and academic load requirements of the scholarship. Additionally, most scholarship awards are of a fixed award duration which may vary by scholarship type. Scholarship recipients are bound by all QU rules and regulations, and are responsible for all financial penalties incurred.

For additional information regarding academic scholarships, please contact the Scholarship Section by e-mail at scholarships@qu.edu.qa or visit their website at: <http://www.qu.edu.qa/students/admission/scholarships/index.php>



CHAPTER 6 ACADEMIC INTEGRITY

STUDENT INTEGRITY CODE

Universities are unique communities committed to creating and transmitting knowledge. They depend on the freedom of individuals to explore ideas and advance their capabilities. Such freedom, in turn, depends on the good will and responsible behavior of all members of the community, who must treat each other with tolerance and respect. They must allow each other to develop to the full range of their capabilities and take full advantage of the institutions' resources.

The Student Integrity Code aims at providing all students at QU with clear standards of behavior. By registering as a student, all students acknowledge their awareness and knowledge of the student integrity code and its procedures. Moreover, they understand the consequences of their violation of these standards; violations may be of an academic or non-academic nature.

Students attending an off-campus event as representatives of the University (such as conferences, or athletic teams or engaging in club activities) are subject to this code.

QU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, staff members and the wider University community. Moreover, QU expects its students to act maturely and responsibly in their relationships with others. Every student is expected to assume the obligations and responsibilities of membership required by the QU community.

As such, a student is expected not to engage in behaviors that compromise the integrity of themselves, as well as that of QU. While the University encourages its students to express themselves freely, this freedom is forfeited when it infringes on the rights and respect of others. Specifically, a student is expected to abide by the principles within the academic and non-academic domains as outlined below.

STUDENTS' RIGHTS AND RESPONSIBILITIES

Student Rights

QU recognizes the rights of its students to include:

- Access to the academic and non-academic opportunities available to them at the University, providing such opportunities fall within the standards and/or requirements adopted by the University.
- Freedom of thought and expression, subject to applicable policies, rules and laws adopted by the University.
- Equal opportunities regardless of race, color, gender, religion, ethnicity, age or disability.
- A fair University judicial process whenever applicable.

Student's Responsibilities

QU students should:

- Contribute to maintaining a safe and orderly University educational environment.
- Show respect to other individuals at QU; students, staff and visitors.
- Be familiar with and abide by all students bylaws, policies and procedures.
- Work to the best of their ability in all academic pursuits.
- Behave in a responsible manner.
- Pursue knowledge.
- Dress appropriately and according to the University rules and regulations in this regard.
- Accept responsibility for their actions.

JURISDICTION

All charges involving any violation of the Student Integrity Code will be transferred to the Vice President for Student Affairs (VPSA) for recording purposes and to determine appropriate action in consultation with concerned parties when the need arises.

DEFINITIONS OF ACADEMIC AND NON-ACADEMIC VIOLATIONS

Academic violations include, but are not limited to, the following:

Plagiarism

Plagiarism includes the following examples and it applies to all student assignments or submitted work: use of the work, ideas, images or words of someone else without his/her permission; use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks, and misrepresentation of the sources that were used.

Inappropriate Collaboration

Inappropriate Collaboration includes the following examples: working with someone else in developing, organizing or revising a submitted work without acknowledging that person's help. This work may include: projects, papers, oral presentations, research, design projects or take-home examinations, use of tutors for writing, editing or fabricating a submitted work, and use of unauthorized assistance in all cases of submitted work.

Inappropriate Proxy

Inappropriate Proxy is the state in which a student attends an exam or any academic activity or obligation in replacement of another student.

Dishonesty

Dishonesty in examinations and submitted work may include the following forms: Submission of non-original paper, test result, work and materials; any form of communication between or among students during examination; cheating from another student during examination; copying from another's paper, giving unauthorized assistance, obtaining unauthorized advance knowledge of examination questions, and the

use of mechanical or marking devices or procedures for the purpose of obtaining false scores on machine-graded examinations; submitting any material prepared by or purchased from another person or company.

Work completed for one course and submitted to another

In general, any work for one course should not be presented to another course. Similarly, the students are reminded that when incorporating their own past research in current projects, they must refer to such previous work.

Deliberate falsification of data

It involves the deliberate act of falsifying any kind of data or (manipulating) distorting any supporting documentation for a course work or other academic activity.

Complicity in academic dishonesty

Complicity in academic dishonesty means helping or attempting to help another student to commit an act of academic dishonesty, such as doing work for another student; designing or producing a project for another student; willfully providing answers during an exam or quiz; contacting a student on a mobile device while taking an exam and providing information; providing a student with an advance copy of a test; leaving inappropriate materials behind at the site of an exam or test and altering outcome results.

Interference with other students' work

It involves the intentional interference with the work of other students; sabotaging other students' laboratory experiments, research or digital files; and giving any misleading information or disrupting other students' class work.

Intellectual Property (IP) violations

Respect for original intellectual creativity is vital to academic discourse. This principle applies to works of all authors and publishers in all forms. This encompasses respect for the right to acknowledgement; the right to privacy and the right to determine the form, manner and terms of publication and distribution.

As a general rule, copying, distributing, making derivative work, displaying, or performing copyright-protected work requires the permission of the copyright owner. For purposes such as discussion, analysis, comment, news reporting, teaching, scholarship, or research, copyrighted work may be used without permission and will not be considered an infringement of copyright, provided that the source has been acknowledged. Since electronic information is easily reproduced, respect for the work and personal expression of others is especially critical in electronic media. Violations of authorial integrity, including plagiarism, invasion of privacy, unauthorized access, and trade secret and copyright violations may constitute grounds for disciplinary action against any member of the academic community.

Non-academic violations of QU's standard of conduct may include but are not limited to the following:

- Illegal trespassing or entering on any University property including any building, structure or facility.
- Harassment (verbal or physical) and/or intimidation of peers, faculty, and University visitors and employees.
- Disruptive, destructive, and abusive behavior within the confines of QU campus.
- Behavior that threatens the physical or emotional safety and well being of others within campus grounds, premises, and facilities.
- Any violation of the Qatari law committed within campus grounds, premises, and facilities.
- Theft, which includes stealing of private or University property or services while on University premises or in connection with any University activity.
- Violation of Qatar University Dress Code: QU recognizes cultural diversity and respects the requirements needed for a productive learning environment. Students are expected to dress in a manner respectful of the local culture and traditions. Inappropriate dress for both males and females is unacceptable. Violators will be subject to appropriate disciplinary measures.
- Damaging, destroying or defacing University property or that of any person while on University premises.
- Smoking in a non-smoking area in or around campus facilities.
- Unauthorized possession or duplication or use of keys of University buildings, facilities, or property.
- Unauthorized entry into or use of University facilities or property, including computer hardware and software.
- Unauthorized posting of signs, notices, flyers, banners, and announcements. Such material may be placed only on authorized bulletin boards, and other specified locations. They may not be posted on cars, trees, walls, doors, or glass surfaces. All students' events publicly to be distributed or displayed in most buildings on campus must be approved and stamped at Student Activities Department.

Adjudication of offenses

Cases resulting from alleged violations of the student integrity code are within the jurisdiction of a faculty member, department head, Dean of the College, and the Vice President for Student Affairs, who will consult with the Student Judiciary Committee (SJC), a university-wide committee to investigate cases of violations. The mandate of the Student Judiciary Committee is to advise the Vice-President for Student Affairs on individual cases with respect to academic or non-academic violation of the integrity code. The Committee, in conducting its business, will observe:

- a) The concepts of procedural fairness, and
- b) The existing QU Student Integrity Code.

This will be accomplished by considering the facts of each specific case; and examining the preceding deliberations to ensure that the procedures were consistent with QU policy.

In cases of academic offenses, if they are not resolved by the faculty member or within the department, the Dean of the College in which the alleged academic offense took place should consult with the College Student Affairs committee to investigate these cases. However,

academic offenses which may lead to a student's dismissal from the University should be forwarded to the Vice President for Student Affairs, who shall communicate the decision to the Vice President and Chief Academic Officer and President of the University for taking the decision. The ultimate decision to dismiss a student from the University lies within the jurisdiction of the University President.

DISCIPLINARY ACTIONS

A student is advised that violations of the Student Integrity Code will be treated seriously, with special attention given to repeated offenses. A notation of the student integrity code violation will be entered on the student's permanent record. Penalties for violations of QU rules and regulations or for acts of student misconduct may include one or more of the following:

Category One

- Resubmission of work assigned by the faculty member.
- Submission of additional work for the course in which the offense occurred.
- A lowered grade or loss of credit for the work found to be in violation of the integrity code.
- A failing grade of (F) or (WF) or denial of credit for the course in which the offense occurred.
- Reprimand from the dean of the college, which is a written statement of disapproval of behavior issued to the student, and filed in the records.
- Educational activities: They may include writing essays or setting a presentation for the community.

Category Two

- University Service: A student may be required to do a number of service hours, engaging in light work tasks, such as the maintenance of College / University property and/or clerical work.
- Loss of student employment eligibility and/or merit scholarship.
- Restitution- reimbursement to the University for any damage or misappropriation of University property.
- Restriction by exclusion from participation in social activities which includes but not limited to being prohibited from: representing QU in any official activity or event be it cultural or athletic; entering any of university facilities; or serving as an officer of any students' organizations.
- Warning: It is an official written notification that the student's behavior violates the Student Integrity Code; that the action or behavior must cease; and that further misconduct could result in additional disciplinary action.
- Probation: Disciplinary probation is a formal notice, affecting the non-academic status of the student, that the student's behavior is unacceptable within the University community. Probation requires that the student demonstrate during a specified period of time, that s/he is capable of meeting the conduct standards expected of members of the University community.

Category Three :

- Exclusion from academic privileges including Dean's list and VP list of honors.
- Strongly advised to attend treatment or counseling as determined by the director of the counseling center, in consultation with the VPSA.
- Dismissal for a specified term(s) from the university
- Expulsion from the University.

PROCEDURES AND GUIDELINES

The following procedures are to be followed in case of academic offenses by students:

1. The immediate responsibility for dealing with instances of academic dishonesty, plagiarism, disruption in classroom and other academic violations rests with the faculty member. In any case of an academic offense committed by a student, the faculty member should fill out the relevant form of student offense (Offense Record Form) which shall be documented in the student's personal file in the college's archives and within the office of the VPSA. This action will allow the University to monitor and record multiple cases of students' offenses at the University level.
2. In the case that a faculty member is convinced that the alleged offense has resulted from a lack of judgment on the student's part rather than an intended dishonesty, the faculty member should instruct the student for an acceptable academic work and must record it in the student file. In such cases, the faculty member may, for example, require the student to rewrite or correct the original work or assignment or to resubmit a substitute work or assignment.
3. The faculty member who is reporting an allegation of dishonesty must report such action within 3 working days from the date of occurrence or discovery of the alleged offense. The form Offense Record Form should be forwarded to the VPSA and the Department Head in which the alleged offense took place.
4. Based on the level of severity of the alleged offense, and after consultation with the faculty member concerned, the Department Head records his/her opinion (on the form) after meeting with both the faculty member and the student.
5. The form is then forwarded to the Dean of the College for either the final decision, or to be forwarded to the Vice President for Student Affairs. At the college level the Dean's decision must be based on the recommendations given by The College Student Affairs Committee whose members are elected at the beginning of the academic year. Members of this committee serve for two years and they include the Associate Dean of Student Affairs of the college, one or two elected faculty member(s) depending on the enrollment number in the college, and a student.
6. Recommendations for disciplinary actions of the first category (refer to previous section) may be approved and implemented by the dean of the college in which the student is enrolled. Significant cases of violations that require second and third category actions should be referred to the Vice President of Student Affairs for further review by the Student Judiciary Committee.

7. In all cases, offenses must be recorded and sent to the Vice President for Student Affairs for monitoring purposes.
8. In all cases the student must attend any meetings requested by the college in which the offense has taken place, or by the University, for hearing purposes. Failure to do so may result in making decisions based on available facts.
9. In cases where the faculty member is not satisfied with the decision of the College Committee, he/she may appeal the decision to the Vice President for Student Affairs.

As for **non-academic** offenses, any member of the University community may file a charge of misconduct against any student. The concerned party should fill out a non-academic offense record form within three days of the occurrence of the incident. Charges are to be filed with the Vice President for Student Affairs who will notify the student of the offense with which s/he is being charged, conduct interviews, determine if the Code has been violated and decide an appropriate response.

RECORDS OF DISCIPLINARY ACTIONS

Records of the violation and disciplinary actions, charges and sanctions will be maintained as part of the confidential records in the office of the VPSA and the respective dean of the college for a period of two years after the student graduates or ceases to be a student. Suspension and expulsion charges will become part of the student's official transcript of record.

Student appeals

Qatar University is committed to a policy of fair treatment of its students in their relationships with the administration, faculty, staff and other members of the University community. The purpose of this policy is to establish, and implement a student complaint procedure and complaints may be of an academic or non-academic nature.

Academic disputes

Academic complaint or appeal related to academic matters may include: admission, grades, academic suspension, charges of dishonesty, plagiarism, deliberate falsification of data, work completed for one course and submitted to another, and intellectual property violation.

Scope

This section sets forth the procedures which should be followed by a student who believes that he or she has been unfairly or improperly treated by a faculty member in connection with the academic process. For example, it applies to disputes over assignment of grades, decisions about program or degree requirements or eligibility, or claims that course requirements are unfair.

Informal resolution

The student should first try to resolve the grievance informally by discussing the grievance with the faculty member as soon as is reasonably possible after the student becomes, or should become aware of the matter. If the student and faculty member cannot reach an agreement, the student should discuss the grievance with the faculty member's department head. If the grievance is still not resolved, the student should

discuss the grievance with the college dean. If the student grievance is against the department head or the dean, the student should discuss the grievance with one administrative level higher than that of the department head/dean. In these informal discussions, the department head or dean is encouraged to mediate the dispute. In particular he/she should talk to both the student and the faculty member, separately or together, and should examine any relevant evidence, including any documentation the parties wish to submit.

Formal resolution

- File an official letter (completing an official form) written by the student outlining the complaint, the individuals involved, the date of the incident, and the location of the incident.
- The complaint will be addressed to one administrative level higher than the individual involved. For example, if the complaint is against a faculty member, the complaint should be addressed to the department head. If the complaint is against a department head, it should be addressed to the college dean.
- The student has ten (10) business days from the date of incident to file the complaint in writing.
- The complaint will be addressed by the appropriate administrative level in a timely and confidential manner and the student should be informed in writing of the outcome within 10 business days of submitting the complaint.
- If the student is not satisfied with the outcome of the complaint, the student has the right to file an appeal to one administrative level higher than that of the decision maker within ten (10) business days of receiving the decision.
- The appeal will be addressed by the appropriate administrative level in a timely and confidential manner and the student should be informed in writing of the outcome of his/her appeal within 10 business days of submitting the appeal.
- In all cases, if the student does not receive a formal response within 10 business days of submitting the complaint/appeal, the student should consider the request rejected and may appeal to the next level.
- In cases where the student believes that the proper procedures were not followed, the student has the right to appeal the decision to the Vice President for Student Affairs. The appeal must be filed within 10 business days of the date of the decision. The Vice President for Student Affairs shall review the paperwork of the complaint and the nature of the appeal, and make a decision. The outcome of the appeal is final and no further appeal is available.
- All paperwork related to the complaint, appeal, and decision should be forwarded to the Office of the Vice President for Student Affairs for archiving.

Non-Academic disputes

Non-academic violations include, but are not limited to, harassment (verbal or physical) and/or intimidation, disruptive or abusive behavior within the confines of QU campus, fines, fees, exclusion from a use of service, discrimination, record access, and violation of policy.

Scope

This section sets forth the procedures which should be followed by a student who believes that he/she has been unfairly or improperly treated by a member of the administrative staff, faculty, or student body in connection with a non-academic matter.

Informal resolution

The student should first try to resolve the grievance informally as soon as reasonably possible after the student becomes, or should become aware of the matter. If the matter involves a staff member, and the student and staff member cannot reach an agreement, the student should discuss the grievance with the staff member's supervisor. Similarly, if the matter involves a faculty member, and the student and faculty member cannot reach agreement, the student should discuss the grievance with the faculty member's department head. Although students are encouraged to resolve the grievance informally, the nature of certain cases may require that the informal process be by-passed.

Formal resolution

- All non-academic complaints must be addressed to the Vice President of Student Affairs.
- The complaint must be filed within ten (10) business days of the date of the incident.
- The complaint must be written by the student outlining the complaint, the individuals involved, the date of the incident, and the location of the incident.
- The Vice President for Student Affairs will assign the complaint to a committee to investigate. A formal decision will be communicated to the student in writing within 10 business days of submitting the complaint.
- In cases where the student believes that the proper procedures were not followed, the student has the right to appeal the decision to the Vice President for Student Affairs. The appeal must be filed within 10 business days of receiving the decision. The Vice President for Student Affairs shall review the paperwork of the complaint and the nature of the appeal, and make a decision.
- The decision of the appeal is final and may not be appealed. In cases where the Vice President for Student Affairs recommends dismissal from the University, the student may submit an appeal to the University President.
- All paperwork related to the complaint, appeal, and decision shall be kept at the Office of Vice President for Student Affairs with no access without the VP, Student's written permission.

NOTIFICATION OF OUTSIDE PARTIES

When deemed appropriate, the University reserves the right to notify a student's parents or guardians at any time during a disciplinary process.



CHAPTER 7 ACADEMIC POLICIES AND REGULATIONS

REGISTRATION

Once admitted to QU, students must select and register in courses required for their degrees. Registration for classes takes place prior to the beginning of every semester. Students are assisted by academic advisors to ensure that they have registered for the appropriate courses for each semester. Students should check with their advisors before registering. The following information identifies the steps and requirements necessary for a successful course registration process.

Methods of Registration

Students should register for courses online through their myQU portal after consulting with their academic advisor. In order to access the myQU portal, new students must use their username and password information as provided in their admission letter. Upon successful registration, students can view their schedule of courses, classroom locations, meeting times, and faculty assignments for all registered courses.

Students experiencing difficulty accessing their myQU portal should contact the ITS Help Desk by e-mail at helpdesk@qu.edu.qa.

Important Registration Information

Students are responsible for their own registration. They are only officially registered in a course when the course appears on their myQU schedule.

It is sometimes necessary for an academic department or college to make changes to its class schedule, such as a change of class time, location, instructor, merging sections, or even canceling a course. Departments will make every effort to announce such changes in advance; however, **it is the student's responsibility** to follow up their registration status according to such changes. The first week of classes in the semester is allotted for this purpose. Changes to a student's registration are not permitted beyond the last date for the drop and add period.

A student is allowed to pre-register for a course whose prerequisite(s) have not yet been completed, on the assumption that a student will pass the prerequisite course(s) during the semester in which the pre-registration takes place. If the student fails in any pre-requisite course(s), the Registration Department will drop, without notification, all the courses pre-registered by the student. Consequently, **students are responsible** for checking their final grades to make sure that they have successfully completed the prerequisite(s) and that they are successfully registered for the courses selected for the following semester. If a student is not allowed to register for a course because of failing or dropping a prerequisite course, **it is the student's responsibility** to ensure that the course load does not fall below the minimum number of credit hours allowed.

Dates for pre-registration and registration are determined by the University and stated in each year's academic calendar. These dates are communicated to the University community and updated regularly on the University's web site.

Academic Load: The minimum and maximum number of credit hours allowed per semester is as follows:

Semester	Academic Standing (GPA)	Type of Study	Academic Load (per credit hour)	
			Min	Max
Fall and Spring	Good Standing (2.00 and above)	Full Time	12	18
		Part Time	1	11
	Academic probation (less than 2.00)	Full Time	8	12
		Part Time	1	9
Fall and Spring	Good Standing (2.00 and above)	Full Time	2	9
		Part Time		
	Academic probation (less than 2.00)	Full Time	1	6
		Part Time		

New students at the University will be allowed to register for the maximum number of credit hours allowed by their program. Students who achieve a cumulative 3.50 GPA based on 15 credit hours or more will be allowed to increase the load by 1-3 credit hours. A student expected to graduate by the end of a given semester may register, in that semester, for fewer than the minimum number of credit hours stipulated in the course loads shown above.

Dropping and Adding Courses: A student may drop or add courses only during the designated period for drop/add. This period is determined by the University, and specified in the academic calendar and updated on the University web site. A course that is dropped before the drop deadline will not appear on the student's transcript.

Prerequisites: When a student attempts to register for a course, the registration system will check the request against the student's academic record. If the student has not satisfied the prerequisite, the student will be prevented from registering for the course. Students should contact their program director regarding prerequisite discrepancies.

Registration Holds: Students with registration holds will not be allowed to register for classes until the hold is removed. The student should contact the department that placed the hold for a solution.

Withdrawal from a Course: After the regular drop/add period at the beginning of each term, a student may withdraw from one or more courses before the end of the eighth week of the semester, provided that the total number of credit hours carried does not fall below the minimum credit hour requirement of the program. This withdrawal period results in differing refund rates. Students are encouraged to consult the University academic calendar for specific dates. If a student withdraws from a course during the withdrawal period, the grade of "W" is entered on the student's transcript.

Withdrawal from the Semester: Withdrawal from a semester (from all courses) requires the approval of the student's academic advisor and the Department Head. A student on academic probation will not be allowed to withdraw from the semester without providing a compelling reason. Withdrawal from a semester must be within the time limit set by the academic calendar.

A student cannot withdraw from QU for more than four semesters; the exception to this provision is during a study adjournment (for emergency reasons). If a student withdraws from a semester, he/she must re-enroll before registering for the following semester. The Vice President for Student Affairs may grant exceptions to this regulation in extenuating circumstances.

Withdrawal from the University: A student may apply for withdrawal from the University by contacting the Registration Department. Enrollment will be suspended and earned grades will be maintained in the student's record given that the student has completed at least one semester. The maximum period for which a student can leave the University must not exceed four semesters.

RE-ENROLLMENT

A student who withdraws from the University without approval, must re-enroll before being allowed to register. Re-enrollment may be pursued by contacting the Registration Department before the deadline specified in the academic calendar. The decision to proceed with a re-enrollment request is determined by the Registration Department, in consultation with the Director of Admission, the Department Head, and the Dean of the College in which the student wants to re-enroll. A student seeking re-enrollment after an absence of two consecutive semesters may be required to re-enroll, according to the policies or the rules of the degree prevailing at the time of re-enrollment. Passed credit hours taken before withdrawal from QU may, upon request of the student, be considered towards the intended degree, provided that re-enrollment occurs within 5 years from completion of the individual course.

RETURNING HIGH SCHOOL CERTIFICATES

At the request of the student, the Registration Department will return the original high school certificate to the student if the student is no longer enrolled in Qatar University. After a period of five years following deactivating the student record, the student's paper file will be destroyed. The University does not accept responsibility for any files destroyed. Original high school certificates may not be returned to enrolled students.

FINAL EXAMINATION SCHEDULE

Final examinations are announced at the beginning of each semester and the final exams schedule is posted by the Office of Student Affairs on the University web site. It is the responsibility of the student to be aware of these dates. A student who misses a final exam due to

circumstances beyond their control (family illness or death, personal illness, etc.), must contact the instructor to justify the absence and submit proof of the circumstance. This must take place by the time the instructor submits final grades to the Registrar. If the instructor accepts the excuse, the student is given an "Incomplete" grade and a date will be scheduled for a make-up exam to be given. Once the make-up exam has been taken and graded, the instructor, with the approval of the Department Head, will provide the Registrar with the final grade to replace the "Incomplete" grade.

STUDY PRINCIPLES AND POLICIES

Attendance

Class participation and attendance are important elements of every student's learning experience at QU, and the student is expected to attend all classes. Keeping track of student attendance and observation of student performance in class are the responsibilities of the instructor. A student should not miss more than 25% of the classes during a semester. Those exceeding this limit will receive a failing grade, regardless of their performance. In exceptional cases, students with their instructor's prior permission can be exempted from attending a class, provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the validity of an excuse for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course. This student will be exempted from fines associated with withdrawal.

The following rules are applied in determining attendance of the students:

- If a student attends only part of class, the instructor determines whether he/she is considered present or absent for that day.
- Attendance record begins on the first day of class, irrespective of the period allotted to drop/add and late registration.
- If an instructor reschedules a class, the new timing must be suitable and agreed upon in writing by all students; otherwise, instructors cannot hold a student responsible for not meeting the attendance requirement.
- If more than 25% of the classes for a course are cancelled during a semester and not rescheduled appropriately, no student in that course will be failed for reasons of absenteeism.
- A student who does not take any exam may be determined as excused or unexcused by the instructor.

Student Coursework Assessment and Grading

Student assessment and grading is a continuous process starting on the first day of class and continuing until the end of the semester. Instructors evaluate student performance using a variety of techniques, methods and tools. They are required to assess each student's performance and progress in the class while recognizing areas of strengths and weaknesses.

Grading is a cumulative notion that is based on the student's performance during the semester. The student's final grade should not be based on less than three different assessment tools. These may include, but are not limited to, exams, projects, presentations, reports, quizzes, reading assignments, research papers, writing essays, classroom feedback and discussions etc. In all cases, every student has the right to see, review and discuss with the instructor all marked materials used in grading them.

Grading Policy

Instructors shall determine the grade for each undergraduate student registered in their courses according to the following table:

Letter Grades and their Corresponding Grade Points

Letter Grade	Description	Percentage	Grade Points
A	Excellent	90 to 100	4.00
B+	Very Good	85 to <90	3.50
B	Very Good	80 to <85	3.00
C+	Good	75 to <80	2.50
C	Good	70 to <75	2.00
D+	Pass	65 to <70	1.50
D	Pass	60 to <65	1.00
F	Fail	less than 60	0.00
P	Pass		
CC	Continuing Course		
I	Incomplete		
TC	Transfer Credit		
W	Withdrawal		
WF	Withdrawal Failing		
Au	Audit		
R	Repeat		

Grade Point Average (GPA)

Every letter grade has grade points corresponding to it. These constitute the basis for calculating the Grade Point Average (GPA). The total number of grade points earned for each course is calculated by multiplying the number of credit hours assigned to the course by the number of grade points corresponding to the letter grade received as shown above. The semester and cumulative GPA are determined by dividing the total number of grade points accumulated for all courses by the number of credit hours attempted. The GPA is an indicator of the student's overall academic performance at QU.

Example:

Student's number of courses registered in the current semester	4
Student's total number of completed credit hours	34
Total of earned grade points	95.5
Student's current GPA = 95.5/34	2.8

NB: The first two decimal digits that come after a proper (unbroken) number do count, while the rest do not (without rounding)

Student's current registered courses are as follows:

Subject	Credit Hours
1	3
2	2
3	3
4	1

Student's Final grades at the end of the current semester:

Subject	Credit Hours
1	A
2	C+
3	D
4	F

Student's GPA calculations:

Subject	Credit Points	Credit Hours	Total points gained*
1	4.0	3	4.0 x 3 = 12
2	2.5	2	2.5 x 2 = 5
3	1.0	3	1.0 x 3 = 3
4	0.0	1	0.0 x 1 = 0
		9	20

* Total points gained = total credit hours x Grade points of each grade attained by student in the same course.

Total points (from the previous semesters) + (current semester) = 95.5+20=115.5

GPA= Total points/ total credit hours completed = 115.5 / 34 + 9 = 2.68

Grade Reports and Transcripts

Official QU transcripts are the recorded results of the students' academic work. They contain all the essential information pertaining to students' course grades, academic level, scholarship, and degrees received. They summarize their academic history. At the end of each semester, every student is issued a grade report summarizing the course grades they have completed in that semester. Students may obtain an official copy of their QU transcript from the Registration Department.

Graduation Requirements

Each program has a study plan consisting of courses selected from the core curriculum, college requirements, program requirements, (major/minor) and electives. An academic degree is awarded to a student who completes all the requirements of the program in which he/she is enrolled with a minimum cumulative GPA of 2.00. The number of credit hours required by each academic program within individual colleges may vary. The minimum number of credit hours required for graduation by each college is shown below:

College	Total number of credit hours	
Arts and Sciences	120	
Business and Economics	125	
Education	120	
Engineering	131	Architectural Engineering
		Electrical Engineering
		Chemical Engineering
		Mechanical Engineering
		Civil Engineering
	160	Architecture
	128	Computer Engineering
Industrial Engineering		
120	Computer Science	
Law	120	
Sharia and Islamic Studies	120	
Pharmacy	173	

Internships

The University encourages its students to benefit from internships whenever possible. Internships combine what the student has learned in the classroom with a real world environment such as a company / business, laboratory, or governmental project. The academic department determines the number of credit hours awarded to internships. Upon completing the requirements of an internship, the student receives a grade. To apply for an internship, the student must have the support of the academic advisor, the Department Head, and the Dean of the College in which he/she is enrolled.

Application forms for internships are available at the Office of Career Services, or from the Office of the Dean of the student's College. Students are selected for internships based on their ability to perform the work required by the position in which they wish to intern. At the time of application, the student must have a full-time status and be in good academic standing at the University. Maintaining an internship requires satisfactory job performance and a minimum cumulative GPA of 2.0. If a student is terminated from the internship due to failure to meet job expectations, he/she is eligible to reapply one year from the date of termination.

Incomplete Grades

An incomplete (I) grade may be received in a course if the student attends but fails to complete all the course requirements. The Incomplete grade is not an alternative for an "F" when the student performs poorly. To be considered for an Incomplete grade, the student must provide an acceptable justification for failing to complete the required work to the course instructor, which the Department Head must also approve. If the justification is related to medical problems, it must be supported by a medical report that is certified by the Public Health Authority or Hamad Medical Corporation and submitted to the Registration Department.

Any person presenting the medical report on behalf of a student must produce their ID and that of the student. If an incomplete grade is given because the student did not take the final exam, the student should arrange with the instructor to take the exam. The deadline for changing an (I) grade is the last day of the second week of classes in the ensuing semester. Upon successful completion of the required work, the course instructor will replace the (I) grade with a letter grade (A through F) and submit it to the Registration Department.

If a grade of "I" is not changed by the end of the specified period, it will be changed automatically to an "F". Only the Vice President for Student Affairs may grant an extension beyond the specified time limit. At the end of the first week of classes in the following semester, the Registration Department will remind instructors who have given incomplete grades to change them before the deadline.

Academic Probation

All students who show a cumulative grade point average below 2.00 ("C") are automatically placed on academic probation and it is noted in their academic record. Students on academic probation are not allowed to register for more than the maximum number of semester credit hours allowed for this category of student, and may be advised by their academic advisor to register for fewer courses in the following semester to improve the likelihood of raising their GPA and consequently removing the probation.

Once placed on academic probation, students have two (2) consecutive or three (3) separate semesters (summer session not included) to remove the academic probation before being dismissed from the University.

If the student fails to remove the academic probation at the end of the first probationary semester, the student will be able to register for the following semester only with the approval of his/her academic advisor and that of the Department Head.

A student placed on final probation may not withdraw from a semester or leave the University for the remainder of the semester. If a student on final probation does not register in any courses in a given semester, he/she will be dismissed at the end of that semester.

Academic Dismissal

A student will be dismissed from the University for academic reasons under the following conditions:

- Failing a required course three (3) times.
- Failing to achieve a minimum GPA of 2.00 for three (3) consecutive or four (4) separate semesters.

- Failing to meet graduation requirements within eight years from enrollments in the University (excluding Foundation Program).

Repeating a Passed Course

A student may repeat any passed course taken at Qatar University in which a final grade of "D+" or below was earned. The student who repeats a course to improve the academic standing must abide by the following conditions:

- A passed course may only be repeated once.
- The repeated course may only be counted once towards the total number of credit hours required for graduation.
- A notation of "R" next to the grade on the final transcript indicates that the course has been repeated.
- The grades of a repeated course, including a grade of "F", are included in the overall GPA.
- Courses transferred from another accredited college or university cannot be repeated for additional credit.

Repeating a Failed Course

A student may repeat a failed course only once to improve their grade in that course and the overall GPA. He/she, however, may repeat a failed required course twice. Failing grades will not be removed from the student's record, and are included in the calculation of overall GPA along with the repeated grades. An "R" notation will appear next to the grade(s) of repeated courses on the student's transcript.

Grade Appeal and Changing a Grade

A student who believes that he/she has received an unfair or erroneous grade may contest the grade to the instructor of the course within two (2) weeks of the issuance of grade reports. If the instructor concurs with what the student claims, the instructor may submit a grade change to the Department Head. The student will be notified of the grade change once it has been updated by the Registration Department. If the instructor does not agree with the student's claim, the student may submit a written, signed and dated appeal to the Department Head. The Department Head will review the merits of the complaint and rule on it. The Department Head may consult with the relevant faculty in the Department before ruling on the claim. Should the course instructor also be the Department Head, the student should submit a written complaint directly to the Associate Dean of the College. If the student is not satisfied with the decision of the instructor or the Department Head, a written appeal may be submitted to the Associate Dean of the College who will then make the final decision on the appeal.

In cases where the student feels that proper procedures were not followed regarding his claim, he/she may appeal in writing to the Vice President for Student Affairs. It should be noted here that the Vice President for Student Affairs will only assess whether proper procedures were followed and will not make a decision regarding the grade change. In all cases, if the student does not receive a formal response within two weeks of submitting the appeal, the applicant should consider the appeal rejected and may appeal to the next level.

Transferring Credits to QU

Qatar University students may take courses at other accredited colleges or universities, and this academic credit may be transferred to QU under the following conditions:

- The student submits an application to the Registration Department, along with all official transcripts and course syllabi from the colleges and universities attended. The content of the transferred courses must match 90% of the course content of their counterparts at QU. Only courses with a grade of "C" or above are transferable.
- The respective academic department at QU will make the final decision on transfer of credit into its program. Courses accepted for transfer will be given a grade of "TC" but will not bear on the GPA accumulated at QU; however, credit hours transferred will be used to satisfy graduation requirements provided they do not exceed 50% of the required credit hours needed for graduation from QU. If the student has successfully completed more than 50% of the courses required for a degree at QU at other institutions, he/she will have to determine the course(s) to be transferred to their record at QU given that they fall within their study plan at QU.
- First Year admits are not eligible to receive transfer credit consideration for coursework completed prior to their semester of admission to QU.

Auditing Courses

QU allows a student to enroll in courses on a non-credit basis, provided that the student receives prior permission from the instructor of the course, and registers as an audit student. Permission to audit a course is contingent upon the availability of space and class size. Priority is given to a student who takes the course for credit. A student who audits a course, however, is charged the standard tuition, fees, and registration costs. An audit student is expected to attend class regularly, but is not obliged to take exams and so does not receive the normal grade (A-F); rather upon completion of the course, a grade of "AU" is recorded in the student's transcript to denote that the course was taken on an audit basis. Should a student wish to take the course for credit, he/she must get the status changed at the Registration Department no later than two weeks from the commencement of classes. A student can audit a given course only once.

Major

A major is a curriculum component of an academic program intended to provide in-depth study in a discipline or a professional field of study. The major defines the student's primary area of study and requires the completion of a defined set of courses and credit hour requirements.

Selecting a Major

1. Students are asked to declare their major when applying for admission to Qatar University. Majors are open to QU students provided that:
 - a) They meet the admission requirements for the major;
 - b) The department offering the major approves the major declaration on the basis of department capacity.Some colleges admit their students initially to a general program prior to admission to a specific major.

2. Students may declare and pursue only one major.
3. Students should declare their selected major before completing 36 undergraduate credit hours.
4. At least half of the credit hours required to complete the major must be taken in residence at QU.
5. A student must complete the graduation requirements for a Bachelor degree at Qatar University in order to receive recognition for the completed major.
6. The only recognition delivered by the university for a major completed by a student consists on the appearance of the major on the student official transcript at the time of graduation and the student graduation statement.

Change of Major

A student may change their major within the first 60 undergraduate credit hours. Additionally, students who have earned a minimum cumulative GPA of 2.50 and at least 30 undergraduate credit hours may apply for a change of major even if they did not satisfy the admission requirements for that major at the time of initial admission to QU. And in all cases, the sought College or Department approves the major change taking into consideration their transfer requirements and capacity.

Minor

A minor is a curriculum component of an academic program intended to provide a limited depth and/or breadth study in a discipline or a professional field of study. Its main objective is to provide students a fair measure of expertise and knowledge in more than one academic area.

Selecting a Minor

1. Minors are open to all QU students provided that:
 - a. They meet the admission requirements for the minor;
 - b. The department offering the minor approves the student enrollment in the minor based on the department capacity.
2. Students may not declare a minor before declaring their major.
3. Students may declare one or multiple minors.
4. Students may not declare a minor in the same field as the declared major.
5. At least half of the credit hours required to complete the minor must be taken in residence at QU.
6. A student must complete the graduation requirements for a Bachelor degree at Qatar University in order to receive recognition for the completed minor.
7. The only recognition delivered by the university for a minor completed by a student consists on the appearance of the minor on the student official transcript at the time of graduation and the student graduation statement.

Change of Minor

A student may change their minor only once and the change must occur before completing 12 credit hours in the minor and 90 undergraduate credit hours. The sought College or Department approves the minor change taking into consideration their transfer requirements and capacity.

Transfer Students

QU welcomes students transferring from other accredited institutions of higher education. A comprehensive list of transfer admission requirements can be found in the admissions portion of the Undergraduate Catalog.

ACADEMIC ACHIEVEMENT AWARDS

The purpose of having the academic achievement awards is to recognize and acknowledge students whose academic performance is deemed as excellent and distinguished during their studies at QU. The levels of honor are reflected in the following lists:

Order of Excellence:

Bachelor degree graduates who have demonstrated distinguished academic performance during their study at QU are acknowledged and honored by the University during their graduation ceremony. A maximum of ten graduates are selected to receive Academic Excellence Medals. In order for a student to qualify for receiving this outstanding award, the following conditions must be met by the student:

1. Having attained a minimum overall GPA of 3.80, and never received a grade of less than "B" during their undergraduate studies.
2. Having never received a written disciplinary warning or sanction while studying at QU.

Graduating With Honors:

Students who are graduating with a Bachelor's degree and have attained outstanding academic performance are acknowledged and honored by the University during the graduation ceremony, and are issued certificates that attest to their achievements. In order for a student to receive this outstanding award, he/she must meet the following conditions:

1. Graduated in the top 5% of the graduating class for that academic year with a minimum overall GPA of 3.50.
2. Having never been placed on academic probation, nor was subjected to disciplinary action while studying at QU.

The Vice-President and Chief Academic Officer's List:

The Vice-President and Chief Academic Officer List recognizes all students at the Undergraduate level who have shown distinguished academic performance. This award is issued at the completion of each fall and spring semester by the Vice President for Student Affairs, upon approval of the University's Vice-President and Chief Academic Officer. This award is reflected on the student's transcript for the semester of award. To achieve Vice-President and Chief Academic Officer List recognition, a student must satisfy the following conditions in addition to all Dean's List requirements:

1. Earn a minimum cumulative GPA of 3.50.
2. Complete a minimum of 30 credit hours.
3. Earn a minimum final grade of "C" for all courses taken, with the exception of courses taken on Pass/Fail basis.
4. Never subjected to any disciplinary action by the University.

The Dean's List:

The Dean's List is an academic award recognizing the remarkable achievements of undergraduate students. Deans of the respective Colleges issue the award upon completion of each fall and spring semester, and the award is reflected on the student's transcript for the semester of the award. To achieve Dean's List recognition for the semester, a student must satisfy the following conditions:

1. Earn a minimum semester GPA of 3.50.
2. Maintain a minimum semester course load of 12 credit hours in undergraduate courses.
3. Earn a minimum final grade of "C" for all courses taken in the semester, with the exception of courses taken on Pass/Fail basis.
4. Not placed on academic probation during the academic semester of award.
5. Not subjected to any disciplinary action by the University for two semesters prior to the award.

STUDENT NON-ACADEMIC AWARDS

The University bestows special service awards to students who have demonstrated exceptional contributions in the areas of campus life, student activities, athletics and services. Three categories of awards will be presented to both male and female students: (1) Student Leadership Award, (2) Student Services Award and (3) Student Athletic Award. Nominations for the Student Non-Academic Awards can be made by individual faculty members, staff, other students, or the student, providing that the eligibility criteria stated for each award is met by the student. Should a student wish to make a nomination for any of these awards, he/she must submit at least one letter of recommendation attesting to their leadership qualities, service rendered, or athletic skills. Student Leadership Award (one male student and one female student): This award is reserved for male and female students who have exhibited the most outstanding leadership qualities in student activities and/or student organizations. To be eligible for this award, the student must have:

1. Served in a leadership position.
2. Worked to create meaningful changes in the lives of other students.
3. Demonstrated commitment to increase student participation on campus.
4. Participated in a variety of campus activities and exhibited outstanding leadership in them
5. Completed a minimum of 60 credit hours.
6. Maintained a GPA of 2.00 for the previous two semesters.

Student Services Award (three male students and three female students):

This award is given to the three male and female students who have exhibited outstanding achievements in student activities, student services, and service to the community. To be eligible for this award, the student must have:

1. Been active in student activities, student services, or in the service of the community, and demonstrated clear achievement in this realm.
2. Contributed to campus life and the community.
3. Set an example for other students through investment of their time and energy in order to impact campus life.
4. Completed a minimum of 60 credit hours.
5. Maintained a GPA of 2.00 for the previous two semesters.

Student Athletic Award (one male student and one female student):

This award is given in recognition of the students who have achieved excellence in the sports they practice. To be eligible for this award, the student must have:

1. Been active in a University sport activity.
2. Shown clear athletic achievement.
3. Maintained a practice or training regimen acceptable to their coach.
4. Completed a minimum of 60 credit hours.
5. Maintained a GPA of 2.00 for the previous two semesters.





CHAPTER 8 ACADEMIC ADVISING

Academic advising is an ongoing partnership between students and their advisors that helps students to attain their academic, personal, and career goals.

The academic advisor serves as the primary link between the student's academic program and other resources available at the university. In order to assist students in making informed choices about their education and career goals, academic advisors help students identify available opportunities and options while also communicating accurate and timely information about academic policies and procedures, programs, resources, and career opportunities.

General academic advising is available to all students in the Foundation Program. Once students begin their freshman year, they are assigned to academic advisors in their respective colleges. Advisors assist students with course selection, registration, and educational planning.

Although advisors at QU actively assist students in making effective academic choices, students are personally responsible for planning their academic program to meet all graduation requirements. Therefore, students are encouraged to take the lead in developing an association with their academic advisor by communicating with them on a routine basis. Through regular contact with their advisors, students develop essential communication, decision-making, and problem-solving skills and become actively engaged in their educational expedition, thereby making it a richer experience.



CHAPTER 9 HONORS PROGRAM

103-104 Men's Building (Men's Campus)

Phone: (+974) 4403-4990 / 4993 / 4994

E-mail: quhonors@qu.edu.qa

Website: http://www.qu.edu.qa/honors_program

The Honors program is a community of exceptional, motivated, and innovative minds. It serves as a vehicle to enhance the intellectual quality and inspire the academic culture of the University. The program encompasses all undergraduate colleges and programs in the university.

HONORS BENEFITS

Members of the Qatar University Honors program have the following academic opportunities available to them:

- Interaction with other high achieving students from different disciplines
- Honors advising
- Innovative courses designed especially for the Honors Program by outstanding scholars / teachers
- Small classes emphasizing active student participation and intensive faculty guidance
- Semester 'Study Abroad' program
- Priority for 'Undergraduate Research Funding'
- Recognition at graduation and honors designation on transcripts and diplomas
- Opportunities for outstanding honors students to attend professional conference in their field of specialization
- Annual Honors Potluck and Student Academic and Service Awards

HONORS ADMISSION REQUIREMENTS

First Year Applicants	Current QU Students
1. A minimum high school score of 90%.	1. Completion of 12-18 post-Foundation credit hours at QU or any other accredited university, with a minimum cumulative GPA of 3.50
2. Minimum score of 500 on paper-based TOEFL or equivalent	2. Minimum score of 500 on paper-based TOEFL or equivalent
3. Minimum score of 550 in the Math portion of the SAT, 24 on the ACT	3. Minimum score of 550 in the Math portion of the SAT, 24 on the ACT
4. A written essay	4. A written essay
5. Two recommendation letters from current or previous instructors, counselors, or academic advisors	5. Two recommendation letters from current or previous instructors, counselors, or academic advisors
6. Copy of transcript	6. Copy of transcript
7. Successfully pass an interview	7. Successfully pass an interview

HONORS PROGRAM STUDY PLAN STRUCTURE

In order to graduate with Honors, students must complete a minimum of 24 credits of Honors coursework. Reasonable progress includes the completion of at least 6 Honors credits each year, with an overall cumulative GPA of 3.50. In order to retain the privileges of membership in the Honors Program, students must maintain this minimum progress.

HONORS CURRICULUM

Honors courses are offered each semester specifically for Honors Program members. Outstanding and acclaimed faculty members teach these courses. Honors courses usually emphasize participatory classroom styles, intense and in-depth study of subject matter, the use of primary source material, team or group teaching, an interdisciplinary theme, and an element of independent study. Honors courses include intensive reading, writing, and research. Only Honors students may enroll in Honors courses.

Credit Hours	Courses
3	Honors Freshman Seminar
9	Three University Core Curriculum Courses
9	Three Major-based Honors Courses
3	Honors Senior Thesis (Senior Project, Capstone course, etc.)
24	Total Program Credit Hours*

*Please note that the 24 credit hours to complete the Honors Program are included in the overall hours required to earn an undergraduate degree at Qatar University

HONORS STUDENT ASSOCIATION

Honors students have several opportunities to engage in academic and recreational activities through their participation in the Honors Student Association (HSA). The association is a student-elected body with the following functions:

1. Represent the interests of Honors students and promote the Honors program on and off campus.
2. Plan and implement special events, including academic and extracurricular activities that focus on academic enrichment, professional development, social development, and community service.
3. Engage Honors students with students in academic departments across campus and with the various academic programs in Education City.

HONORS STUDENT ADVISING

Every student is assigned an academic advisor upon matriculation; however, Honors students also have access to an Honors advisor, who will advise both on Honors issues as well as in broader areas. Honors' advising is similar to mentoring and it does not end with advising on Honors Program curriculum issues. The Honors Advising Office will report directly to Honors Program Director and work very closely with the university advising center.

GRADUATION WITH HONORS

Students who have completed all requirements for a baccalaureate degree (including courses in the Honors curriculum) and earned an accumulative GPA of 3.50 will receive an Honors distinction at the annual convocation ceremony. This distinction will be noted on the student's official transcript.

CONTACT INFORMATION

For additional information on the Honors Program, visit their website at http://www.qu.edu.qa/honors_program or e-mail quhonors@qu.edu.qa.



CHAPTER 10 FOUNDATION PROGRAM

339 Foundation Building (Female Campus)
Phone: +974 4403-5300
E-mail: foundation@qu.edu.qa
Website: <http://www.qu.edu.qa/foundation/>

Director
Dr. Khalid Al-Ali

INTRODUCTION

The Foundation Program at Qatar University presents unique and challenging opportunities for students to become better-prepared and confident in key academic areas of study at Qatar University. All QU Foundation Program registered students are provided the opportunities to develop their academic abilities while being able to get acquainted with and experience career paths and programs from the different colleges at the University.

VISION

The Foundation Program seeks to accelerate the effective transition of high school graduates to enable them to perform successfully at university level.

MISSION

The mission of the Foundation Program is to prepare high school graduates to meet the common academic entrance requirements of Qatar University, and of University colleges and specific programs. In addition to providing students with essential knowledge and skills in English language, Mathematics and Information and Communication Technology, the Foundation Program equips students with the necessary communication and study skills to succeed in competitive and challenging academic programs at Qatar University.

OVERVIEW

The Foundation Program is composed of two departments: the Department of English and the Department of Math and Computer. The Foundation Program offers 27 classroom teaching contact hours per week (20 hours in English; 4 hours in Math; and 3 hours in Computer). All new students who come to the University are first registered in the Foundation Program, excepting those accepted into the College of Sharia and Islamic Studies and the Arabic Language major. Students who have achieved the required scores on the ACT, SAT, TOEFL, IELTS, and IC³ exams, are exempted from English, Math, and Computer subject requirements in the Foundation Program. Students can complete all courses required by the Foundation Program in 1 to 4 semesters, depending on their ability and pacing. All Foundation courses are non-credit courses.

STUDENT SERVICES

The Foundation Program offers students a number of services, including:

- Examination preparation for IELTS, TOEFL, ACT and IC3 placement exams.
- Clubs, competitions, debates, movie lab, and field trips.
- Math tutorial services in Foundation Math courses.
- Student Advising Center Access
- Standardized External Examinations (IELTS, TOEFL, ACT, Accuplacer and IC3)

DEPARTMENT OF ENGLISH

Head

Mr. Robert Kennedy

NON-CREDIT COURSES IN EAP (ENGLISH FOR ACADEMIC PURPOSES)

Length & Structure of Program

The English Program, now with five-year accreditation with the Commission on English Language Program Accreditation (CEA), has four levels of instruction and focuses on developing students' language skills in academic reading, writing, listening, and speaking. Appropriate technology is integrated with program activities to aid language skills development and to support autonomous learning. Students can spend from one semester to a maximum of four semesters (or two years) to complete all four levels in the Foundation Program Department of English.

Placement

New students who do not achieve the exemption scores must take the ACCUPLACER ESL (APL) test to be placed in the appropriate level of English. The APL tests new students' reading, listening, and writing skills and their understanding of grammar and vocabulary. Students are allowed to sit for the test once during their Foundation English study, although certain exceptions are possible for Level 1A students, and for those students who are at risk of exiting the program without the minimum requirements set by the University colleges.

Accuplacer Levels Cut-Off Scores Out of 600	
Level 1 A	0-165
Level 1 B	166-250
Level 2	251-327
Level 3	328-400
Level 4	401 and above

Program Objectives

The Program aims to help students develop skills to achieve the following objectives:

- Read and comprehend academic texts across a broad range of academic topics.
- Produce texts utilizing the different modes necessary in academic writing.
- Communicate effectively in academic contexts.
- Listen to and comprehend discourse in an academic context.
- Apply strategies necessary for successful independent learning in an academic context.
- Use appropriate Information and Communication Technology (ICT) tools for learning, researching, collaborating, communicating, and presenting information.
- Attain the required level of language proficiency to gain admission to academic programs.

Completion

Students complete the Foundation English Program when they have completed all four levels of the program. However, they are also exempted from Foundation English requirements at any time they obtain the required score of 500 on the TOEFL paper-based test or 61 on the TOEFL iBT or band 5.5 on IELTS. Nevertheless, the Program cooperates with various agencies to validate certificates of exams taken outside Qatar University to maintain the proper level of skill and knowledge proficiency.

The Foundation Program reserves the right to verify any certificate issued from centers outside Qatar.

UNIVERSITY REQUIRED COURSES: POST-FOUNDATION AND ENGLISH LANGUAGE FOR ARTS, SHARIA AND EDUCATION

There are university requirement courses administered by the Foundation Program Department of English: Post-Foundation courses and English Language for Arts, Sharia and Education courses.

Length & Structure of Post-Foundation Courses

After completing or being exempted from the Foundation Program English requirement, students must take the two required credited courses: English 1 and English 2. Both are three-hour/week courses aimed at promoting advanced academic skills, with a particular focus on writing and critical thinking. English 1 focuses on developing vocabulary, note-taking, discussion and debate skills through consideration of various contemporary topics. English 2 fosters the skills necessary for students to be able to write an academic term paper in the appropriate format, as well as writing a variety of shorter essays.

Length & Structure of English Language for Arts, Sharia and Education Courses

Students in some majors of study are exempted from completing the Foundation Program English requirement. Nevertheless, these students complete a shorter, two-course series (both of which fulfill three university credit hours) to develop their English language skills. English Language for Arts, Sharia and Education 1 focuses on the integration of the four skills (reading, writing, listening, and speaking) in addition to the development of grammar and vocabulary. The next course, English Language for Arts, Sharia and Education 2, cultivates reading skills such as skimming & scanning, prediction, and identification of main ideas.

DEPARTMENT OF MATH & COMPUTER

Head

Dr. Maha Nabhan

THE MATH PROGRAM

Length & Structure of Program

The non-credit courses in the Math Program are designed for the following three tracks of study:

- Art, Law & Education
- Business & Sport Sciences
- Engineering, Science & Pharmacy

The Art, Law & Education track consists of one course in elementary algebra; the Business & Sport Sciences track consists of two courses in elementary algebra & intermediate algebra; while the Engineering, Science & Pharmacy track consists of two courses in intermediate algebra, pre-calculus & trigonometry. It takes one semester to complete the Math courses for the Art, Law & Education track and two semesters to complete the Math courses in the other two tracks. Students may complete the program in a shorter period by taking the Scholastic Aptitude Test (SAT) or the American College Test (ACT), at any time, with an exemption score.

Placement

Placement into the appropriate Math course is based on the students' foundation specialty and on the score obtained in the Math components of the ACT and the SAT. The Foundation Program at Qatar University is a certified centre for the Residual ACT and for the International ACT. Students may take the ACT at Qatar University. Students may also take the ACT or SAT at any certified centre inside or outside the State of Qatar.

The basis for placement in Math courses are shown in the table.

Foundation Specialty	Entry Level	ACT Score	SAT Score
Engineering, Science & Pharmacy	Foundation Math III	0 to 21	0 to 519
	Foundation Math IV	22 to 23	520 to 549
	Complete Exemption	24 to 36	550 or more
Business & Sports Science	Foundation Math I	0 to 18	0 to 459
	Foundation Math II	19 to 20	460 to 499
	Complete Exemption	21 to 36	500 or more
Arts, Law & Education	Foundation Math I	0 to 18	0 to 459
	Complete Exemption	19 to 36	460 or more

Program Objectives

- To provide students with a mathematical background that is appropriate for their future needs.
- To help students prepare for advanced mathematical concepts and analytical skills.
- To stimulate curiosity, encourage perseverance and to develop mathematical and technological maturity.

Completion

Students complete the Foundation Math Program if they score 60% or more in the required courses, or are exempted from Foundation Math requirements at any time they obtain the required score in the ACT or SAT.

THE COMPUTER PROGRAM

Length & Structure of Program

The Computer Program has two non-credit courses for all students. Students, regardless of their foundation specialty, are required to take both courses. Each course consists of an integrated skills curriculum, in which students develop and enhance their computer skills by learning computer concepts, keyboarding, using the Internet, Basic Statistics, Microsoft Word, Excel, and PowerPoint applications. The entire program takes two semesters to complete. Students may complete the program in a shorter period by taking the Internet and Computer Core Certificate (IC³) at any time with an exemption score.

Placement

The Internet and Computer Core Certificate (IC³) is a three module exam that is used at QU to determine placement into Foundation Computer courses.

The Foundation Program at Qatar University is a certified centre for the IC³ exam. All students joining QU are required to take the IC³ exam. No IC³ certification taken outside QU is accepted by the Foundation Program.

Placement criteria for all Foundation students in all specialties are as follows:

Foundation Specialty	Entry Level	IC ³ Total Score
All Majors	Foundation Computer I	0 to 1799
	Foundation Computer II	1800 to 2349
	Complete Exemption	2350 to 3000

Program Objectives

- To provide students with the basic computer skills that are considered a must for them to cope with technology as an educational tool in their future studies.
- To enable students to develop an understanding of the context in which their computing contributions will be used.
- To enable students to apply computer knowledge to solve designated problems

Completion

Students complete the Foundation Computer Program if they score 60% or more in the required courses, or are exempted from Foundation Computer requirements at any time they obtain 2350+ on the IC³ test.



CHAPTER 11 CORE CURRICULUM

The Core Curriculum is a substantial component in all undergraduate academic programs offered by QU. It is an important building block of any bachelor's degree program. The inclusion of the Core Curriculum in all academic programs has been based on the understanding that it would not be enough for students to take courses only in the major. The main goal of the Core Curriculum is to ensure that all undergraduate students are equipped with a broad knowledge-base related to disciplinary and interdisciplinary fields, basic skills and dispositions essential to the intellectual growth, moral maturity, personal fulfillment and social development needed for living successfully in an increasingly globalized and interconnected world. The concept of a "Core Curriculum" is based on the idea that the mastery of certain fundamental skills is crucial to the learning process, no matter what students choose to study. The Core Curriculum has been designed to provide undergraduates with a general education, a core of general skills and knowledge that every individual needs; either to excel in professional career, or to build a rich and fulfilling personal life.

MISSION

The mission of the Qatar University Core Curriculum Program is to prepare competent undergraduate students who are well-rounded, multi-skillful and effective global citizens. Through a motivating and research-based learning environment, the program seeks to create highly distinguished learners capable of succeeding in the diversity of disciplines offered by QU and who can contribute positively to society.

OBJECTIVES

The Core Curriculum Program aims at helping the students to:

1. Instill the concept of good citizenship within the commitment to the framework of Arabic and Islamic moral values.
2. Build awareness of diverse knowledge to assimilate local and international changes and participate in how they are expressed.
3. Develop communication skills in Arabic and in English.
4. Acquire higher order thinking skills and the basics of scientific research.

LEARNING OUTCOMES

At the end of the Core Curriculum Program, students should be able to:

1. Appreciate Islamic values and morals in a way that prepares them to accept others.
2. Recognize the nature of Qatari society historically, geographically and socially, to reinforce allegiance to the country.
3. Demonstrate proficiency in written and oral Arabic.
4. Communicate competently with others using oral and written English skills.
5. Think critically and creatively in a variety of methods in order to make decisions and solve problems.
6. Demonstrate competency in the use of research skills and various information sources.
7. Identify the general concepts of humanities and natural sciences in a manner that reveals their value in life.

STRUCTURE

Coursework in the Core Curriculum is intended to impart the skills, foundational knowledge, and dispositions described in the Core Curriculum's Objectives and Learning Outcomes. The Core Curriculum Program is a set of college-level courses drawn from different disciplines. The courses are organized and distributed into seven packages: A Common Package (12-15 Credits), Social/ Behavioral Sciences Package (3 Credits), Natural Sciences and Mathematics Package (3 Credits), Humanities/ Fine Arts Package (3-6 Credits), General Knowledge Package (0-3 Credits), and General Skills Package (0-3 Credits). The Humanities/ Fine Arts Package includes a sub-package; Qatar and Gulf History (3 Credits).

In some study plans, depending on the major, the structure has a package titled "Supplemental College/Program Core Requirements." This package (0-12 Credits) may include different courses related to the mission, objectives and learning outcomes of the Core Curriculum Program. It might include courses pertaining to natural sciences, mathematics, social/behavioral sciences, and humanities/fine arts. Courses in such a package can be counted as Core Curriculum courses.

Each package has a required number of credit hours. Students have to satisfy the minimum credit hours assigned to each package. Generally, the Core courses are selected to cover different disciplines including social /behavioral sciences, humanities/fine arts, natural sciences, and mathematics.

REGULATIONS

- As a general rule, all undergraduates of Qatar University are required to complete a 33-credit Core Curriculum before receiving a baccalaureate degree. These requirements must be met by every student pursuing a baccalaureate degree at Qatar University, regardless of his or her major.
- The Core Curriculum is spread out across students' full tenure at the University. The Core requirements must be completed only prior to graduation.

- Courses offered in a student's major or minor program cannot be counted for credit in the Core Curriculum.

CORE CURRICULUM PROGRAM

A minimum of 33 credit hours are required to complete the Core Curriculum Program as detailed below.

Common package (12 - 15 CH)

The number of credit hours required for this package range from 12 to 15 credit hours, depending on the program. The specific courses to be completed by students are identified in the degree requirements of each program and consists on some combination of the courses listed below:

- ARAB 100 Arabic I
- ARAB 200 Arabic II
- ARAB 107 Arabic Language Basics
- ARAB 201 Arabic Language Basics Adv.
- ARAB 109 Language Skills
- ARAB 110 Introduction to Literature and Language
- ENGL 150 Essay Writing I
- ENGL 151 Advanced Reading Comprehension
- ENGL 200 English Language I for Arts, Sharia and Education
- ENGL 201 English Language II for Arts, Sharia and Education
- ENGL 202 English Language I – Post Foundation
- ENGL 203 English Language II – Post Foundation
- DAWA 111 Islamic Culture

Social/Behavioral Sciences package (3 CH)

A minimum of 3 credit hours from courses listed in CCP defined Social/ Behavioral Sciences package including:

- ARAB 484 Sociology of Literature
- ECON 111 Principles of Microeconomics
- ECON 112 Principles of Macroeconomics
- EDUC 203 Family Relationships
- INTA 102 Introduction to Political Science
- INTA 203 Women in Islam
- INTA 206 Globalization
- INTA 401 International Relations Theory
- INTA 404 Gender and Law
- ISLA 302 Family law
- LAWC 222 Constitutional Law
- LAWC 250 Family Law
- MCOM 103 Media and Society
- PSYC 205 Social Psychology
- SOCI 120 Introduction to Sociology
- SOCI 121 Introduction to Anthropology
- SOCI 263 Badawi Society
- SOCI 363 Ethnicity
- SOCI 467 Globalization
- SOWO 101 Introduction to Social Work and Welfare
- SOWO 200 Social Work and the Law
- SOWO 302 Mental Health & Social Work
- SOWO 361 Society and Human Rights

Natural Science/Mathematics package (3 CH)

A minimum of 3 credit hours from courses listed in CCP defined Natural Science/Mathematics package including:

- BIOL 101 Biology I
- CHEM 101 General Chemistry I
- GEOL 101 Principles of Geology
- MATH 101 Calculus I
- MATH 103 Numbers and Basic Algebra
- MATH 104 Basic Geometry and Measures
- PHYS 183 Introduction to General Physics
- STAT 101 Statistics I

Humanities /Fine Arts package (3 - 6 CH)

The number of credit hours required for this package ranges from 3 to 6, depending on the program. All programs must complete 3 Credit Hours from courses listed in the Qatar and Gulf History sub-package. When applicable, the remaining 3 credit hours can be taken from courses listed in the CCP defined Humanities/Fine Arts package including:

- ARAB 221 Classical Arabic Poetry I
- ARAB 326 Literary Analysis
- ARAB 482 Contemporary Gulf Literature
- DAWA 117 Ethics
- DAWA 202 Introduction to General Philosophy
- DAWA 305 Modern Philosophy
- ENGL 155 Introduction to Language
- ENGL 156 Introduction to Literature I
- ENGL 157 Introduction to Linguistics
- ENGL 234 Language and Gender
- ENGL 209 Language and Society
- ENGL 213 Language and Culture
- ENGL 233 Language and Computers
- HIST 217 Islamic Civilization
- HIST 332 Medieval Europe, 500 to 1400 CE
- HIST 334 Arabian Gulf in Antiquity
- HIST 336 Women and Gender in the Ancient Near East
- HIST 416 History of Islamic Arts and Architecture
- ISLA 205 Intellectual Foundations of Islamic Civilization

Qatar and Gulf History Sub package (3 CH)

The Qatar and Gulf History Sub package is part of the Humanities /Fine Arts package. Students must complete a minimum of 3 CH in courses listed below:

- HIST 121 History of Qatar
- HIST 222 The Gulf in Modern Period
- INTA 306 Gulf Studies

General Knowledge package (0 - 3 CH)

Number of credit hours required for this package range from 0 to 3 credit hours depending on the program. When applicable, the 3 credit hours can be taken from courses listed in the CCP defined General Knowledge package including:

- ARAB 224 Classical Arabic Prose
- ARAB 261 Rethorics
- ARAB 262 Prosody and Metrics

- ARAB 271 Persian Language I
- DAWA 113 Philosophy of Sirah
- DAWA 203 Principles and Methodology of Dawa
- DAWA 206 International Organizations & Human Rights
- EDUC 310 Foundation of Education in Qatar and School Reform
- EDUC 317 Inclusive Classrooms
- FREN 101 French 1
- INTA 308 International Political Economy
- INTA 405 Gender in the International Perspective
- INTA 415 History of the Middle East in 20th Century
- ISLA 101 Studies in Islamic Creed
- ISLA 102 Quranic Sciences
- ISLA 104 Sciences of Hadith
- ISLA 201 Principles of Islamic Jurisprudence
- ISLA 209 Islamic Studies in Contemporary Thought
- LAWC 102 Human Rights
- LAWC 339 Public International Law
- PSYC 201 Introduction to Psychology
- SOCI 200 Sustainable Development
- SPSC 101 Traditional and New Games
- SPSC 201 Theory and Practice "Teams Sports"
- PHIL 110 Introduction to Philosophy

General Skills package (0 - 3 CH)

The number of credit hours required for this package ranges from 0 to 3, depending on the program. When applicable, the 3 credit hours can be taken from courses listed in the CCP defined General Skills package including:

- ACCT 110 Financial Accounting
- DAWA 114 Modern Techniques of Dawa
- DAWA 204 Research Methodology
- DAWA 205 Schools of Islamic Thought
- DAWA 302 World Religion: Comparative Studies
- EDUC 200 Education and Societal Problems
- EDUC 201 Research Methods
- ENGL 150 Essay Writing I
- ENGL 151 Advanced Reading Comprehensions
- HONS 100 Honors Freshman Seminar
- INTA 100 First Year Seminar
- INTA 101 Political and Social Thoughts
- INTA 103 Introduction to International Relations
- INTA 200 Study and Practice of Diplomacy
- INTA 209 Islam and the West
- INTA 301 Islamic Political Thought
- ISLA 202 Logic and Research Methodology
- LAWC 101 Introduction to Law
- MAGT 101 Principles of Management

Supplemental College/Program Package (0 - 12 CH)

The number of credit hours required for this package ranges from 0 to 12, depending on the program. When applicable, the required number of credit hours can be taken from a list of courses specific to each program and/or college.



CHAPTER 12 COLLEGES, ACADEMIC DEPARTMENTS, AND DEGREES

COLLEGE OF ARTS AND SCIENCES

College of Sciences Building (Women's Section)
Phone: (974) 4403-4504
E-mail: cas@qu.edu.qa
Website: <http://www.qu.edu.qa/cas>

Dean
Eiman Mustafawi

Associate Dean for Academic Affairs
(Vacant)

Associate Dean for Research
Mohamed Ahmedna

Assistant Dean for Student Affairs
Wesam Al-Madhoun

ABOUT THE COLLEGE

The College of Arts and Sciences (CAS) aspires to provide the foundation of liberal education, quality academic research, and educational programs to contribute to the development and advancement of human thought, values and the changing societal needs of the 21st century. The College of Arts and Sciences offers a variety of quality academic programs in both arts and sciences to fulfill the teaching, research and service missions of the university. The College is dedicated to enhancing and disseminating knowledge through research, quality instruction, critical thinking, global learning and community service. CAS fosters an open and supportive learning environment to attract a diverse student body and distinguished faculty who are committed to research and teaching excellence.

DEGREE OFFERINGS

The College of Arts and Sciences offers the following undergraduate degree programs:

- Bachelor of Arts in Arabic Language
- Bachelor of Arts in English Literature and Linguistics
- Bachelor of Arts in History
- Bachelor of Arts in International Affairs
- Bachelor of Arts in Mass Communication
- Bachelor of Arts in Social Work
- Bachelor of Arts in Sociology
- Bachelor of Science in Biological Sciences
- Bachelor of Science in Biomedical Sciences
- Bachelor of Science in Chemistry
- Bachelor of Science in Environmental Science
- Bachelor of Science in Human Nutrition
- Bachelor of Science in Statistics

DEPARTMENT OF ARABIC LANGUAGE

College of Sciences Building - Room 153 (Women's Section)
Phone: (974) 4403-4820
E-mail: headdeparabic@qu.edu.qa
Website: <http://www.qu.edu.qa/artsscience/arabic/>

Head

Ali Al-Kubaisi

Faculty

Professors:

Salama Abdullah Al-Suwaidi, Rashid Blhabib, Ahmad Yousef

Associate Professors:

Nasser Al-Din Salih, Fatima Al-Suwaidi, Lotfi Al Yousifi, Habibi Buhroor, Abdoul Salam Hamid

Assistant Professors:

Haya Al-Durham, Sami Al-Manai Mariam Al-Nuaimi, Mohamed Al-Obaidy, Ramadan Amer, Idris Atih Noora Faraj, Hanan Fyad, Hanady Mansour, Mohammad Mostafah Saleem, Ahmad Teaema

ABOUT THE DEPARTMENT

The Department of Arabic Language (DAL) aspires to achieve a distinction in the study of Arabic Language and Literature so that it enables Qatar University to occupy a prominent place among departments of Arabic in the region and internationally, by virtue of its high-quality teaching, research, community, and university services. It aims to implement advanced developments in the educational and pedagogical process which lead to achieving academic accreditation in the fields of education, research, and acquisition of linguistic skills. It aims to produce a new generation of educated graduates, capable of becoming the country's elite in the field of leadership and intellectual endeavor to serve their language, country, and nation.

The Department aims to produce graduates with open minds to other cultures and civilizations, armed with strategies of dialogue and communication with man and technology. The mission of the Department of Arabic Language is to prepare specialists in linguistics and literary studies who are equipped with sufficient communicative skills and qualified to implement their knowledge and experience in the field of research as well as in the practical field of work which requires the use of Arabic language, its literature and expressive techniques. Thus, the students will be able to assimilate the heritage of the nation and be at the same time opened to the approaches of others and their schools of thought. In addition, the mission emphasizes the values of citizenship and national identity and develops the students' skills in critical thinking, self-learning, and teamwork.

BACHELOR OF ARTS IN ARABIC LANGUAGE

Objectives

The objectives of the Arabic Language major are to:

- Enhance the effectiveness of Arabic language teaching methods.
- Develop students' linguistic, communication and creative skills.
- Develop critical and literary skills through both collaborative and individual approaches.
- Develop a spirit of pride for the Arabic language, literature, and Islamic heritage.
- Develop cultural dialogue and open-mindedness with other peoples and their cultures.

Major Declaration

The Requirements of the Department of Arabic Language (DAL) for admission in a Major in Arabic Language are:

1. Score a minimum of 75% on the final high school examination.
2. Score 75% in the subject of Arabic Language.
3. Pass the written admission test set by DAL for this purpose.
4. Pass the DAL oral examination.

Learning Outcomes

Graduates of the Arabic Language major are expected to be able to:

- Demonstrate high competence in the use of Arabic language in the fields of reading, writing, and scientific research.

- Employ Arabic language in expressing the needs of Arabic, and Islamic society.
- Effectively use the resources of Arabic language, linguistics and literary tradition in a variety of scholarly activities.
- Distinguish the various periods of Arabic literature, literary schools and trends.
- Know the historical, theoretical and material context of the interaction between Arabic culture and other cultures.
- Distinguish the different linguistic theories, schools, and practices.
- Apply all acquired skills in research, analysis, criticism, and comparison.

Opportunities

The department's graduates will have the ability to fulfill the needs of the work market and the Qatari community, especially in pursuing the following work opportunities:

- University teaching assistant
- Teaching in the educational field.
- Working as a newspaper journalist.
- Working as a professional in television or radio stations.
- Working to scrutinize the language and grammar in news institutions, public ministries, and other government organizations.
- Working in centers of literary creativity.
- Managing cultural activities in clubs or any field that requires critical thinking.
- Working in public relations and diplomatic service.

DEGREE REQUIREMENTS

Major in Arabic Language

A minimum of 120 credit hours are required to complete the major in Arabic Language, including the following:

- A minimum of 33 credit hours in core curriculum requirements
- A minimum of 33 credit hours in major requirements
- A minimum of 24 credit hours in concentration requirements.
- A minimum of 24 credit hours in minor requirements.
- A minimum of 6 credit hours of free electives

Core Curriculum Requirements (33 CH)

Common package (15 CH)

- ARAB 109 Language Skills
- ARAB 110 Introduction to Literature and Language
- ENGL 200 English Language I for Arts, Shareea and Education
- ENGL 201 English Language II for Arts, Shareea and Education
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/ Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (33 CH)

- ARAB 213 Grammar I
- ARAB 218 Morphology
- ARAB 319 Grammar II
- ARAB 221 Classical Arabic Poetry I
- ARAB 224 Classical Arabic Prose
- ARAB 261 Rethorics
- ARAB 331 Classical Arabic Criticism
- ARAB 351 Introduction to Linguistics
- ARAB 381 Modern and Contemporary Arabic Poetry
- ARAB 481 Modern Literary Criticism
- ARAB 483 Comparative Literature

Concentration in Linguistics (24 CH)

Students must complete a minimum of 24 credit hours in concentration requirements as detailed below. Students must have successfully completed 18 credit hours from the Major compulsory courses before registering in the concentration area courses.

Linguistics Concentration Requirements (15 CH)

- ARAB 392 Arabic Syntax
- ARAB 375 Phonology
- ARAB 273 Hebrew
- ARAB 419 Comparative Linguistics
- ARAB 493 Capstone on Arabic Linguistics

Linguistics Concentration Electives I (6 CH)

- ARAB 355 Applied Linguistics
- ARAB 352 Philology
- ARAB 354 Semantics
- ARAB 262 Prosody and Metrics

Linguistics Concentration Electives II (3 CH)

- ARAB 412 Readings and Linguistics Traditions
- ARAB 464 Socio-Linguistics
- ARAB 491 Topics in contemporary Arab thought
- ARAB 434 Orientalism and its Criticism

Concentration in Literature (24 CH)

Students must complete a minimum of 24 credit hours in concentration requirements as detailed below. **Students must have successfully completed 18 credit hours from the Major compulsory courses before registering in the concentration area courses.**

Literature Concentration Requirements (15 CH)

- ARAB 391 Literary research Sources and methods
- ARAB 326 Literary Analysis
- ARAB 271 Persian Language I
- ARAB 372 Persian Language II
- ARAB 492 Capstone on Arabic Literature

Literature Concentration Electives I (6 CH)

- ARAB 382 Modern Narratives
- ARAB 482 Contemporary Gulf Literature
- ARAB 223 Classical Arabic Poetry
- ARAB 262 Prosody and Metrics

Literature Concentration Electives II (3 CH)

- ARAB 327 Readings in Literary Tradition
- ARAB 484 Sociology of Literature
- ARAB 491 Topics in contemporary Arab thought
- ARAB 434 Orientalism and its Criticism

Minor Requirements (24 CH)

Students must complete a minor offered at the university other than the minor in Arabic Language. If the selected minor requires less than 24 CH the student must take additional free electives to complete the 24 CH requirements.

Free Electives (6 CH)

Students must take 6 credit hours from courses outside the Arabic major.

Minor in Arabic (24 CH)

The minor in Arabic provides students with a fair measure of expertise and knowledge in the Arabic Language and Literature via highly elected courses.

Students seeking a minor in Arabic must complete a minimum of 24 credit hours, including the following:

- A minimum of 12 credit hours in Minor requirements
- A minimum of 12 credit hours in Minor Electives

Minor Requirements (12 CH)

Students must complete a minimum of 12 credit hours in Minor required courses:

- ARAB 213 Grammar I
- ARAB 218 Morphology
- ARAB 221 Classical Arabic Poetry I
- ARAB 261 Rhetoric

Minor Electives (12 CH)

Students must complete a minimum of 6 CH in the Arabic Minor Electives I Package and a minimum of 6 CH in the Arabic Minor Electives II Package.

Arabic Minor Electives I Package (6 CH)

Students must complete a minimum of 6 CH taken from the following Minor electives courses:

- ARAB 262 Prosody and Metrics
- ARAB 319 Grammar II
- ARAB 351 Introduction to Linguistics
- ARAB 354 Semantics
- ARAB 352 Philology

Arabic Minor Electives II Package (6 CH)

Students must complete a minimum of 6 CH taken from the following Minor electives courses:

- ARAB 223 Classical Arabic Poetry
- ARAB 331 Classical Arabic Criticism
- ARAB 381 Modern and Contemporary Arabic Poetry
- ARAB 481 Modern Literary Criticism
- ARAB 482 Contemporary Gulf Literature
- ARAB 483 Comparative Literature

DEPARTMENT OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES

College of Sciences Building, Room 222 (Women's Section)
Phone: (974) 4403-4570 / 4534
E-mail: biology@qu.edu.qa
Website: <http://www.qu.edu.qa/artsscience/bioenvi/>

Head

Hamda Al-Naemi

Faculty

Professors:

Abdel Aziz S. El-Bayoumi, Samir Mohamed Jaoua, Malcolm Potts

Associate Professors:

Talaat Abdel-Fattah Ahmad, Jassim A. Al-Khayat, Roda Fahad Al-Thani

Assistant Professors:

Khalid Abdulla Al-Ali, Ibrahim M. Al Ansari, Mohsin Al-Ansi, Fahad H. Al-Jamali, Ibrahim A. Al Maslamani, Abdul Rahman M. A. Al-Muftah, Aisha Hamda A. Al-Naemi, Ahmed Al-Obaidli, Nobuyuki Yamaguchi

ABOUT THE DEPARTMENT

The Department of Biological and Environmental Sciences offers a Bachelor of Science major in both Biological Sciences and Environmental Science. The Biological Sciences major is designed in such a way as to provide proper training and qualification in modern biology, meeting the unprecedented advancement in the field and responding to the needs and aspiration of the Qatari society. The Environmental Science major is the first program of its kind in Qatar. It is developed to address escalating issues and problems associated with the environment of Qatar and the region, as well as imminent and consequential projected needs of stakeholders.

BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES

Objectives

The major in Biological Sciences aims to:

- Develop an understanding of the principles of biological sciences.
- Provide students with intensive laboratory and field experiences.
- Carry out basic and applied research in biological sciences.
- Enhance student abilities to communicate effectively in biological issues.

Major Declaration

In order to declare a major in Biological Sciences, applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements. A minimum score of 450 on the TOEFL (or equivalent) is also required.

Learning Outcomes

Graduates of the Biological Sciences major will be able to :

- Define structure and function of organisms.
- Describe ecological systems.
- Apply molecular tools to different life disciplines.
- Demonstrate skills in the laboratory as they engage in regularly-scheduled lab activities that include basic skills, acquired in previous courses, as well as advanced skills.
- Demonstrate proficiency in written communication by writing with clarity, conciseness, and coherence about relationships among biological concepts.
- Demonstrate proficiency in oral communication by giving concise, clear, and organized oral presentations, with responses and leadership for the audience.
- Engage effectively in groups on critical thinking while participating weekly on problem-solving activities and reporting their results to the class.

Opportunities

Graduates in Biological Sciences find employment in government agencies, non-governmental organizations, and in the private sector in clinical, chemical and research laboratories.

DEGREE REQUIREMENTS

Major in Biological Sciences

A minimum of 120 credit hours are required to complete the major in biological sciences, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 24 credit hours in major requirements
- A minimum of 24 credit hours in major electives
- A minimum of 21 credit hours in major supporting requirements
- A minimum of 18 credit hours in minor requirements

Core Curriculum Program (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/ Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (24 CH)

Students must complete a minimum of 24 credit hours in Major required courses:

- BIOL 101 Biology I
- BIOL 102 Biology II
- BIOL 221 Basic Ecology
- BIOL 241 Microbiology
- BIOL 311 Molecular Biology
- BIOL 351 Plant Anatomy & Physiology
- BIOL 362 Animal Anatomy & physiology
- BIOL 497 Research project

Major Electives (24 CH)

Students must complete a minimum of 24 credit hours in Major elective courses:

- BIOL 211 Cell Biology
- BIOL 322 Desert Biology
- BIOL 343 General Parasitology
- BIOL 212 Genetics
- BIOL 312 Histology
- BIOL 321 Principles of Environmental Biology
- BIOL 412 Genetic Engineering & DNA Technology
- BIOL 421 Eco-Physiology
- BIOL 422 Environmental Management & Conservation
- BIOL 442 Biotechnology
- BIOL 444 Immunology
- BIOL 451 Cell & Tissue Culture

Major Supporting Requirements (21 CH)

Students must complete a minimum of 24 credit hours in major supporting requirements:

- MATH 101 Calculus I
- STAT 151 Introduction to Applied Statistics
- PHYS 110 General Physics for Biology
- PHYS 111 Practical Physics for Biology
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I
- CHEM 211 Organic Chemistry I
- CHEM 351 Basic Biochemistry
- CHEM 352 Basic Biochemistry Practical

Minor Requirements (18 CH)

Students enrolled in the Biological Sciences program may take any of the Minors offered within the university. If the minor the students enrolled in is less than 18 CH, students must take additional courses as free electives to complete the 18 CH requirement.

Students are encouraged to take the following minor:

- Minor in Chemistry

MINOR IN BIOLOGICAL SCIENCES (18 CH)

The Department of Biological and Environmental Sciences offers an undergraduate minor in Biological Sciences that is intended to increase the programs of students whose major fields are outside the biological sciences and who are interested in obtaining a broad-based perspective in biology.

Students seeking a minor in Biological Sciences must complete a minimum of 18 credit hours, including the following:

- A minimum of 12 credit hours in Minor Requirements
- A minimum of 6 credit hours in Minor Electives

Minor Requirements (12 CH)

Students must complete a minimum of 12 credit hours in Minor required courses:

- BIOL 101 Biology I
- BIOL 102 Biology II
- BIOL 221 Basic Ecology
- BIOL 241 Microbiology

Minor Electives (6 CH)

Students must complete a minimum of 6 credit hours in Minor electives courses:

- BIOL 211 Cell Biology
- BIOL 212 Genetics
- BIOL 311 Molecular Biology
- BIOL 321 Principle of Environmental Biology
- BIOL 343 General Parasitology
- BIOL 442 Biotechnology

BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE

Objectives

The major in Environmental Science strives to:

- Provide factual knowledge and necessary thinking skills, which are needed to solve environmental problems through application of knowledge of scientific principles, case studies, research, and cause-and-effect analyses.
- Understand the different strategies and techniques available to study environmental issues, as well as their advantages and disadvantages.
- Enable students to function effectively in society and within their area of specialty. In addition, understand the dimension of issues in diverse areas such as Environmental Policy, International Treaties, Sustainable Development, Environmental Monitoring and Environmental Health.

Major Declaration

In order to declare a major in Environmental Science, applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements. A minimum score of 450 on the TOEFL (or equivalent) is also required.

Learning Outcomes

Graduates of the Environmental Science major will:

- Have depth of understanding in the fundamental disciplines of Environmental Sciences.
- Understand a broad array of diverse biological, biochemical and physical phenomena in terms of fundamental concepts.
- Effectively use a wide range of analytical techniques and equipment, and understand in which situations they are applied, as well as their advantages and limitations.
- Understand the needs, operating strategies, business plans, and health and safety concerns of relevant industries in the region, especially the oil and gas sector.
- Work effectively in teams and exercise leadership at appropriate times in their careers.
- Understand and appreciate the human dimensions of their profession, including the diverse social, cultural, economic, and international aspects of their professional activities.
- Write a well-organized, logical, and scientifically sound report on a topic in Environmental Science that references current literature across several disciplines.
- Communicate and debate environmental issues with peers from sub-disciplines, and present a summary of such discourse electronically, including the use of multimedia modes of communication that are appropriate for distribution and outreach purposes.

Opportunities

Graduates in Environmental Science find employment in government agencies, non- governmental organizations, industries and private

sectors. Great opportunities for employment in management positions, research and consulting at health, industry and government positions are available.

DEGREE REQUIREMENTS

MAJOR IN ENVIRONMENTAL SCIENCE

A minimum of 125 or 126 credit hours are required to complete the major in Environmental Sciences, depending on the selected concentration.

A minimum of 126 credit hours are required to complete the major in Environmental Sciences with concentration in Biotechnology. A minimum of 125 credit hours are required to complete the major in Environmental Sciences with concentration in Marine Sciences. The degree requirements for the major include the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 54 credit hours in Major Requirements
- A minimum of 9 credit hours in Major electives
- A minimum of 15 credit hours in major supporting requirements
- A minimum of 14 or 15 CH in concentration requirements.
- A minimum of 15 CH for the concentration in Biotechnology and a minimum of 14 CH for the concentration in Marine Sciences.

Core Curriculum Requirements (33 CH)

Students must complete a minimum of 33 credit hours in Core Curriculum requirements

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

- SOCI 200 Sustainable Development

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

- MATH 101 Calculus I

General Knowledge package (3 CH)

Courses in CCP-defined General Knowledge package

General Skills package (3 CH)

Courses in CCP-defined General Skills package

Major Requirements (54 CH)

Students must complete a minimum of 54 credit hours in Major required courses:

- BIOL 101 Biology I
- BIOL 102 Biology II
- BIOL 221 Basic Ecology
- BIOL 241 Microbiology
- BIOL 399 Internship
- BIOL 496 Research
- MARS 101 Introduction to Marine Science
- MARS 251 Marine Biology
- CHEM 275 Principles of Environmental Chemistry
- BIOL 322 Desert Biology
- BIOL 422 Environmental Management and conservation
- BIOL 345 Health Safety and Environment
- CHME 361 Petroleum and Gas Technologies
- CVEN 342 Water Resources and Management
- CVEN 352 Waste Management
- GENG 107 Engineering Skills and ethics
- GEOG 442 Environment and Pollution
- LAWC 449 Environmental Law and Regulations
- MARS 459 Environmental Impact Assessment

Major Electives (9 CH)

Students must complete a minimum of 9 credit hours in Major electives courses:

- BIOL 212 Genetics
- BIOL 312 Animal Histology
- BIOL 343 General Parasitology
- BIOL 351 Plant Anat/Physiology
- BIOL 362 Animal Anat/Physiology
- BIOL 421 Ecophysiology
- BIOL 444 Immunology
- BIOL 346 Environmental Health
- BIOL 493 Special Topics
- BIOM 324 Medical Virology
- BIOM 405 Clinical Microscopy
- BIOM 406 Intro. Clinical Medicine
- GEOG 204 General Economic Geography
- GEOG 242 Weather and Climate
- GEOG 243 Introduction to Remote sensing
- GEOG 346 Introduction to GIS
- GEOG 441 Geography of Qatar
- GEOG 448 Hydro-geography

Major Supporting Requirements (15 CH)

Students must complete a minimum of 15 CH in major supporting requirements:

- STAT 151 Introduction to Applied Statistics
- PHYS 110 General Physics for Biology
- PHYS 111 Practical Physics for Biology
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I
- CHEM 102 General Chemistry II
- CHEM 104 Experimental General Chemistry II
- BIOL 103 Freshman Seminar

Concentration in Biotechnology (15 CH)

Students must complete a minimum of 15 CH in concentration requirements.

- BIOL 310 Molecular Cell Biology
- BIOL 433 Monitoring and Toxicology
- BIOL 443 Biotechnology and Bioremediation
- BIOL 451 Cell and Tissue Culture
- BIOL 452 Molecular analytical Techniques

Concentration in Marine Science (14 CH)

Students must complete a minimum of 14 CH in concentration requirements.

- MARS 222 Chemical Oceanography
- MARS 325 Marine Pollution
- MARS 327 Plankton and Productivity
- MARS 455 Marine Ecology
- MARS 458 Fisheries and Aquaculture

DEPARTMENT OF CHEMISTRY AND EARTH SCIENCES

College of Sciences Building, Room 121 (Women's Section)

College of Arts and Sciences, Corridor 4 (Men's Section)

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Head

Jan C. T. Kwak

Faculty

Professors:

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Associate Professors:

Ibrahim Ahmad Zainal Al-Ansari, Hamad Abdul-Rahman Al-Saad, Amina Sultan Jaber Al- Jaber, Siham Y. Al-Qaradawi, Khadeeja Abdul-Rahman Hassan, Khalid A. Majid Al-Saad, Nisreen Abdulla Al Hashemi, Abdulali M. Sadek, Lamis Abdu-Hadi Shahada

Assistant Professors:

Hezam Yahya Abdulla, Saeed Hashim Al-Meer, Latifa Al-Naimi, Ameena Al-Khal Fakhro, Yasser H. Abdulrazek Hussein, Mariam Al-Yousef

ABOUT THE DEPARTMENT

The Department was established in 1973. It offers a BSc with a Chemistry major and a Geology minor (male students) or a Biology or Human Nutrition minor (female students). The Chemistry program also offers courses to various programs at Qatar University including Chemical Engineering, Biology, Human Nutrition, Environmental and Biomedical Sciences, and Pharmacy. The Geology program offers introductory courses to a wide variety of students, as well as more advanced course for students with a geology minor. The Chemistry program serves the Qatari community in several aspects, e.g. by offering consultations, suggesting solutions for numerous scientific problems, and by holding symposiums and public lectures. Chemistry faculty members also provide special workshops and training for employees in many sectors. In addition, many graduates from the Chemistry program have come to serve as teachers in a number of schools and academic institutions.

BACHELOR OF SCIENCE IN CHEMISTRY

Objectives

- Possess a fundamental knowledge of all major areas of modern chemistry.
- Be proficient in the use of up-to-date laboratory techniques.
- Possess the knowledge to apply quantitative and computational methods to practical problems.
- Become creative researchers and confident problem solvers.

- Practice safe laboratory procedures and assess the environmental impact of chemical processes.
- Develop a high level of communication skills.
- Understand ethical and professional responsibilities as chemists and as citizens.

Major Declaration

Applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements.

Learning Outcomes

By graduation students will be able to:

- Identify and characterize chemical compounds.
- Apply knowledge of theory to solve problems related to all fields of chemistry.
- Use modern lab techniques effectively.
- Conduct research in the field of chemistry and its applications.
- Demonstrate the ability to work effectively in teams with professionals from other disciplines.
- Use mathematical and computational methods and information technology in modern chemistry.
- Apply safety rules in chemical laboratories.
- Communicate effectively using verbal, written and electronic communication skills.
- Value further study and lifelong learning in their chemistry careers.
- Demonstrate commitment to ethical issues in their field of work such as falsification of data, plagiarism, and copyright infringement.

Opportunities

- Qatar Gas
- RasGas
- Qatar Petrochemical Company (QAPCO)
- Qatar Fertilizer Company (QAFCO)
- Qatar Steel Company (QASCO)
- Qatar Lubricants Company Limited (QALCO)
- Qatar Chemical Company (Q-Chem)
- Qatar Fuel Additives Company (QAFAC)
- Qatar Vinyl Company (QVC)
- Qatar Industrial Manufacturing Company (QIMC)
- Ministry of Environment
- Forensic Department, Interior Security Force
- National Health Authority
- Ministry of Education
- Ministry of Municipal Affairs & Agriculture

DEGREE REQUIREMENTS

MAJOR IN CHEMISTRY

A minimum of 120 credit hours are required to complete the major in Chemistry, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 40 credit hours in major Requirements
- A minimum of 16 credit hours in major Electives
- A minimum of 13 credit hours in major supporting requirements
- A minimum of 18 credit hours in minor requirements

Core Curriculum Program (33 credit hours)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Students must complete a minimum of 3 credit hours from the following courses:

- MATH 101 Calculus I
- BIOL 101 Biology I

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

Supplemental College / Program core requirements package (3 CH)

Students must complete a minimum of 3 credit hours from the following courses:

- MATH 101 Calculus I
- BIOL 101 Biology I

Major Requirements (40 CH)

Students must complete a minimum of 40 credit hours in Major required courses:

- CHEM 101 General Chemistry I
- CHEM 102 General Chemistry II
- CHEM 103 Experimental General Chemistry I
- CHEM 104 Experimental General Chemistry II
- CHEM 211 Organic Chemistry I
- CHEM 212 Organic Chemistry II

- CHEM 213 Experimental Organic Chemistry
- CHEM 221 Inorganic Chemistry I
- CHEM 222 Experimental Inorganic Chemistry
- CHEM 231 Analytical Chemistry I
- CHEM 234 Experimental Analytical Chemistry
- CHEM 241 Physical Chemistry I
- CHEM 242 Experimental Physical Chemistry I
- CHEM 331 Analytical Chemistry II
- CHEM 341 Physical Chemistry II
- CHEM 351 Basic Biochemistry
- CHEM 352 Experimental Basic Biochemistry
- CHEM 442 Experimental Physical Chemistry II
- CHEM 462 Research Project

Major Electives (16 CH)

Students must complete a minimum of 16 credit hours in Major electives courses:

- CHEM 311 Organic Chemistry III
- CHEM 312 Organic Chemistry IV
- CHEM 315 Environmental Chemistry
- CHEM 321 Inorganic Chemistry II
- CHEM 322 Inorganic Chemistry III
- CHEM 342 Physical Chemistry III
- CHEM 375 Industrial Chemistry
- CHEM 391 Applied Biochemistry
- CHEM 461 Special Topics
- CHME 431 Petroleum Refining
- CHME 433 Petrochemical Technology

Major Supporting Requirements (13 CH)

- MATH 102 Calculus II
- CMPS 101 Introduction to Computer Science
- PHYS 101 General Physics I
- PHYS 103 Experimental General Physics I
- PHYS 102 General Physics II

Minor Requirements (18 credit hours)

Students enrolled in the Chemistry program may take any of the Minors offered within the university, provided that the total number of credit hours for the minor is 18. If the minor the students enrolled in is less than 18 CH, students must take additional courses as free electives to complete the 18 CH requirements.

Students are encouraged to take one of the following minors:

- Minor in Biological Sciences
- Minor in Nutrition
- Minor in Geology

Minor in Chemistry (18 CH)

The minor in Chemistry provides students with a knowledge of the general areas of chemistry, and allows them to apply this knowledge in other disciplines.

Students seeking a minor in Chemistry must complete a minimum of 18 credit hours, including the following:

- A minimum of 11 credit hours in Minor requirements

- A minimum of 7 credit hours in Minor electives

Minor Requirements (11 CH)

Students must complete a minimum of 7 credit hours in Minor required courses:

- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I
- CHEM 102 General Chemistry II
- CHEM 104 Experimental General Chemistry II
- CHEM 211 Organic Chemistry I

Students must complete a minimum of 11 credit hours in Minor electives courses, selected from:

Minor electives

- CHEM 221 Inorganic Chemistry I
- CHEM 222 Experimental Inorganic Chemistry
- CHEM 231 Analytical Chemistry I
- CHEM 234 Experimental Analytical Chemistry
- CHEM 241 Physical Chemistry I
- CHEM 242 Experimental Physical Chemistry I
- CHEM 212 Organic Chemistry II
- CHEM 213 Experimental Organic Chemistry
- CHEM 341 Physical Chemistry II
- CHEM 351 Basic Biochemistry I
- CHEM 352 Experimental Basic Biochemistry
- CHEM 391 Applied Biochemistry

Minor in Geology (18 CH)

The minor in Geology provides students with an overview of the main topics of the discipline, allowing students to apply this knowledge in other areas.

Students seeking a minor in Geology must complete a minimum of 18 credit hours, including the following:

- A minimum of 7 credit hours in Minor requirements
- A minimum of 11 credit hours in Minor electives

Minor Requirements (7 CH)

Students must complete a minimum of 7 credit hours in Minor required courses:

- GEOL 101 Principles of General Geology
- GEOL 321 Structural Geology and Geo-tectonics

Minor Electives (11 CH)

Students must complete a minimum of 11 credit hours in Minor electives courses:

- GEOL 201 Crystallography & Mineralogy
- GEOL 211 Principles of Paleontology
- GEOL 303 Sediment & sedimentation
- GEOL 322 Survey & field Geology
- GEOL 332 Geophysics
- GEOL 401 Geo-chemistry
- GEOL 403 Economic Geology
- GEOL 411 Geology of Arabian Peninsula and Qatar
- GEOL 421 Photogeology & Remote Sensing

- GEOL 432 Geology of Petroleum
- GEOL 434 Hydrogeology

DEPARTMENT OF ENGLISH LITERATURE AND LINGUISTICS

Women's Main Building, Room 147 (Women's Section)

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Head

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Faculty

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Assistant Professors:

Sara Al-Mohannadi, Abdulaziz Al-Mutawa, Rizwan Ahmad, Maria Lombard, Eiman Mustafawi, William Spates, Eirini Theodoropoulou,

Lecturers:

Iglal Ahmed, Sam Meekings, Melissa Mullins

ABOUT THE DEPARTMENT

The Department of English Literature and Linguistics provides high-quality, student-centered education in a positive learning and research environment. Students acquire a broad knowledge of English literature and linguistics. They then choose to develop advanced knowledge and skills in either area. The program equips graduates to meet the challenges of their careers, and it enhances their awareness and appreciation of human values and the literature, culture and language of others.

BACHELOR OF ARTS IN ENGLISH LITERATURE AND LINGUISTICS

Objectives

The major in English Literature and Linguistics strives to:

- Enable students to develop effective communication skills.
- Develop students' appreciation for the diversities of languages and cultures.
- Familiarize students with linguistics, its sub-branches, applications and relations to other disciplines.
- Introduce students to the various literary genres of English in their historical, cultural and artistic contexts.
- Develop students' critical thinking skills and enhance their ability to produce logical and well-structured arguments.

Major Declaration

Applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program, or satisfy the University's competency requirements. A minimum score of 500 on the TOEFL (or Band 5.5 on the IELTS) is required. In addition, applicants must successfully pass the entrance test and interview held by the Department.

Additional Requirements

Students in the major conduct a senior project under faculty supervision within a capstone course. Each student embarks on an individual project, which involves review of literature, data collection, data analysis, and report writing. In addition to a written report, the student gives a 25-30 minute presentation of her project before peers and faculty.

Learning Outcomes

- Fluently and expressively communicate in English.
- Compare their language and culture to those of others.
- Relate the phenomenon of language to its social and psychological contexts.
- Critically analyze English poetry, novels, and drama within their historical, social, and intellectual contexts.
- Analyze and evaluate theoretical and practical constructs in literature and linguistics

Opportunities

Graduates with a major in English Literature and Linguistics will be qualified to work as English teachers and translators, and in the field of communication. They could also work in mass media organizations: newspapers, radio and television. In addition, they could work in non-governmental organizations, the private sector, international aid and development agencies, community services, social organizations, and research organizations.

Major in English

A minimum of 120 credit hours are required to complete the major in English, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements.
- A minimum of 27 credit hours in Major requirements
- A minimum of 24 credit hours in Concentration requirements and electives
- A minimum of 24 credit hours in Minor requirements
- A minimum of 12 credit hours in Free Electives

Core Curriculum Requirements (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 150 Essay Writing I
- ENGL 151 Advanced Reading Comprehension

- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (27 credit hours)

Students must complete a minimum of 27 credit hours in Major required courses:

- ENGL 153 Essay Writing II
- ENGL 155 Introduction to Language
- ENGL 156 Introduction to Literature I
- ENGL 157 Introduction to Linguistics
- ENGL 158 Introduction to Literature II
- ENGL 230 Professional Writing
- ENGL 208 Literary Criticism
- ENGL 226 History of the English Language
- ENGL 499 Capstone Course (Integrated Skills)

Concentration in Linguistics (24 CH)

Students must complete a minimum of 9 CH in concentration core requirements and a minimum of 15 CH in concentration electives

Linguistics Concentration Core Requirements (9 CH)

Students must complete a minimum of 9 credit hours in concentration core requirements.

- ENGL 216 Phonetics & Phonology
- ENGL 301 Syntax
- ENGL 303 Sociolinguistics

Linguistics Concentration Electives (15 CH)

Students must complete a minimum of 15 credit hours in concentration electives from specific packages. Students must complete 3 CH in each of the Language Across Disciplines, Language and Psychology, Language and Meaning, Research Techniques, and Linguistics Special Topics packages.

Language Across Disciplines Package (3 CH)

- ENGL 234 Language and Gender
- ENGL 209 Language and Society
- ENGL 213 Language and Culture

- ENGL 233 Language and Computer Language and Psychology Package (3 CH)

- ENGL 305 First Language Acquisition
- ENGL 307 Psycholinguistics
- ENGL 309 Second Language Acquisition

Language and Meaning Package (3 CH)

- ENGL 319 Semantics
- ENGL 327 Discourse Analysis

Research Techniques Package (3 CH)

- ENGL 401 Speech Sciences
- ENGL 403 Field Methods

Linguistics Special Topics Package (3 CH)

- ENGL 423 Seminar in Linguistics
- ENGL 425 Topics in Linguistics
- ENGL 448 Independent Study

Concentration in Literature (24 CH)

Students must complete a minimum of 9 CH in concentration core requirements and a minimum of 15 CH in concentration electives

Literature Concentration Core Requirements (9 CH)

Students must complete a minimum of 9 credit hours in concentration core requirements.

- ENGL 220 American Literature
- ENGL 302 Comparative Literature
- ENGL 304 Shakespeare

Literature Concentration Electives (15 CH)

Students must complete a minimum of 15 credit hours in concentration electives from specific packages. Students must complete a minimum of 3 CH in each of the Period, Genre, and Literature Special Topics packages.

Period package (3 CH)

- ENGL 306 Medieval Literature
- ENGL 308 Renaissance to Restoration
- ENGL 314 Augustan to Romantic
- ENGL 324 Victorian Literature
- ENGL 334 Twentieth Century Literature

Genre package (3 CH)

- ENGL 326 Poetry
- ENGL 328 Drama
- ENGL 330 The Short Story
- ENGL 332 The Novel

Literature Special Topics package (3 CH)

- ENGL 400 Women's Literature
- ENGL 402 Text and Film
- ENGL 404 Modernism
- ENGL 406 Post-Modernism

- ENGL 408 Post-Colonial Literature
- ENGL 424 Modern Drama
- ENGL 426 Children's Literature
- ENGL 428 Topics in Literature
- ENGL 448 Independent Study

Minor requirements (24 credit hours)

Students enrolled in the English program may take any of the Minors offered within the university. If the minor the students enrolled in is less than 24 CH, students must take additional courses as free electives to complete the 24 CH requirements.

Free Electives (if applicable) (12 CH)

Students must complete a minimum of 12 credit hours in free electives from courses outside the English major.

Minor in English (24 CH)

The Minor in English offers a variety of courses in writing, literature, and linguistics which allow students to develop advanced communicative and critical thinking skills. It also enables students to appreciate the diversity of languages and cultures.

Students seeking a minor in English must complete 24 credit hours, including the following:

- 15 credit hours in Minor requirements
- 9 credit hours in Minor electives

Minor Requirements (15 CH)

Students must complete a minimum of 15 credit hours in Minor-required courses:

- ENGL 153 Essay Writing II
- ENGL 155 Introduction to Language
- ENGL 156 Introduction to Literature I
- ENGL 157 Introduction to Linguistics
- ENGL 158 Introduction to Literature II

Minor Electives (9 CH)

Students must complete a minimum of 9 credit hours in Minor electives courses:

- ENGL 230 Professional Writing
- ENGL 220 American Literature
- ENGL 234 Language and Gender
- ENGL 209 Language and Society
- ENGL 213 Language and Culture
- ENGL 302 Comparative Literature
- ENGL 303 Sociolinguistics
- ENGL 305 First Language Acquisition
- ENGL 307 Psycholinguistics
- ENGL 309 Second Language Acquisition
- ENGL 328 Drama
- ENGL 330 The Short Story
- ENGL 400 Women's Literature
- ENGL 402 Text and Film
- ENGL 426 Children's Literature

DEPARTMENT OF HUMANITIES

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Head

Mahjoob Zweiri

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Assistant Professors:

Khalid Hamad Abaalzamat, Maher Abu-Munshar, Shamma Sultan Abdullah Al-Asiri, Muhammad Khalifa Al-Kuwari, Sara M. Al-Zaman, Nadeem A.Kareem Hashem, Adil Ismail M. Hilal, Edward Moad

ABOUT THE DEPARTMENT

The Department of Humanities is one of the leading in the region and is committed to achieving academic excellence in teaching and scholarly endeavors, as well as serving the academic community and the public at large. The Department currently offers a major in History, as well as a minor in Geography and Urban Planning for History and Sociology students. In addition, the Department offers many elective courses in History, Geography and Philosophy. Our bachelor's degrees are well established and comparable to similar programs offered by regional universities.

The primary educational objective of the Department is to provide high-quality undergraduate education to QU students. Our students will be equipped with valuable knowledge, as well as with technical, critical-thinking, problem-solving, communication, and teamwork skills. This empowers our students for their future careers in educational and industrial sectors.

The faculty members of the department are highly qualified with international academic experience, and are committed to advance the learning of History, Geography and Urban Planning, and Philosophy, through instruction and research. The members of the Department are also involved in scholarly endeavors, with the aim of extending the frontier of social and scientific knowledge that will benefit the State of Qatar and humanity at large. Their research results have been disseminated internationally through publication, as well as through international and regional conferences. Moreover, some of their

research projects have been supported by national and institutional grants.

The Department of Humanities continues to serve the Qatari society in various capacities, including community outreach programs, professional development activities, and collaborative partnerships with various sectors of the national and international community.

BACHELOR OF ARTS IN HISTORY

Objectives

1. Encourage students to see cause and effect relationship over time and across civilizations by using a mixed chronological, thematic, and topical approach.
2. Expand students' ability to understand the chronological relationship between geography and history, resulting in an understanding of difference of lifestyles, cultures, and patterns of social interactions.
3. Enhance students' recognition and understanding of major turning points in history.
4. Improve students' communication skills by encouraging them to interpret, analyze, defend, and advocate positions via writing and oration, based on their study of global and regional history.

Major Declaration

Applicants are required to have a minimum overall Secondary School average of 75%, and a TOEFL score of 450 or 5 on the IELTS. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements. In addition, a personal interview is also required.

Learning Outcomes

Graduates of the History major will succeed in achievement and mastery of the target objectives of the Arts Degree, including:

1. Develop information gathering techniques through the examination of primary sources.
2. Recognizing the impact of interactions among major civilizations.
3. Comparing instances of equality and disparity, and human successes and failures in history.
4. Interpret historical facts to draw conclusions.
5. Apply scientific research based on historical methodology.
6. Develop oral and written communication skills.

Opportunities

The program provides graduates opportunities in governmental organizations such as ministries, diplomatic offices, the media sector, authorities and councils, and also non-governmental organizations including hotels, tourism agencies and publishing houses. In addition, graduates are highly demanded for work at museums, libraries and research centers. Also, Qatar University, as well as other universities, have employment openings for graduates.

DEGREE REQUIREMENTS

Major in History

A minimum of 120 credit hours are required to complete the major in History, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 27 credit hours in Major requirements
- A minimum of 6 credit hours in Major Electives
- A minimum of 15 credit hours in a Focus Area package
- A minimum of 6 credit hours in the language requirement package
- A minimum of 24 credit hours in Minor Requirements
- A minimum of 9 credit hours in Free Electives

Core Curriculum Program (33 credit hours)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (27 CH)

Students must complete a minimum of 27 credit hours in Major-required courses:

- HIST 103 An Introduction to History
- HIST 111 History of the Muslim World I (600 –1187)
- HIST 121 History of Qatar
- HIST 131 World History Since 1300
- HIST 204 Historiography
- HIST 212 History of the Muslim World II (1187 - 1516)
- HIST 213 Modern Arab History (1516 -1919)
- HIST 370 Modern Arab History since 1919
- HIST 407 Capstone

Major Electives (6 CH)

Students must complete a minimum of 6 credit hours in Major electives courses:

- HIST 334 Arabian Gulf in Antiquity
- HIST 336 Women and Gender in the Ancient Near East
- HIST 380 The Making of Modern America
- HIST 390 The History of Modern China and Japan
- INTA 302 Politics of Oil
- HIST 427 Muslim Minorities in the World
- HIST 436 Intellectual History of Europe in the 20th Century
- HIST 470 Modern Latin American History
- INTA 345 The Arab Israeli Conflict

Focus Area (15 CH)

Students must select one of the three Focus Areas Packages namely the Islamic History Focus Area Package, the European History Focus Area Package, or the Modern Gulf History Focus Area Package.

The Islamic History Focus Area Package (15 CH)

Students must complete a minimum of 3 CH in The Islamic History Focus Area Requirements Package, a minimum of 6 CH in The Islamic History Focus Area Electives Package, a minimum of 3 CH from The Islamic History Focus Area Additional Electives I Package, and a minimum of 3 CH from The Islamic History Focus Area Additional Electives II Package.

The Islamic History Focus Area Requirements Package (3 CH)

- HIST 217 Islamic Civilization

The Islamic History Focus Area Electives Package (6 CH)

Students must complete a minimum of 6 credit hours in the focus area elective courses:

- HIST 314 Economic & Social History of the Muslim World
- HIST 318 History of Al-Andulus
- HIST 319 History of the Crusades (The Franks Invasion)
- HIST 320 History of Islamic sects and movements
- HIST 415 History of science in Islam
- HIST 416 History of Islamic arts and architecture
- HIST 417 Topics in Islamic History

The Islamic History Focus Area Additional Electives I Package (3 CH)

Students must complete a minimum of 3 credit hours taken from the Modern Gulf History Focus Area Requirements or Electives Packages.

The Islamic History Focus Area Additional Electives II Package (3 CH)

Students must complete a minimum of 3 credit hours taken from the European History Focus Area Requirements or Electives Packages.

The Modern Gulf History Focus Area Package (15 CH)

Students must complete a minimum of 3 CH in The Modern Gulf History Focus Area Requirements Package, a minimum of 6 CH in The Modern Gulf Focus Area Electives Package, a minimum of 3 CH from

The Modern Gulf Focus Area Additional Electives I Package, and a minimum of 3 CH from The Modern Gulf Focus Area Additional Electives II Package.

The Modern Gulf History Focus Area Requirements Package (3 CH)

- HIST 222 The Gulf in Modern Period

The Modern Gulf History Focus Area Electives Package (6 CH)

Students must complete a minimum of 6 credit hours in the focus area elective courses:

- HIST 322 Iran and its Neighbours
- HIST 323 Gulf-South Asian Relations in modern and contemporary history
- HIST 324 Economic History of the Gulf
- HIST 421 The Gulf and the Arab World
- SOCI 462 Change in Contemporary Arab Society
- HIST 425 Topics in Gulf History

The Modern Gulf History Focus Area Additional Electives I Package (3 CH)

Students must complete a minimum of 3 credit hours taken from the Islamic History Focus Area Requirements or Electives Packages.

The Modern Gulf History Focus Area Additional Electives II Package (3 CH)

Students must complete a minimum of 3 credit hours taken from the European History Focus Area Requirements or Electives Packages.

The European History Focus Area Package (15 CH)

Students must complete a minimum of 3 CH in The European History Focus Area Requirements Package, a minimum of 6 CH in The European History Focus Area Electives Package, a minimum of 3 CH from The European History Focus Area Additional Electives I Package, and a minimum of 3 CH from The European History Focus Area Additional Electives II Package.

The European History Focus Area Requirements Package (3 CH)

- HIST 231 Europe and the World since 1500 CE

The European History Focus Area Electives Package (6 CH)

Students must complete a minimum of 6 credit hours in the focus area elective courses:

- HIST 331 Ancient Greece and Rome, 1200 BCE to 500 CE
- HIST 332 Medieval Europe, 500 to 1400 CE
- HIST 333 The Renaissance and Reformation, 1400 to 1648
- HIST 337 The Age of Absolutism and Revolution, 1648 to 1815
- HIST 431 Nationalism and its Consequences, 1815 to 1914
- HIST 432 Europe Between the Two World Wars, 1914-1945
- INTA 433 Europe, the Cold War and the World since 1945
- HIST 434 Topics in European History

The European History Focus Area Additional Electives I Package (3 CH)

Students must complete a minimum of 3 credit hours taken from the Islamic History Focus Area Requirements or Electives Packages.

The European History Focus Area Additional Electives II Package (3 CH)

Students must complete a minimum of 3 credit hours taken from the Modern Gulf History Focus Area Requirements or Electives Packages.

Language requirements Package (6CH)

Students must complete a minimum of 6 credit hours in one of the three language requirement packages depending on the selected focus area. The three language requirement packages are: The Islamic History Focus Area Language Requirement package, The Modern Gulf History Focus Area Language Requirement package, and the European History Focus Area Language Requirement package.

The Islamic History Focus Area Language Requirement package (6 CH)

Students must complete a minimum of 6 credit hours taken from the Persian Language Package or the Turkish Language Package

The Modern Gulf History Focus Area Language Requirement package (6 CH)

Students must complete a minimum of 6 credit hours taken from the Persian Language Package or the Turkish Language Package

The European History Focus Area Language Requirement package (6 CH)

Students must complete a minimum of 6 credit hours taken from the French Language Package or the Spanish Language Package

The Persian Language package (6 CH)

- ARAB 271 Persian 1
- ARAB 272 Persian 2

The Turkish Language package (6 CH)

- TURK 101 Turkish 1
- TURK 201 Turkish 2

The French Language package (6 CH)

- FREN 101 French 1
- FREN 201 French 2

The Spanish Language package (6 CH)

- SPAN 101 Spanish 1
- SPAN 201 Spanish 2

Minor Requirements (24 CH)

Students enrolled in the History program may take any of the Minors offered within the university. If the minor the students enrolled in is less than 24 CH, students must take additional courses as free electives to complete the 24 CH Minor requirements.

Free Electives (9 credit hours)

Students must complete a minimum of 9 Credit Hours in free electives from courses outside the History major.

MINOR IN HISTORY (24 CH)

The Minor in History is an excellent opportunity for students who are interested in providing depth to their chosen major through gaining a historical perspective in their area of specialization. Adding an interdisciplinary aspect to a degree, this minor allows students to learn about history as a science, providing training in the use of basic tools and methods in the study of history. Through a wide range of approaches, students will be exposed to both modern and ancient history, tailoring choices to their specific interests.

Students seeking a minor in History must complete a minimum of 24 credit hours, including the following:

- A minimum of 12 credit hours in Minor requirements
- A minimum of 12 credit hours in Minor electives

Minor Requirements (12 CH)

Students must complete a minimum of 12 credit hours in Minor-required courses:

- HIST 103 An Introduction to History
- HIST 111 History of the Muslim World I (600 –1187)
- HIST 131 World History Since 1300
- HIST 213 Modern Arab History (1516 -1919)

Minor Electives (12 CH)

Students must complete a minimum of 12 credit hours in Minor elective, those credits can be selected from the list of the major electives or any of the focus areas (Islamic History Focus, Modern Gulf History Focus and European History): the courses including :

- HIST 334 Arabian Gulf in Antiquity
- HIST 336 Women and Gender in the Ancient Near East
- HIST 380 The Making of Modern America
- HIST 390 The History of Modern China and Japan
- INTA 302 Politics of Oil
- HIST 427 Muslim minorities in the world
- HIST 436 Intellectual History of Europe in the 20th Century
- HIST 470 Modern Latin American History
- INTA 345 The Arab Israeli Conflict
- HIST 217 Islamic Civilization
- HIST 314 Economic & Social History of the Muslim World
- HIST 318 History of Al-Andulus
- HIST 319 History of the Crusades (The Franks Invasion)
- HIST 320 History of Islamic Sects and Movements
- HIST 415 History of Science in Islam
- HIST 416 History of Islamic Arts and Architecture
- HIST 417 Topics in Islamic History
- HIST 222 The Gulf in Modern Period
- HIST 322 Iran and its Neighbours
- HIST 323 Gulf-South Asian Relations in Modern and Contemporary History

- HIST 324 Economic History of the Gulf
- HIST 421 The Gulf and the Arab World
- SOCI 462 Change in Contemporary Arab Society
- HIST 425 Topics in Gulf History
- HIST 231 Europe and the World since 1500 CE
- HIST 331 Ancient Greece and Rome, 1200 BCE to 500 CE
- HIST 332 Medieval Europe, 500 to 1400 CE
- HIST 333 The Renaissance and Reformation, 1400 to 1648
- HIST 337 The Age of Absolutism and Revolution, 1648 to 1815
- HIST 431 Nationalism and its Consequences, 1815 to 1914
- HIST 432 Europe Between the Two World Wars, 1914-1945
- INTA 433 Europe, the Cold War and the World since 1945
- HIST 434 Topics in European History

DEPARTMENT OF HEALTH SCIENCES

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Website: <http://www.qu.edu.qa/artsscience/health>

Head

Tahra ElObeid

Faculty

Associate Professors:

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Assistant Professors:

Marwan AbuMadi, Asma Althani, Tahra ElObeid, Elham Sherif

ABOUT THE DEPARTMENT

The Department of Health Sciences has two major programs – Biomedical Sciences and Human Nutrition. These programs provide a unique entity of closely collaborating disciplines that are not found elsewhere in the country. The mission of the department is to promote people's health and well-being and consequently, to advance knowledge and methods for assessing health, functional capacity and associated factors throughout their lifespan and among various population groups, to develop new measures for promoting health and well-being by means of providing well-trained competent calibers to the health field. This is accomplished through intensive teaching, practical and hand on experience in addition to scientific research.

BACHELOR OF SCIENCE IN BIOMEDICAL SCIENCE

Objectives

The mission of the Biomedical Sciences major at Qatar University is to provide quality education that prepares future competent Biomedical Scientists with knowledge of theory, practical and critical thinking skills, and research and communication skills; with emphasis on ethics for the healthcare industry. Our graduates are keen on continuous education, professional development and adapt to the changing technology and needs of society. The goals of the Biomedical Sciences major are to help students to:

- Acquire knowledge related to the field of biomedical sciences.
- Gain practical skills related to the laboratory field.
- Develop communication skills.
- Enhance critical thinking skills.
- Employ modern information technology related to the health field.
- Sustain high professional ethics and behavior.
- Conduct research related to biomedical sciences.
- Maintain an interest in lifelong learning and career development.

MAJOR DECLARATION

Admission to the Pre-Biomedical Science Major:

Applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements. A minimum score of 500 on the TOEFL (or Band 5.5 on the IELTS) is also required.

Admission to the Biomedical Science Major:

1. Completion of 3 Semesters of University Core Curriculum courses and Compulsory Supporting Courses;
2. All Compulsory Supporting Courses must be either completed or in progress;
3. Cumulative GPA of 2.20 is required;
4. Cumulative GPA of 2.50 for all Compulsory Supporting Courses is required;
5. A grade of C or better in each Compulsory Supporting Course.

Additional Requirements

Students must complete a capstone research project prior to their last semester in the program. The Biomedical Science program also requires students to complete clinical rotations in area hospital laboratories. These clinical practice rotations will be coordinated by the program and comprise the courses in the student's last semester of study.

Learning Outcomes

- Demonstrate conceptual knowledge in biomedical field.
- Perform basic laboratory techniques in biomedical labs.
- Comply with safety regulations and universal precaution.
- Communicate effectively with colleagues and clients.
- Solve problems related to discrepancies in test results.
- Integrate patient data for evaluation of validity of laboratory test results.
- Apply computer technology in clinical laboratory data processing, data reporting and information retrieval.
- Maintain strong professional ethics.
- Adjust effectively in team working.
- Participate in biomedical research.
- Maintain positive attitudes toward life-long learning in the biomedical field.

Opportunities

A biomedical scientist is an individual who performs and evaluates laboratory tests using a variety of methods. The results of these tests provide the information needed to diagnose disease or monitor treatment of patients. It has been estimated that as much as 60 to 70% of the information used to treat patients comes from the clinical laboratory.

Most clinical laboratory scientists begin their professional careers working in a laboratory in an acute care or community hospital. However, job opportunities also exist in physician offices, public health laboratories, reference laboratories, research laboratories, and forensic

laboratories. Opportunities for employment exist in industry. In this type of setting a biomedical scientist may be involved in research and development for the production of pharmaceuticals, reagents, or other biological products.

Biomedical Science is appropriate for someone with a strong interest in science who wants a health career with minimal patient contact. You should enjoy "hands on" laboratory work. You should be a team player who is self-motivated and works well under pressure. Additionally, one should have good manual dexterity, good attention to detail and enjoy doing precise work.

DEGREE REQUIREMENTS

Major in Biomedical Science

A minimum of 135 credit hours are required to complete the major in Biomedical Sciences, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 61 credit hours in Major Requirements
- A minimum of 37 credit hours in Major Supporting Requirements
- A minimum of 4 credit hours in Major Electives

Core Curriculum Program (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

- MATH 101 Calculus I

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (61 CH)

Students must complete a minimum of 61 credit hours in Major required courses:

- BIOL 311 Molecular Biology
- BIOM 301 Lab Management and QC
- BIOM 322 Medical Microbiology
- BIOM 323 Medical Parasitology

- BIOM 324 Medical Virology
- BIOM 346 Clinical Chemistry
- BIOM 418 Pharmacology and Toxicology
- BIOM 422 Diagnostic Microbiology
- BIOM 426 Clinical Immunology
- BIOM 444 Histopathology
- BIOM 445 Cytopathology
- BIOM 446 Urine Analysis and Body Fluids
- BIOM 451 Hematology and Hemostasis
- BIOM 452 Immunohematology & Blood Bank
- BIOM 463 Endocrinology
- BIOM 491 Clinical Practice in Chemistry
- BIOM 492 Clinical Practice in Hematology
- BIOM 493 Clinical Practice in Immunology
- BIOM 494 Clinical Practice in Microbiology
- BIOM 495 Clinical Practice in Immunohematology
- BIOM 496 Professional Development
- BIOM 497 Research Project I
- BIOM 498 Research Project II

Major Supporting Requirements (37 CH)

Students must complete a minimum of 37 credit hours in Major Supporting courses:

- BIOL 101 Biology I
- BIOL 241 Microbiology
- BIOM 211 Human Anatomy
- BIOM 212 Human Histology
- BIOM 215 Human Physiology
- BIOM 217 Human Genetics
- BIOM 243 Introduction to Pathology
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I
- CHEM 211 Organic Chemistry
- CHEM 351 Basic Biochemistry
- CHEM 352 Experimental Biochemistry
- CMPS 101 Introduction to Computer Science
- STAT 151 Introduction to Applied Statistics

Major Electives (4 CH)

Students must complete a minimum of 4 credit hours in Major Elective courses:

- BIOM 303 Epidemiology
- BIOM 213 Embryology
- BIOM 240 Pathophysiology
- BIOM 345 Chemistry of Metabolism
- BIOM 352 Radiation & Protection Methods
- BIOM 400 Seminar
- BIOM 401 Special Topics
- BIOM 402 Special Topics
- BIOM 403 Special Topics
- BIOM 405 Clinical Microscopy
- BIOM 404 Modern Tech, in Biomedical Sciences
- BIOM 406 Introduction to Clinical Medicine
- BIOM 411 Forensic Science

- CHEM 231 Analytical Chemistry I
- CHEM 234 Experimental Analytical Chemistry
- PHYS 110 General Physics For Biology
- PHYS 111 Practical Physics For Biology

BACHELOR OF SCIENCE IN HUMAN NUTRITION

Objectives

- Provide students with a strong foundation in the basic sciences, research and applications of nutrition, dietetics and food science.
- Prepare students for successful entry into the dietetics and nutrition profession.
- Provide graduates with the knowledge and skills for making a valued and lasting contribution to health promotion within the Qatari community.
- Equip graduates with the ability to communicate effectively, to collaborate, to solve problems, to apply critical thinking and to use information technologies.

Major Declaration

Applicants must satisfy the minimum of 75% in high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements. A minimum score of 480 on the TOEFL (or equivalent) is also required.

1. No more than 20 students will be accepted to the major per academic year.
2. Students will be notified of admission to the major before the start of the Fall semester.
3. Enrolled students are expected to maintain a minimum GPA of 2.4 in basic and preclinical sciences before taking program specialized courses.
4. Enrolled students are expected to maintain a minimum GPA of 2.5 and pass a qualifying exam before enrolled in the supervised professional practice.
5. Enrolled students will have the chance to repeat the qualifying exam

Additional requirements:

Students enrolled in the Human Nutrition Program should complete and pass a supervised professional practice of 20 credit hours before graduation.

Learning Outcomes

- Demonstrate knowledge of the scientific basis of food and nutrition sciences appropriate for entry level professional.
- Apply the principles of food production, delivery and service, procurement, finance and human resource management.
- Analyze, understand and interpret research data.
- Plan, implement and evaluate clients' nutrition care as a member of a health care team.

- Demonstrate the ability to screen individuals for nutritional risk.
- Plan diets for optimal nutrition in health and disease.
- Demonstrate knowledge, application and integration of principles of public health and community nutrition.
- Promote high Standards of ethical and professional conducts.
- Work with other professionals in promoting individuals' health and well-being throughout life.
- Demonstrate effective and professional oral and written communication and documentation and use of current information technologies.
- Demonstrate skills of counseling techniques to facilitate behavior.

Opportunities

As a Human Nutrition graduate, you have many career options. The balance of courses in social sciences and biological sciences, and integration of these in human nutrition courses in the program prepare you for many career options.

An example of position for HNP graduates

- Hamad Medical Corporation
- Aspire
- Qatar Foundation
- Sidra
- Qatar Diabetes Association
- Qatar Health Authority
- Primary Health Care
- Private clinics
- QU food service

DEGREE REQUIREMENTS

Major in Human Nutrition

A minimum of 132 credit hours are required to complete the major in Human Nutrition, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 70 credit hours in Major requirements including:
 - A minimum of 12 credit hours in Major Core Requirements
 - A minimum of 48 credit hours in Nutrition & Dietetics requirements
 - A minimum of 10 credit hours in Food Sciences and Technology requirements
- A minimum of 29 credit hours in Major supporting requirements

Core Curriculum Program (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (70 CH)

Students must complete a minimum of 70 CH in Major required courses including 12 CH in Major core requirements, 48 CH in Nutrition & Dietetics package requirements, and 10 CH in Food Sciences and Technology Package Requirements.

Major Core Requirements package (12 CH)

Students must complete a minimum of 12 CH in major core requirements including:

- NUTR 221 Principles of Food Science and Nutrition
- NUTR 231 Human Nutrition
- NUTR 321 Food Chemistry
- NUTR 335 Nutritional Metabolism I
- NUTR 336 Nutritional Metabolism II

Nutrition & Dietetics package (48 CH)

Students must complete a minimum of 48 CH in Nutrition & Dietetics package requirements.

- NUTR 320 Introduction to Dietetic and Nutrition Practice
- NUTR 329 Nutrition Education and Communication
- NUTR 338 Nutrition through the Lifespan
- NUTR 340 Assessment of Nutritional Status
- NUTR 439 Meal Planning & Evaluation
- NUTR 450 Medical Nutrition Therapy I
- NUTR 451 Medical Nutrition Therapy II
- NUTR 454 Medical Nutrition Laboratory I
- NUTR 453 Medical Nutrition Laboratory II
- NUTR 456 Professional Issues in Dietetics and Nutrition
- NUTR 457 Public Health Nutrition
- NUTR 490 Capstone Course
- NUTR 491 Nutrition Seminar
- NUTR 492 Research Methodologies in Human Nutrition
- NUTR 494 Supervised Dietetic Practice I (15 weeks)
- NUTR 495 Supervised Dietetic Practice II (15 Weeks)

Food Sciences and Technology package (10 CH)

Students must complete a minimum of 10 CH in Food Sciences and Technology package requirements:

- NUTR 319 Quantity of Food Production & Equipment
- NUTR 441 Food Safety and Quality Control
- NUTR 442 Management of Food Services Operations I
- NUTR 443 Management of Food Services Operations II

Major Supporting Requirements (29 CH)

Students must complete a minimum of 29 credit hours in Major supporting courses:

- CHEM 101 General chemistry I
- CHEM 103 Experimental General Chemistry I
- CHEM 211 Organic Chemistry I
- CHEM 351 Basic Biochemistry
- CHEM 352 Experimental Basic Biochemistry
- BIOL 101 Biology I
- BIOL 241 Microbiology
- BIOM 211 Human Anatomy
- BIOM 215 Human Physiology
- BIOM 217 Human Genetics
- MATH 101 Calculus

Minor in Human Nutrition (18 CH)

The minor in Human Nutrition will provide students with knowledge of nutritional biochemistry, digestion, absorption and metabolism. Students will have opportunities to examine the role of nutrition throughout the life cycle, as well as study of the social and economic influences on nutrition. The minor also introduces student to food science and its applications in food industry.

Students seeking a minor in Human Nutrition must complete a minimum of 18 CH including the following:

- A minimum of 8 CH in Minor requirements
- A minimum of 10 CH in Minor electives

Minor Requirements (8 CH)

Students must complete a minimum of 8 CH in Minor required courses:

- NUTR 221 Principles of Food Science and Nutrition
- NUTR 231 Human Nutrition
- NUTR 321 Food Chemistry

Minor Electives (10 CH)

Students must complete a minimum of 10 CH in Minor elective courses including:

- NUTR 319 Quantity of Food Production & Equipment
- NUTR 329 Nutritional Education and Communication
- NUTR 335 Nutritional Metabolism I
- NUTR 336 Nutritional Metabolism II
- NUTR 338 Nutrition through the Lifespan
- NUTR 441 Food Safety and Quality Control
- NUTR 442 Management of Food Services Operations I
- NUTR 457 Public Health Nutrition

DEPARTMENT OF INTERNATIONAL AFFAIRS

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Website: <http://www.qu.edu.qa/artssciences/iap/>

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Jacqueline Armijo, Taef El-Azhari, Youcef Bouandel.

Assistant Professors:

Mazhar Al-Zo'by, Farhan Chak, Afyare Elmi, Lina Kassem, Hanan Abdul Rahim, Hatoon Al-Fassi, Todd Thompson, Steven Wright.

Lecturers:

Thayyiba Ibrahim

ABOUT THE DEPARTMENT

The Department of International Affairs offers an interdisciplinary degree focused on generating knowledge and understanding the politics, histories, economies, and cultures of modern global societies. Through focusing on national, regional, and international issues, the degree seeks to prepare its graduates to thrive in an increasingly interdependent global community by grounding them in independent critical thinking, leadership skills, global awareness, tolerance, and social responsibility. Graduates will be ready for further study and professional careers in both the public and private sectors.

BACHELOR OF ARTS IN INTERNATIONAL AFFAIRS

Objectives

The major in International Affairs strives to:

- Provide Qatari society with highly-qualified graduates in order to support the development of a knowledge-based society, in accordance with Qatar University's mission.
- Training future leaders with advanced knowledge and research skills to meet the needs of Qatari society in the areas of politics, domestic and international affairs, and international institutions.
- Provide students with the skills and knowledge to appreciate and understand the world and its pluralistic heritage in terms of history, cultures, politics, norms, values, economics, and religions.
- Foster an understanding of the dynamics of globalization

and its impact on global and local contexts.

- Develop community partnerships, outreach activities, and civic collaboration to provide education on issues of global significance and to better prepare a citizenry for an increasingly globalized world.
- Recruit a highly promising international student body and help them achieve their potential through imparting a culture of lifelong learning.

Major Declaration

Applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements. A minimum score of 450 on the TOEFL (or equivalent) is required. In addition, a personal interview is also required. Transfer applicants must have earned a minimum cumulative GPA of 2.50.

Additional Requirements

To receive a BA in International Affairs, students must complete the 120 credit hour approved study plan of the major. Students must also achieve a minimum cumulative GPA of 2.00. With the help and supervision of an assigned advisor, students under the newly proposed program will have to diversify their coursework by the end of their sophomore year to include departmental concentrations and/or a Minor.

Learning Outcomes

- Identify and analyze global issues, systems, and trends from a variety of disciplinary perspectives (political, cultural, economic, geographic, diplomatic, and environmental).
- Use academic methodologies to organize and evaluate information sources critically and effectively, and communicate findings clearly, analytically and persuasively.
- Demonstrate knowledge of other cultures, values, beliefs and perspectives.
- Demonstrate a thorough understanding of the histories, politics, and societies of Qatar, the Gulf and the region.
- Critically evaluate the social, cultural, political and economic impact of energy and natural resources on modern societies and international affairs.
- Demonstrate a critical understanding of key theories and empirical findings in the literature of political science, political economy, political culture, history of societies, the politics of natural resources, and security studies.
- Demonstrate the ability to apply concepts and skills learned in a variety of contexts through participation in public agencies, institutions, field work, internships, projects and university events.

Opportunities

Graduates will be ready for further study and professional careers in public and private sectors, including foreign affairs, international organizations, government, media, civil service and journalism.

DEGREE REQUIREMENTS

Major in International Affairs

A minimum of 120 credit hours are required to complete the major in International Affairs, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 39 credit hours in Major Requirements
- A minimum of 18 credit hours in Major Electives
- A minimum of 24 credit hours in either a Minor or in Concentration requirements
- A minimum of 6 credit hours in Free Electives

Core Curriculum Requirements (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Core Requirements (39 CH)

Students must complete a minimum of 39 credit hours in Major required courses:

- INTA 100 First Year Seminar
- INTA 101 Political and Social Thought
- INTA 102 Introduction to Political Science
- INTA 103 Introduction to International Relations
- EDUC 201 Research Methodology
- INTA 296 International Organizations
- INTA 302 Politics of Oil
- INTA 306 Gulf studies
- INTA 308 International Political Economy
- INTA 313 Culture and Politics
- LAWC 339 Public International Law
- INTA 411 Capstone
- INTA 415 History of the Middle East in the 20th Century

Major Electives (18 CH)

Students must complete a minimum of 18 credit hours in Major electives courses:

- INTA 201 Comparative Political Systems
- INTA 203 Women in Islam
- INTA 204 Middle East History I
- INTA 205 Middle East History II
- INTA 206 Globalization
- INTA 209 Islam and the West
- INTA 300 Chinese Society and Politics in the 21st Century
- INTA 301 Islamic Political Thought
- INTA 305 Internship
- INTA 315 Dialogue Across Societies and Civilizations
- INTA 345 The Arab-Israeli Conflict
- INTA 350 Foreign Policy of the United States
- INTA 401 International Relations Theory
- INTA 403 Security Studies
- INTA 404 Gender and Law
- INTA 405 Gender in International Perspective
- INTA 420 Conflict Resolution and Human Rights
- INTA 440 Politics of Development
- INTA 450 Ethics of International Relations
- INTA 461 Special Topics
- INTA 465 Leadership and Civic Responsibility
- INTA 470 Area Studies
- FREN 101 French 1
- FREN 201 French 2
- SOCI 361 Human Rights

Concentration in International Security and Diplomacy (24 CH)

Students must complete a minimum of 12 CH in concentration core requirements and a minimum of 12 CH in concentration electives.

International Security and Diplomacy Concentration Core Requirements (12 CH)

- INTA 200 Study and Practice of Diplomacy
- INTA 350 Foreign Policy of the United States
- INTA 403 Security Studies
- INTA 420 Conflict Resolution and Human Rights

International Security and Diplomacy Concentration Electives (12CH)

A minimum of 12 credit hours in Concentration Elective courses:

- INTA 345 The Arab-Israeli Conflict
- INTA 404 Gender and Law
- INTA 450 Ethics of International Relations
- INTA 470 Area Studies
- HIST 322 Iran and its Neighbors
- HIST 323 Gulf-South Asian Relations in the modern and contemporary history
- INTA 433 Europe, the Cold War and the World since 1945
- FREN 301 French Language 3
- LAWC 102 Human Rights and International Humanitarian Law

- SOCI 368 Law and Society
- SOCI 361 Human Rights
- SOCI 366 Language, Communication and Society

Concentration in International Political Economy (24 CH)

Students must complete a minimum of 12 CH in concentration core requirements and a minimum of 6 CH in concentration electives

International Political Economy Concentration Core Requirements (12 CH)

- INTA 440 Politics of Development
- MATH 119 Business Math I
- ECON 111 Principles of Microeconomics
- ECON 112 Principles of Macroeconomics

International Political Economy Concentration Electives (12 CH)

A minimum of 12 credit hours in Concentration Elective courses:

- INTA 201 Comparative Political Systems
- INTA 206 Globalization
- INTA 405 Gender in International Perspective
- INTA 470 Area Studies
- SOCI 200 Sustainable Development
- FINA 201 Principles of Finance
- HIST 324 Economic History of the Gulf
- SOCI 463 Labor and Class in Petroleum Society

Concentration in Culture, Society and Heritage

Students must complete a minimum of 12 CH in concentration core requirements and a minimum of 12 CH in concentration electives.

Culture, Society and Heritage Concentration Core Requirements (12 CH)

- INTA 203 Women in Islam
- HIST 131 World History
- SOCI 121 Introduction to Anthropology
- SOCI 462 Change in Contemporary Arab Society

Culture, Society and Heritage Concentration Electives (12 CH)

A minimum of 12 credit hours in Concentration Elective courses:

- INTA 206 Globalization
- INTA 209 Islam and the West
- INTA 300 Chinese Society and Politics in the 21st Century
- INTA 301 Islamic Political Thought
- INTA 470 Area Studies
- SOCI 120 Introduction to Sociology
- SOCI 253 Badawi Society
- SOCI 264 Family and Kinship
- SOCI 265 Population and Migration
- SOCI 267 Urban Studies
- SOCI 361 Human Rights
- HIST 231 Europe and the World since 1500 CE

- HIST 334 Arabian Gulf in Antiquity
- HIST 416 History of Islamic Arts and Architecture
- HIST 427 Muslim Minorities in the World
- PHIL 110 Introduction to Philosophy
- ENGL 209 Language and Society
- ENGL 213 Language and Culture

Free Electives (6 CH)

Students must complete a minimum of 6 Credit Hours in free electives from courses outside the International Affairs major

Minor in International Affairs (24 CH)

The minor in International Affairs aims to equip students with interdisciplinary knowledge in the field of International Affairs, and to also prepare them for living and working within an increasingly global community.

Students seeking a minor in International Affairs must complete a minimum of 24 credit hours, including the following:

- A minimum of 18 credit hours in Minor requirements
- A minimum of 6 credit hours in Minor electives

Minor Requirements (18 CH)

Students must complete a minimum of 18 credit hours in Minor required courses:

- INTA 101 Political and Social Thought
- INTA 102 Introduction to Political Science
- INTA 103 Introduction to International Relations
- LAWC 339 Public International Law
- INTA 415 History of the Middle East in the 20th Century
- INTA 308 International Political Economy

Minor Electives (6 CH)

Students must complete a minimum of 6 credit hours in Minor electives courses:

- INTA 203 Women in Islam
- INTA 206 Globalization
- INTA 306 Gulf studies
- INTA 209 Islam and the West
- INTA 401 International Relations Theory
- INTA 403 Security Studies
- INTA 404 Gender and Law
- INTA 405 Gender in International Perspective
- INTA 440 Politics of Development
- INTA 450 Ethics of International Relations
- INTA 470 Area Studies
- SOCI 200 Sustainable Development
- INTA 300 Chinese Society and Politics in the 21st Century

DEPARTMENT OF MASS COMMUNICATION

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Rabia Sabah Al-Kawari, Mohamed Hamas Al-Masri, Saadia Malik

Lecturers:

Hind Al-Ibrahim, Nejud Al-Ibrahim, Chaker Ayyadi, Rana Hassan

ABOUT THE DEPARTMENT

The Department of Mass Communication strives to create a student-centered learning environment that enables students to gain a foundation in the theoretical frameworks of the fields of Strategic Communication, Broadcast/Online Journalism, and Print/Online Journalism. The major aims at incorporating theory into practice by engaging students in interactive learning processes, research, and media production activities that are necessary in coping with the demands of modern communication technology. Students are expected to develop communication competence, acquire journalistic techniques, and gain critical thinking skills that allow them to act professionally and ethically in the various mass communication fields. Understanding of the field of Mass Communication while allowing for the acquisition of an in-depth understanding of one area of specialization such as Print/Online Journalism, Public Relations/Advertising, and Broadcast Journalism.

BACHELOR OF ARTS IN MASS COMMUNICATION

Objectives

The major in Mass Communication strives to:

- Provide students with strong theoretical and conceptual understanding of the field of Mass Communication.
- Enhance students' writing, oral, and editing skills.
- Enable students to conduct research related to communication and mass media, including collecting, analyzing, and reporting data.
- Prepare students for careers in Public Relations, Radio Television Broadcasting, Advertising, and print/Online Journalism.
- Create an intellectual climate for students to think critically, creatively and independently on issues related to mass

communication at the national, regional, and global levels.

- Enhance professional and ethical values imbedded in the field of Mass Communication.

Major Declaration

In order to declare a major in Mass Communication, applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements. Students must also pass an interview.

Additional Requirements

Students in the program must prepare a capstone graduation project in the area of their specialization. The project must fulfill the requirements of the application of the theories and practices learned in the respective concentrations, and must demonstrate an application of major competencies and values of the ACEJMC, which were adopted by the Department as program learning outcomes. The capstone graduation project is to be evaluated by a panel of academics and professionals from media institutions. The panel evaluates the project and convenes a thirty-minute round of discussion with the student to evaluate his/her competency in the area of concentration.

Learning Outcomes

The learning objectives of the Department of Mass Communication are to educate graduates who will:

- Understand and apply media law and principles of freedom of speech and of press appropriate to professional practice.
- Demonstrate an understanding of the history and role of professionals and institutions in shaping communications.
- Critically evaluate their work and that of others for accuracy and fairness, clarity, appropriate style and grammatical correctness.
- Comprehend concepts and apply theories in the use and presentation of images and information.
- Demonstrate technical skills in writing and reporting correctly and clearly for different audiences.
- Conduct research and evaluate information by methods appropriate to the communications professions in which they work, including the application of basic numerical and statistical concepts.
- Think critically, creatively and independently.
- Acquire and apply an ethical framework for the practices of mass communication and journalism.
- Demonstrate an understanding of the diversity of groups in a global society in relationship to communication.
- Analyze and interpret media messages.
- Apply tools and technologies appropriate for the communications professions in which they work.

Opportunities

Mass Communication graduates take many career paths. Besides working as reporters, editors, writers on print/online newspapers, our graduates may land their first jobs with national, regional and local

magazines, radio/television, media advertising, and public relations job opportunities. Department of Mass Communication graduates can work for advertising agencies, for marketing departments of major corporations in the fast-growing Gulf region, for media organizations, and in many other ancillary jobs in advertising.

Besides finding employment at television and radio stations, our graduates are trained in writing and producing videos for documentation purposes and for public relations clients, working in industrial and corporate communications. Integrated into all these professional options is the study and practice of skills, techniques, theories and aesthetics, which our graduates will need to succeed in an ever-changing field of Mass Communication. Mass Communication students will learn the tried-and-true mass communication basics as well as media techniques needed to excel in this brave new globally interconnected world.

DEGREE REQUIREMENTS

Major in Mass Communication

A minimum of 126 credit hours are required to complete the major in Mass Communication, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 6 credit hours in Major Supporting Core Requirements
- A minimum of 6 credit hours in Major Supporting Electives
- A minimum of 15 credit hours in Major Requirements
- A minimum of 6 credit hours in Major Electives
- A minimum of 18 credit hours in Concentration Requirements
- A minimum of 6 credit hours in Concentration Electives
- A minimum of 24 credit hours in Minor Requirements or Concentration Supporting requirements
- A minimum of 12 credit hours in Free Electives

Core Curriculum Program (33 credit hours)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Supporting Core Requirements (6 CH)

Students must complete a minimum of 6 credit hours of major supporting core requirements including:

- STAT 101 Statistics I
- SOCI 120 Introduction to Sociology

Major Supporting Electives (6 CH)

Students must complete a minimum of 6 credit hours in major supporting electives:

- SOCI 368 Law & Society
- SOCI 444 Social problems
- SOCI 465 Arabian Gulf Societies
- SOCI 451 Political Sociology
- PSYC 325 Psychology of Personality
- GEOG 344 Political Geography
- INTA 205 Middle East History

Major Core Requirements (15 CH)

Students must complete a minimum of 15 credit hours in Major required courses:

- MCOM 103 Media and Society
- MCOM 212 Visual Communication
- MCOM 215 Multimedia Reporting and Writing I
- MCOM 222 Communication Theories
- MCOM 317 Media Law and Ethics

Major Electives (6 CH)

Students must complete a minimum of 3 credit hours in each of the Major Theoretical Electives and the Major Practical Electives packages.

Major Theoretical Electives Package

Students must complete a minimum of 3 credit hours in Major Theoretical Elective courses:

- MCOM 223 Media Writing
- MCOM 318 Global Communication
- MCOM 303 Women and Media

Major Practical Electives Package

Students must complete a minimum of 3 credit hours in Major Practical Elective courses:

- MCOM 226 Special Topics in Mass Communication
- MCOM 315 Communication Research Methods
- MCOM 348 Investigative Journalism
- MCOM 465 Web-Content for Radio
- MCOM 382 Organizational Communication

Concentration in Print/Online Journalism (24 CH)

Students must complete a minimum of 18 CH in concentration core requirements and a minimum of 6 CH in concentration electives.

Print/Online Journalism Concentration Core Requirements (18 CH)

- MCOM 341 News Reporting, Writing and Editing Arabic
- MCOM 342 News Reporting, Writing and Editing English
- MCOM 343 Online Journalism
- MCOM 350 Multimedia Reporting and Writing II
- MCOM 447 Journalism Internship
- MCOM 450 Multimedia Journalism “Capstone”

Print/Online Journalism Concentration Electives (6 CH)

A minimum of 3 credit hours in Concentration Elective courses:

- MCOM 345 Newspaper Design and Production
- MCOM 346 Internet-Assisted Reporting
- MCOM 348 Investigative Journalism
- MCOM 452 Magazine Writing
- MCOM 364 Broadcast Production

Concentration in Broadcast/Online Journalism (24 CH)

Students must complete a minimum of 18 CH in concentration core requirements and a minimum of 6 CH in concentration electives

Broadcast /Online Journalism Concentration Core Requirements (18 CH)

- MCOM 350 Multimedia Reporting and Writing II
- MCOM 361 Broadcast News Reporting and Writing I
- MCOM 364 Broadcast Production
- MCOM 467 Broadcast Internship
- MCOM 469 Television Documentary Production
- MCOM 470 Broadcast Capstone

Broadcast /Online Journalism Concentration Electives (6 CH)

A minimum of 3 credit hours in Concentration Elective courses:

- MCOM 363 Announcing
- MCOM 365 Script Writing
- MCOM 366 Broadcast Directing
- MCOM 367 Broadcast News Reporting and Writing II
- MCOM 465 Web-Content for Radio

Concentration in Strategic Communication (24 CH)

Students must complete a minimum of 18 CH in concentration core requirements and a minimum of 6 CH in concentration electives

Strategic Communication Concentration Core Requirements (18 CH)

- MCOM 381 Principles of Public Relations
- MCOM 383 Principles of Advertising
- MCOM 384 Advertising Copy Writing and Design
- MCOM 388 Public Relations Writing and Presentations
- MCOM 487 PR/AD Internship
- MCOM 490 Strategic Communication “Capstone”

Strategic Communication Concentration Electives (6 CH)

A minimum of 3 credit hours in Concentration Elective courses:

- MCOM 382 Organizational Communication
- MCOM 386 Public Relations and New Media
- MCOM 491 Strategic Communication
- MCOM 492 Social Marketing
- MCOM 493 Public Opinion Research
- MCOM 364 Broadcast Production

Minor or Concentration Supporting Requirements (24 CH)

Students can choose to either enroll in a minor or to complete concentration supporting requirements. If the minor the students enrolled in is less than 24 CH, students must take additional courses as free electives to complete the 24 CH requirements. If students choose to complete concentration supporting requirements, the concentration supporting requirements students must complete depends on the concentration selected by the student.

Concentration Supporting Requirements for the Broadcast/Online Journalism and the Print/Online Journalism Concentrations

- SOWO 361 Human Rights
- SOCI 363 Ethnicity
- INTA 103 Introduction to International Relations
- INTA 201 Comparative Political Systems
- INTA 306 Gulf Studies
- INTA 440 Politics of Development
- HIST 445 Modern and Contemporary History of Arabian Gulf
- INTA 201 Comparative Political Systems
- SOCI 263 Bedouin Society
- SOCI 267 Urban Studies

Concentration Supporting Requirements for the Strategic Communication Concentration

- SOCI 261 Quantitative Methods
- SOCI 262 Qualitative Methods
- SOCI 263 Bedouin Society
- SOCI 267 Urban Studies
- PSYC 201 Introduction to Psychology
- PSYC 205 Social Psychology
- MAGT 101 Principles of Management
- MAKT 101 Principles of Marketing (E)
- MAKT 301 Consumer Behavior
- MAKT 303 International Marketing

Free Electives (12 CH)

Students must complete a minimum of 6 Credit Hours in free electives from courses outside the Mass Communication major.

Minor in Mass Communication (24 CH)

The minor in Mass Communication is designed to provide students a wide spectrum of knowledge in the field of Mass Communication through courses that cover the major areas of print and online journalism, broadcast journalism and strategic communication. Students seeking a minor in Mass Communication must complete a

minimum of 24 credit hours, including the following:

- A minimum of 9 credit hours in Minor requirements
- A minimum of 15 credit hours in Minor electives

Minor Requirements (9 CH)

Students must complete a minimum of 9 credit hours in Minor required courses:

- MCOM 103 Media and Society
- MCOM 222 Communication Theories
- MCOM 223 Media Writing

Minor Electives (15 CH)

Students must complete a minimum of 15 credit hours in Minor electives courses:

- MCOM 318 Global Communication
- MCOM 303 Women and Media
- MCOM 315 Communication Research Methods
- MCOM 341 News Reporting, Writing and Editing Arabic
- MCOM 342 News Reporting, Writing and Editing English
- MCOM 343 Online Journalism
- MCOM 345 Newspaper Design and Production
- MCOM 363 Announcing
- MCOM 364 Broadcast Production
- MCOM 381 Principles of Public Relations
- MCOM 382 Organizational Communication
- MCOM 452 Magazine Writing

DEPARTMENT OF SOCIAL SCIENCES

Main Women's Building, Room 126 (Women's Section)

Phone: (974) 4403-4754

E-mail: sosciences@qu.edu.qa

Website: <http://www.qu.edu.qa/artsscience/sosciences>

Head

Layachi Anser (Acting)

Faculty

Professors:

Layachi Anser, Fadwa Elguindi, Paul Sillitoe

Associate Professors:

Kaltham Al-Ghanim, Wesam Al-Othman, Mohsen Mobasher, Abdalnasser Saleh, Lacey Sloan

Assistant Professors:

Abdalkarim Ahmad AlAmir Hassan, Ibrahim Al-Kaabi, Kaltham Al-Kawari, Fatima Al-Kubaisi, Salah Al-Mannai, Jassim Al-Nasr, Ali Al-Shawi, Andrew Gardner

Lecturers:

Muneera Al-Rumaihi, Marwa Maziad

ABOUT THE DEPARTMENT

The Department of Social Sciences offers courses that address both classic and contemporary perspectives on the social worlds in which humans live. Through broad training and practical experience in a research-oriented environment, students in the department will gain the skills and knowledge necessary to meaningfully contribute to society, to pursue graduate study in the social sciences, and to grapple with the social and cultural aspects of our collective existence. This mission is shared by the departments two programs: Sociology and Social Work.

BACHELOR OF ARTS IN SOCIOLOGY

About the Sociology Program

The mission of the program is to train students in the foundational methods and theories integral to sociology and closely related social sciences, and to combine that training with practical experience and research skills to produce graduates capable of significant contributions in a wide variety of practical and research-oriented pursuits. Coursework in the sociology program is configured to simultaneously build a strong social and cultural understanding of the local region, while also producing global citizens with an awareness and respect for cultural diversity and other ways of living.

Objectives

The major in Sociology strives to:

- Equip students with methods for gathering and analyzing

systematically derived field-based data.

- Develop students' understanding of basic social science concepts.
- Provide students with the ethical foundation for conducting research on social and cultural issues to explain societal patterns or problems.
- Furnish students with an understanding of both the uniformity and diversity observable in socio-cultural orders.

Major Declaration

In order to declare a major in Sociology, applicants must satisfy the minimum high school percentage requirement 75% for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements.

Language of Instruction

The Sociology major is a bilingual program. Both Arabic and English are employed in course instruction. As a result of coursework in the Foundation Program and in the University's Core Curriculum, students arrive at the program with a working knowledge of both languages. Hence, they may take courses in Arabic or English, depending on the course offerings for a given subject. During each term, two to three courses with pronounced technical aspects will be offered in English. Other courses are periodically offered in English at the discretion of the department. In addition, English readings will be required from students in courses taught in Arabic, thus encouraging them to use up-to-date material in English language. The Sociology Program seeks to enhance these linguistic capacities and graduate students who are academically capable of using both languages for the enrichment of their intellectual pursuits, the deepening of their theoretical grounding, and the development of their research skills.

Additional Requirements

Students in the major must prepare a senior thesis, based either on an empirical investigation conducted by the student in a field setting, or based upon a substantial theoretical inquiry. In close consultation with a faculty adviser, each student develops, carries out, and writes up her own research project. The resulting thesis serves as the basis for the first part of the senior comprehensive exam, a 60-minute oral presentation to the faculty, followed by a 30-minute defense of the thesis and a discussion of its implications. The thesis is then evaluated by the advisor and any co-advisors, and recommendations for revisions or improvements (if any) may be made.

Learning Outcomes

The sociology major will foster student achievement and mastery of the desired educational outcomes specific to the sociology degree, including the abilities to:

- Apply methods of data gathering and analysis to conduct sociological research on societal issues.
- Critically assess surveys and other research techniques.
- Demonstrate comprehension of social and cultural concepts.
- Demonstrate a critical understanding of major social issues.
- Abide by the international sociological code of ethics in

both scholarship and research.

- Develop an appreciation of social and cultural diversity.

Opportunities

Graduates in Sociology find employment in government agencies, non-governmental organizations, international aid and development agencies, and in the private sector in management positions, community service, social service, and research organizations. Knowledge of the quantitative and qualitative methods of social and behavioral sciences research allows graduates to also be employed by research and consulting agencies committed to addressing social problems.

DEGREE REQUIREMENTS

Major in Sociology

A minimum of 120 credit hours are required to complete the major in Sociology, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 24 credit hours in Major Requirements
- A minimum of 27 credit hours in Major Electives
- A minimum of 24 credit hours in Minor Requirements
- A minimum of 12 credit hours in Free Electives

Core Curriculum Program (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (24 CH)

Students must complete a minimum of 24 CH in major requirements including a minimum of 3 credit hours in Major Requirements I package and 21 credit hours in Major Requirements II package.

Major Requirements I package (3 CH)

Students must complete a minimum of 3 CH taken from the following courses:

- SOCI 120 Introduction to Sociology
- SOCI 121 Introduction to Anthropology

Major Requirements II package (21 CH)

Students must complete a minimum of 21 credit hours in the major requirements II package courses:

- SOCI 261 Quantitative Methods
- SOCI 262 Qualitative Methods
- SOCI 360 Sociological Theory
- SOCI 361 Human Rights
- SOCI 460 Statistics in the Social Sciences
- SOCI 462 Change in Contemporary Arab Society
- SOCI 469 Research Project

Major Electives (27 CH)

Students must complete a minimum of 27 credit hours in Major electives courses, including a minimum of 3 credit hours in Regional Electives package and a minimum of 21 credit hours in Topical Electives package.

Regional Electives package (3 - 6 CH)

Students must complete between 3 to 6 credit hours in Regional electives package courses:

- SOCI 263 Badawi Society
- SOCI 362 Comparative Ethnography
- SOCI 363 Ethnicity
- SOCI 463 Labor and Class in Petrol Societies
- SOCI 464 Social Policy and Planning

Topical Electives package (21 - 24 CH)

Students must complete between 21 to 24 credit hours in Topical Electives package courses:

- SOCI 200 Sustainable Development
- SOCI 264 Family and Kinship
- SOCI 265 Population and Migration
- SOCI 267 Urban Studies
- SOCI 268 Culture, Health and Disease
- SOCI 364 Violence
- SOCI 365 Study of Gender
- SOCI 366 Language, Communication and Society
- SOCI 367 Comparative Religion
- SOCI 368 Law and Society
- SOCI 465 Industrial Organization and Work
- SOCI 466 Social, Religious, and Political Movements
- SOCI 467 Globalization
- SOCI 470 Independent Study
- SOCI 471 Special Topics

Minor Requirements (24 CH)

Students enrolled in the Sociology program may take any of the Minors offered within the university. If the minor the students enrolled in is less than 24 CH, students must take additional courses as free electives to complete the 24 CH requirements.

Free Electives (12 CH)

Students must complete a minimum of 12 credit hours in University Free Electives from courses outside the Sociology major.

Minor in Sociology (24 CH)

Students pursuing a minor in Sociology will have an opportunity to learn about social phenomena which influence human action within society. The minor will also offer a body of knowledge to enable students to understand core concepts of societal issues and critically think about them.

Students seeking a minor in Sociology must complete a minimum of 24 credit hours, including the following:

- A minimum of 12 credit hours in Minor requirements
- A minimum of 12 credit hours in Minor electives

Minor Requirements (12 CH)

Students must complete a minimum of 12 credit hours in Minor required courses:

- SOCI 120 Introduction to Sociology
- SOCI 261 Quantitative Methods
- SOCI 262 Qualitative Methods
- SOCI 360 Sociological Theory

Minor Electives (12 CH)

Students must complete a minimum of 12 credit hours in Minor electives courses:

- SOCI 121 Introduction to Anthropology
- SOCI 200 Sustainable Development
- SOCI 263 Badawi Society
- SOCI 264 Family and Kinship
- SOCI 265 Population and Migration
- SOCI 267 Urban Studies
- SOCI 268 Culture, Health and Disease
- SOCI 361 Human Rights
- SOCI 362 Comparative Ethnography
- SOCI 363 Ethnicity
- SOCI 364 Violence
- SOCI 365 Study of Gender
- SOCI 366 Language, Communication and Society
- SOCI 367 Comparative Religion
- SOCI 368 Law and Society
- SOCI 460 Statistics in the Social Sciences
- SOCI 462 Change in Contemporary Arab Society
- SOCI 463 Labor and Class in Petrol Society
- SOCI 464 Social Policy and Planning
- SOCI 465 Industrial Organization and Work
- SOCI 466 Social, Religious, and Political Movements

About the Social Work Program

The Program's mission is to develop generalist social workers who will be strategic thinkers, life-long learners and opinion shapers. The knowledge-base, skills, and values necessary for entry-level generalist social work practice will be taught in an environment that fosters sensitivity and integration of Qatari culture, professional development, critical thinking, and leadership and will prepare students to take appropriate action guided by the best available scientific evidence.

Objectives

The objectives of the Social Work major are driven by its mission of preparing students for entry-level generalist practice. These goals portray the meaning and purpose of professional generalist social workers, who must be able to practice effectively within any given person-in-the environment context. The goals will prepare students to:

- 1) Be culturally competent, generalist social workers who can enhance the well-being and social functioning of individuals, families, groups, organizations, and communities.
- 2) Promote social and economic justice.
- 3) Abide by the social work code of ethics.
- 4) Use evidence-based practice.
- 5) Become proactive community members.
- 6) Be life-long learners.

Major Declaration

Admission Requirements

Applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program, or satisfy the University's competency requirements. A minimum score of 450 on the TOEFL or band 5 on the IELTS is required. In addition, applicants to the Social Work major must submit an application and be interviewed by the faculty, to assist them in selecting social work as a major and as a career. Interviews will be scheduled twice during each semester or as needed.

Transfer Students Requirements

- Completed 30-45 College of Arts and Sciences (CAS) credit hours with a minimum cumulative GPA of 2.00.
- Non-CAS students can transfer to the Social Work major if they have finished the University's foundation courses, and achieved a 75% (arts stream) or 70% (science stream) on their high school certificate.
- Students admitted to CAS may be exempted from some or all courses of the Foundation Program, based on the international examination and university level courses as shown below:
 - o Exemption from the courses of the Foundation program may be complete (including all the courses, e.g. English, and Math.) or partial as follows:
 - o Complete Exemption:
 - 1) Obtain a score of 450 or more in the International TOEFL Exam or Qatar University's Institutional TOEFL.
 - 2) Pass the Mathematics Placement Test administered by the Foundation Program Unit at the beginning of each term.

- 3) Pass the Computer Placement Test administered by the Foundation Program Unit at the beginning of each term.

Upon fulfilling the three above mentioned criteria, a student will be exempted from the Study Skills courses, and can register in college.

Learning Outcomes

Upon completion of the major, students will be able to:

1. Apply critical thinking skills within the context of social work practice.
2. Practice social work values and ethics.
3. Practice without discrimination with respect to a variety of differences among individuals, families, groups, organizations, and communities.
4. Understand the mechanisms of oppression and discrimination.
5. Apply strategies of advocacy and social change to advance social justice.
6. Interpret history and current issues of social work.
7. Apply knowledge and skills of generalist practice with social systems of all sizes.
8. Analyze, formulate, and influence social policies.
9. Evaluate research studies, apply research findings to practice, and evaluate their own practice interventions.
10. Use communication skills differentially across client populations, colleagues, and communities.
11. Use supervision and consultation appropriately.
12. Function within the structure of organizations and service delivery systems.
13. Seek necessary organizational change.

Opportunities

There is no graduate program in social work available at any university in Qatar. However, there are graduate social work programs available in UAE, Egypt, Europe and the USA. Job opportunities abound in Qatar for social work majors, including jobs working with children, families, adults, elders, couple, groups, organizations and communities. Opportunities exist for social workers in many fields, including child welfare, school social work, mental health social work, addictions, gerontology, community organizing, and policy.

DEGREE REQUIREMENTS

Major in Social Work

A minimum of 120 credit hours are required to complete the major in Social Work, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 54 credit hours in Major Requirements
- A minimum of 18 credit hours in Major Supporting Requirements
- A minimum of 9 credit hours in Major Electives
- A minimum of 6 credit hours in Free Electives

Core Curriculum Program (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (54 CH)

Students must complete a minimum of 54 credit hours in Major required courses:

- SOWO 101 Introduction to Social Work and Welfare
- SOWO 200 Social Work and law
- SOWO 311 Social and Cultural Diversity
- SOWO 320 Human Behavior and Social Environment I
- SOWO 321 Human Behavior and Social Environment II
- SOWO 330 Social Welfare Policy and Services I
- SOWO 350 Social Work Generalist Practice I
- SOWO 360 Social Work Research Methods I
- SOWO 370 Children and Family Practice & Services
- SOWO 400 Social Welfare Policy & Services II
- SOWO 410 Social Work Research Methods II
- SOWO 420 Social Work Generalist Practice II
- SOWO 430 Social Work Generalist Practice III
- SOWO 440 Integrative Seminar
- SOWO 441 Social Work Practicum

Major Electives (9 CH)

Students must complete a minimum of 9 credit hours in Major electives courses:

- SOWO 301 Medical Social Work
- SOWO 302 Mental Health Social Work
- SOWO 303 School Social Work
- SOWO 361 Society and Human Rights

Major Supporting Requirements (18 CH)

Students must complete a minimum of 18 credit hours in Major supporting required courses:

- BIOL 110 Human Biology
- STAT 101 Statistics I
- PSYC 201 Introduction to Psychology
- PSYC 410 Social Psychology
- SOCI 120 Introduction to Sociology
- SOCI 200 Sustainable Development

Free Electives (6 CH)

Students must complete a minimum of 6 credit hours in University Free Electives from courses outside the Social Work major.

SPORTS SCIENCE PROGRAM

Women's Main Building, Room 227 (Women's Section)

Phone: (974) 4403 4964 / 4966

E-mail: sportscience@qu.edu.qa

Website: <http://www.qu.edu.qa/sportscience/>

Head

Vacant

Faculty

Assistant Professors:

Ruben Tobias Goebel

ABOUT THE DEPARTMENT

The Sport Science Program offers a Bachelor (B.Sc.) degree and provides a comprehensive coursework and field experience that will educate its students for professions in a broad scope of sports business, exercise and fitness enterprises, and educational institutions.

Committed to providing an innovative curriculum which will be continuously updated, the Program is differentiated into three concentrations:

1. Physical Education
2. Exercise and Fitness
3. Sport Management

The Bachelor's degree in Sport Science - Physical Education seeks to prepare future physical education teachers who will be able to work efficiently with students of different educational stages and diverse areas of society, while following high professional and academic standards. These graduates will employ scientific inquiry and assessment, using appropriate instructional strategies and technology.

The Bachelor's degree in Sport Science - Exercise and Fitness focuses on enhancing the human condition by preparing graduates for careers in fitness-related health, and providing the Qatari workplace and society with fitness professionals possessing applied and academic skills and competencies. Furthermore, becoming a professional coach for various sports (individual and team sports) is part of the study plan.

The Bachelor's degree in Sport Science - Sport Management seeks to prepare competent leadership in sports, as well as create and disseminate managerial knowledge in sport business and industry. The goal of the program is to create a collaborative and nurturing learning environment for analyzing and resolving the challenges in the business, management, and culture of sports. With this as a foundation, students can enter the business and management world with knowledge, preparation, and the confidence to assume leadership positions.

BACHELOR OF SCIENCE IN SPORT SCIENCE

Objectives

The mission of the Sport Science major at Qatar University is to provide a comprehensive program of academic coursework and field experience that will educate sport science graduate students for professions in Physical Education, Exercise and Fitness, and Sport Management.

Major Declaration

In order to declare a major in Sport Science, applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program, or satisfy the University's competency requirements. A minimum score of 450 on the TOEFL (or equivalent) is required.

Additional Requirements

- Physical Fitness Test: (Medical record will be required for participating the Physical Fitness Test).
- All applicants to the Sport Science Program will be required to appear for a personal interview. The interview will take place after the Physical Fitness Test, at the same day. The interview will be guided by a questionnaire form.

Learning Outcomes

The key learning outcomes for the three concentrations are as follows:

- Physical Education students will demonstrate an understanding of functional anatomy, biomechanics of the human body and the physiological basis for exercise and physical activity as they apply to the learning and performance of physical activities. They will value and promote physical activity for health, enjoyment, challenge, self-expression, and/or social interaction. Students will become physical education teachers who are able to work efficiently with students of different educational stages and diverse areas of society, while following high professional and academic standards.
- Exercise and Fitness students will be able to assess, design, and implement individual and group exercise and fitness programs for observably healthy individuals and individuals with common chronic diseases. They will be able to evaluate health behaviors and risk factors of disease, and help motivate clients to reduce health risks and maintain positive lifestyle behaviors. Furthermore, students will be able to coach teams and individual sportsmen and sportswomen at different levels of professional expertise.
- Sports Management students will be able to apply concepts of economics and management to the key problems facing sports organizations. They will be able to collect and analyze data using appropriate analytical methods, and to communicate their findings orally and in writing to a diverse audience.

Opportunities

The B.Sc. in Sport Science major was developed to address escalating market needs in fields of Physical Education, Sport Management and Exercise and Fitness. The interdisciplinary nature of the program and its anticipated learning outcomes will provide wide range of employment

opportunities for the program graduates. Graduates will be ready for roles such as PE Teachers, trainers and coaches, club managers, event managers, facilities managers, officers of national and international sports associations, as well as community advocates for fitness and healthy lifestyles.

DEGREE REQUIREMENTS

Major in Sport Science

A minimum of 120 credit hours are required to complete the major in sport science, including the following:

- A minimum of 33 credit hours in core curriculum requirements
- A minimum of 51 credit hours in major requirements
- A minimum of 36 credit hours in concentration requirements

Core Curriculum Program (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics Package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (51 CH)

Students must complete a minimum of 51 credit hours in Major required courses:

- BIOL 101 Biology I
- BIOM 211 Human Anatomy
- BIOM 215 Human Physiology
- SPSC 203 Exercise Physiology I
- SPSC 206 Research Methods in Exercise Science and Health
- SPSC 101 Traditional and New Games
- SPSC 400 Psycho-Social Aspects of Games
- SPSC 200 Theory and Practice individual sports I
- SPSC 204 Theory and Practice individual sports II
- SPSC 201 Theory and Practice (team sports) I

- SPSC 202 Theory and Practice (team sports) II
- SPSC 308 Sport Psychology
- SPSC 306 Motor Learning
- SPSC 210 Principles of Training and Coaching I
- SPSC 310 Principles of Training and Coaching II
- SPSC 401 Performance Analysis and Assessment
- SPSC 490 Sport Science Project

Concentration in Physical Education (36 CH)

Students must complete a minimum of 36 credit hours in concentration requirements.

- EDUC 310 Foundation of Education in Qatar and School Reform
- SPSC 399 Physical Education in Schools
- SPSC 349 Developmental Psychology
- EDEC 411 Health and Safety of Young Children
- EDUC 317 Inclusive Classrooms
- EDUC 312 Curriculum and Assessment
- EDUC 316 Classroom Management
- SPSC 449 Teaching PE in Primary Schools
- SPSC 475 Teaching PE in Secondary Schools
- SPSC 499 Internship

Concentration in Exercise and Fitness (36 CH)

Students must complete a minimum of 27 credit hours in concentration requirements and 9 CH in concentration supporting requirements.

Exercise and Fitness Concentration Core Requirements (27 CH)

- SPSC 302 Fitness Testing and Training
- SPSC 303 Exercise and Metabolism
- SPSC 403 Exercise, Obesity and Diabetes
- SPSC 404 Exercise and Heart Disease
- SPSC 309 Exercise and Aging
- SPSC 318 Exercise Psychology
- SPSC 307 Exercise Physiology II
- SPSC 405 Testing and Exercise Prescription
- SPSC 209 Biomechanics and Movement Analysis

Exercise and Fitness Concentration Supporting Requirements (9 CH)

- SPSC 406 Concepts of Fitness and Nutrition
- SPSC 305 Sport Marketing and Management I
- SPSC 407 Sport Governance and Economics I
- SPSC 311 First Aid and CPR

Concentration in Sport Management (36 CH)

Students must complete a minimum of 24 credit hours in concentration requirements and 12 CH in concentration supporting requirements.

Sport Management Concentration Core Requirements (24 CH)

- MATH 119 Business Math I
- ECON 111 Principles of Microeconomics
- MAGT 101 Principles of Management

- ACCT 110 Financial Accounting
- MAKT 101 Principles of Marketing
- FINA 201 Principles of Finance
- ECON 112 Principles of Macroeconomics
- MAGT 306 International Business

Sport Management Concentration Supporting Requirements (12 CH)

- SPSC 305 Sport Marketing and Management I
- SPSC 409 Sport Marketing and Management II
- SPSC 407 Sport Governance and Economics I
- SPSC 410 Sport Governance and Economics II

DEPARTMENT OF MATHEMATICS, STATISTICS AND PHYSICS

College of Arts and Sciences Building
Corridor 1, Room A105 (Men's Section)

Phone: (974) 4403-4604 / 4605

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Head

Mahmoud Boutefnouchet

Faculty

Professors:

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Associate Professors:

Mariam Al-Ali, Ameen Alawneh, Maitha Al-Muraikhi, Sabah Al-Naimi, Modi Al-Nasr, Mohammad Al-Odat, Hussein Al-Qassim, Mahmoud Al-Refaei, Huda Al-Thani, Mohammed Jaradat, Moumen Hasnah, Hocine Merabet, Saefer Mohammed, Shokry Nada, Abouzaid Shalaby, Adil Eltayyeb Yousif

Assistant Professors:

Dana Abdelmalik, Tamadhur Al-Assiry, Mohanad Al-Khasawneh, Hemyan Al-Kuwari, Nada Al-Thani, Shaikha Al-Thani, Martin Juras, Mohammed Salman

ABOUT THE DEPARTMENT

The Departments of Mathematics, Statistic and Physics were integrated into a single department in September 2004 which grew in size and number to include 38 staff members, eighteen of whom are Qatari nationals. The new Department of Mathematics, Statistic & Physics consists of three different programs: Mathematics, Statistics and Physics, and the department aim to provide an excellent undergraduate teaching. Currently there is one major that leads to the Bachelor degree of Science in Statistics with minor in computer science, business or social science. The Department offers also service courses for various Colleges and Programs within the University

BACHELOR OF SCIENCE IN STATISTICS

Program Objectives

1. Gain knowledge in the principles of statistics and its application to the other related fields of applications.
2. Build Strong theoretical background for the statistical techniques used.
3. Have a good understanding of the statistical principles and methods necessary to collect data including experimental design and statistical.
4. Have a good training in statistical computing necessary to

- conduct different kinds of data analysis.
- 5. Gain the ability to provide sound “statistical consultation” to users of statistics in the different disciplines.
- 6. Acquire the ability to communicate effectively orally and in writing to undertake statistical tasks.
- 7. Promote critical learning skills and enabling students to be lifelong learners

Major Declaration

In order to declare a major in Statistics, applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements.

Learning Outcomes

1. Collect and give advice on how to collect data that conform with the statistical principles of data collection.
2. Design or give advice on how to design surveys and experiments to obtain high-quality data.
3. Describe various types of data numerically and graphically.
4. Analyze the various types of data that arise in a range of types of scientific investigation.
5. Effectively use statistical packages to conduct a number of types of statistical tasks.
6. Write and present professional statistical reports, and communicate effectively with the various users of statistics.
7. Demonstrate the theoretical basis of the statistical methods used in a given situation.

Opportunities

Graduates of the Statistics major have a number of employment opportunities. They have places in government agencies, non-governmental organizations and in the private sector in financial institutions, education and research organizations. Knowledge of the statistical data analysis techniques allows graduates to also be employed by research and consulting agencies.

DEGREE REQUIREMENTS

Major in Statistics

minimum of 120 credit hours are required to complete the major in Statistics, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 39 credit hours in Major Requirements
- A minimum of 12 credit hours in Major Electives
- A minimum of 12 credit hours in major supporting requirements
- A minimum of 24 credit hours in Minor requirements

Core Curriculum Program (33 credit hours)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202

- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Core Requirements (39 CH)

Students must complete a minimum of 39 credit hours in Major required courses:

- STAT 101 Statistics I
- STAT 102 Statistics II
- STAT 211 Introduction to Probability
- STAT 221 Mathematical Statistics I
- STAT 231 Applied Regression Analysis
- STAT 312 Stochastic Processes
- STAT 322 Mathematical Statistics II
- STAT 332 Design of Experiments
- STAT 333 Time Series
- STAT 361 Sampling Methods
- STAT 371 Statistical Packages
- STAT 481 Multivariate Analysis
- STAT 499 Graduation Project

Major Electives (12 CH)

Students must complete a minimum of 12 credit hours in Major electives courses:

- STAT 241 Biostatistics
- STAT 242 Demography
- STAT 341 Actuarial Statistics I
- STAT 343 Applied Survival Analysis
- STAT 344 Quality Control
- STAT 372 Statistical Simulation
- STAT 381 Categorical Data Analysis
- STAT 382 Nonparametric Methods
- STAT 434 Generalized Linear Models
- STAT 442 Actuarial Statistics II
- STAT 445 Reliability and Life Testing
- STAT 464 Environmental Statistics

- STAT 482 Bayesian stat
- STAT 497 Independent Study
- STAT 498 Special Topics

Major Supporting Requirements (12 CH)

- MATH 101 Calculus I
- MATH 102 Calculus II
- MATH 251 Mathematics for Statistics
- MATH 231 Linear Algebra

Minor Requirements (24 CH)

Students enrolled in the Statistics program may take any of the minors offered within the university. If the minor the students enrolled in is less than 24 CH, students must take additional courses as free electives to complete the 24 CH requirements.

Students are encouraged to take one of the following minors:

- Minor in Computer Science
- Minor in Business
- Minor in Sociology

Minor in Statistics (24 CH)

The minor in Statistics is designed to provide students with a firm foundation in statistical theory so that they can confidently collect and analyze their data with the help of statistical packages.

Students seeking a minor in Statistics must complete a minimum of 24 credit hours, including the following:

- A minimum of 18 credit hours in Minor requirements
- A minimum of 6 credit hours in Minor electives

Minor Requirements (18 CH)

Students must complete a minimum of 18 credit hours in Minor required courses:

- STAT 101 Statistics I
- STAT 102 Statistics II
- STAT 211 Introduction to Probability
- STAT 231 Applied Regression Analysis
- STAT 361 Sampling Methods
- STAT 371 Statistical Packages

Minor Electives (6 CH)

Students must complete a minimum of 6 credit hours in Minor electives courses:

- STAT 221 Mathematical Statistics I
- STAT 241 Biostatistics
- STAT 242 Demography
- STAT 332 Design of Experiments
- STAT 333 Time Series
- STAT 343 Applied Survival Analysis
- STAT 344 Quality Control
- STAT 372 Statistical Simulation
- STAT 381 Categorical Data Analysis
- STAT 382 Nonparametric Methods

COLLEGE OF BUSINESS AND ECONOMICS

College of Business and Economics Building (Men's Section)

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Website: <http://www.qu.edu.qa/business>

Dean

Nitham Mohd. Hindi

Associate Dean for Academic Affairs

Adam Fadlalla

Associate Dean for Student Affairs

Rajab Abdullah R. Al-Esmail

ABOUT THE COLLEGE

The College of Business and Economics provides a high quality, applied business education in a collegial, intellectually stimulating, and supportive learning and working environment. Guided by the university reform plan and committed to innovative curriculum and continuous improvement, the college offers undergraduate and graduate business programs that connect theory to practice, promote critical thinking, and engage students in active and collaborative learning. The College of Business and Economics selects and retains a diverse and talented faculty and staff who uphold the professional standards of their respective disciplines, consistent with our mission and values thus producing quality applied scholarship, including contributions to practice, teaching and pedagogical research.

DEGREE OFFERINGS

The College of Business and Economics offers the following undergraduate degree programs:

- Bachelor of Business Administration with a major in Accounting
- Bachelor of Business Administration with a major in Finance
- Bachelor of Business Administration with a major in Management
- Bachelor of Business Administration with a major in Marketing

DEPARTMENT OF ACCOUNTING AND INFORMATION SYSTEMS

College of Business & Economics Building
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Website: <http://www.qu.edu.qa/business/accounting/index.php>

Head

Helmi Hammami

Faculty

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Khaled Alshare, Adam Fadlalla, Nitham Hindi

Associate Professors:

Khaled Al-Khater

Assistant Professors:

Rajab Abdallah, Zaki Abu Shawish, Pawan Adhikari, Husam Aldamen, Mahmoud Al-Akra, Maryam Alasmakh, Helmi Hammami, Nick Manochehri, Fuad Rakhman, Shahriar Saadullah, Fethi Saidi, Hidayah Sulaiman,

ABOUT THE DEPARTMENT

The Department of Accounting and Information Systems offers a major in Accounting and a minor in Information Systems. Accounting is commonly known as "the language of business". Accounting provides the information needed by managers to make business decisions; it generates information about a firm's resources, the sources of the resources, and how effectively the resources have been utilized. The accountant prepares, communicates, and interprets this information, and thus is an integral member of the leadership team of any organization. The intense pace of technological change has prompted a widespread deployment of information technology throughout the world. The opportunity afforded by this technology, and the demands placed on management by global competition, generate a premium for those individuals who are able to use information technology to solve business problems.

BACHELOR OF BUSINESS ADMINISTRATION IN ACCOUNTING

Objectives

The Accounting major aims to prepare students for positions of leadership and responsibility in contemporary organizations. More specifically, the major focuses on the following objectives:

- Prepare students with technical (quantitative & qualitative) and analytical skills and competencies in accounting.
- Develop effective and responsible accounting professionals.

Major Declaration

In order to declare a major in Accounting, students should have completed a minimum of 45 credits and be in good academic standing. Students should obtain approval from their academic advisors, head of department, and associate deans for student affairs.

Learning Outcomes

Graduates of the Bachelor of Business Administration in Accounting are expected to:

- Demonstrate effective communication (written & oral) skills.
- Utilize information technology in making business decisions.
- Work effectively in teams.
- Appreciate ethical dimensions of business decision-making.
- Able to solve accounting-related problems.

Opportunities

The Accounting major prepares undergraduate students for careers in business and to pursue for graduate studies. Applied education and our strong industry links provide students with work opportunities in a variety of organizations. Graduates in Accounting may have career in a variety of businesses. Significant employers are accounting and auditing firms, banks, insurance companies, service companies, private businesses, governmental agencies, and energy and oil companies, just to cite a few. An accounting graduate will have the chance to pursue a career as a certified accountant and work as an auditor (external/internal), business advisor, systems analyst, and in some cases, tax advisor.

DEGREE REQUIREMENTS

Major in Accounting

A minimum of 125 credit hours are required to complete the Bachelor of Business Administration, major in Accounting, including the following:

- A minimum of 33 credit hours in university core curriculum requirements
- A minimum of 45 credit hours in college core requirements.
- A minimum of 6 credit hours in college supporting requirements.
- A minimum of 15 credit hours in major requirements.
- A minimum of 6 credit hours in major electives.
- A minimum of 12 credit hours in minor or No minor requirements and electives.
- A minimum of 8 credit hours in University free elective requirements.

Core Curriculum Program Requirements (33 credit hours)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

College Core Requirements (45 CH)

Students must complete the following list of courses:

- ACCT 110 Financial Accounting
- ACCT 116 Managerial Accounting
- ECON 111 Principles of Microeconomics
- ECON 112 Principles of Macroeconomics
- MAKT 101 Principles of Marketing
- MIST 201 Introduction to MIS
- FINA 201 Principles of Finance
- MAGT101 Principles of Management
- MAGT 304 Production & Operations Management
- MAGT 306 International Business
- MAGT 307 Internship in Business
- MAGT 405 Strategic Management
- MATH 221 Business Math II
- STAT 220 Business Statistics I
- STAT 222 Business Statistics II

College Supporting Requirements (6 CH)

Students must complete the following list of courses:

- MATH 119 Business Math I
- LAWC 215 Business Law

Major Requirements (15 CH)

Students must complete the following list of courses:

- ACCT 221 Intermediate Accounting I
- ACCT 222 Intermediate Accounting II
- ACCT 331 Cost & Management Accounting
- ACCT 333 Auditing I
- ACCT 421 Accounting Information Systems

Major Electives (6 CH)

Students must complete a minimum of 6 credit hours in courses selected from the following list:

- ACCT 411 Governmental Accounting
- ACCT 413 Auditing II

- ACCT 418 Advanced Accounting
- ACCT 424 International Accounting
- ACCT 428 Financial Statement Analysis

Minor or No Minor Requirements

Students with a major in Accounting may choose a minor in Management Information Systems, Finance, Economics, Management, Marketing, International Business, or the No Minor option.

Minor in Management Information Systems Requirements (12 CH)

Students seeking a minor in Management Information Systems must complete the following courses:

- MIST 301 Introduction to Programming
- MIST 302 Database Management System
- MIST 303 Systems Analysis and Design
- MIST 304 Data Communication & Networking

Minor in Finance Requirements (12 CH)

Students seeking a minor in Finance must complete the following courses:

- FINA 301 Corporate Finance
- FINA 302 Investment
- FINA 303 Financial Markets & Institutions
- FINA 401 Portfolio Management

Minor in Management Requirements (12 CH)

Students seeking a minor in Management must complete the following courses:

- MAGT 301 Organizational Behavior
- MAGT 302 Human Resource Management
- MAGT 303 Entrepreneurship & Small Business Management
- MAGT 406 Total Quality Management

Minor in Marketing Requirements (12 CH)

Students seeking a minor in Marketing must complete the following courses:

- MAKT 301 Consumer Behavior
- MAKT 302 Marketing Management
- MAKT 303 International Marketing
- MAKT 401 Marketing Research

Minor in Economics Requirements (12 CH)

Students seeking a minor in Economics must complete the following courses:

- ECON 211 Intermediate Microeconomics
- ECON 212 Intermediate Macroeconomics
- ECON 214 Monetary Policy
- ECON 453 International Economics

Minor in International Business (IB) for the Accounting Major (12 CH)

Students with a major in Accounting seeking a minor in International Business must complete 12 credit hours in minor requirements as

detailed below.

IB Minor Requirements (12 CH)

- MAKT 303 International Marketing
- FINA 304 International Finance
- MAGT 305 Comparative Management
- ECON 453 International Economics

No Minor Requirements (12 CH)

Students not seeking any particular minor (no minor) must complete 12 Credit Hours taken from available courses in any major offered at CBE excluding the student declared major

University Free Elective Requirements (8 CH)

Students must complete a minimum of 8 Credit Hours in free electives from courses offered outside the College of Business and Economics

DEPARTMENT OF FINANCE AND ECONOMICS

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Khalid Shams Abdulqader

Faculty

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Ritab Al-Khouri, Saif Alsowaidi

Associate Professors:

Hicham Benjelloun, Murat Munkin, Akram Temimi

Assistant Professors:

Zaier Aouani, Khalid Abdulqader, Duha Al-Kuwari, Muffasir Badshah, Aruna Dhade, Mohamed Eissa, Hend Ghazzai, Ishrat Hossain, Simeon Kaitibie, Syed Asif Raza, Elias Shukralla, Rami Zeitun

ABOUT THE DEPARTMENT

The Department of Finance and Economics is oriented toward addressing Qatar's need for intellectuals and practitioners to serve the sustainable growth of its economy. Given the uniqueness of Qatar and the opportunities afforded by its resources, the mission of the Department is to provide and maintain prominent teaching and research in Economics and Finance, and to offer rigorous programs focusing on relating theory to practice, and addressing issues related to business, economic development and natural resource management.

BACHELOR OF BUSINESS AND ECONOMICS IN FINANCE

Objectives

The Finance major aims to prepare students for positions of leadership and responsibility in contemporary organizations. More specifically, the major focuses on the following objectives:

- Providing a rigorous, thorough, and meaningful education in Finance for our undergraduate students.
- Providing our students with an awareness of economic and financial institutions, concepts, and problems; and to use that awareness to develop the ability to think like a financial economist when making decisions.
- Providing service to our constituents by giving talks, responding to inquiries, and responding through the popular press to economic and Finance issues.
- Promoting an understanding of the economy by conducting applied financial analysis for industry, non-profit institutions, and government.
- Providing a well-balanced combination of high quality teaching and research.

Major Declaration

In order to declare a major in Finance, students should have completed a minimum of 45 credits and be in good academic standing. Students should obtain approval from their academic advisors, head of department, and associate deans for student affairs.

Learning Outcomes

Upon the successful completion of a Bachelor of Business and Economics majoring in Finance, a student will be able to:

1. Demonstrate effective written and oral communications skills.
2. Utilize information technology in making business decisions.
3. Appreciate social responsibilities and ethical dimensions of business decision-making.
4. Foster global perspective in both appreciation and application.
5. Able to solve finance-related problems.

Opportunities

The Finance major prepares undergraduate students for careers in business and to pursue graduate studies. Graduates in Finance find employment in government agencies, non-governmental organizations, international agencies, and in the private sector. Our graduates from this discipline can work as decision makers, analysts, and designers of business models and as forecasters.

DEGREE REQUIREMENTS

Major in Finance

A minimum of 125 credit hours are required to complete the Bachelor of Business Administration, major in Finance, including the following:

- A minimum of 33 credit hours in university core curriculum requirements.
- A minimum of 45 credit hours in college core requirements.
- A minimum of 6 credit hours in college supporting requirements.
- A minimum of 15 credit hours in major requirements.
- A minimum of 6 credit hours in major electives.
- A minimum of 12 credit hours in minor or No minor requirements and electives.
- A minimum of 8 credit hours in University free elective requirements.

Core Curriculum Program Requirements

(33 credit hours)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3CH)

Courses in CCP defined Social/Behavioral Sciences package.

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

College Core Requirements (45 CH)

Students must complete the following list of courses:

- ACCT 110 Financial Accounting
- ACCT 116 Managerial Accounting
- ECON 111 Principles of Microeconomics
- ECON 112 Principles of Macroeconomics
- MAKT 101 Principles of Marketing
- MIST 201 Introduction of MIS
- FINA 201 Principles of Finance
- MAGT101 Principles of Management
- MAGT 304 Production & Operations Management
- MAGT 306 International Business
- MAGT 307 Internship in Business
- MAGT 405 Strategic Management
- MATH 221 Business Math II
- STAT 220 Business Statistics I
- STAT 222 Business Statistics II

College Supporting Requirements (6 CH)

Students must complete the following list of courses:

- MATH 119 Business Math I
- LAWC 215 Business Law

Major Requirements (15 CH)

Students must complete the following list of courses:

- FINA 301 Corporate Finance
- FINA 302 Investments
- FINA 303 Financial Markets & Institutions
- FINA 304 International Finance
- FINA 401 Portfolio Management

Major Electives (6 CH)

Students must complete a minimum of 6 credit hours in courses selected from the following list:

- FINA 402 Personal Finance
- FINA 403 Insurance and Risk Management
- FINA 404 Islamic Banking & Finance
- FINA 405 Financial Derivatives

Minor or No Minor Requirements

Students with a major in Finance may choose a minor in Economics, Accounting, Management Information Systems, Management, International Business, or the No minor option.

Minor in Economics Requirements (12 CH)

Students seeking a minor in Economics must complete the following courses:

- ECON 211 Intermediate Microeconomics
- ECON 212 Intermediate Macroeconomics
- ECON 214 Monetary Policy
- ECON 311 Econometrics

Minor in Management Information Systems Requirements (12 CH)

Students seeking a minor in Information Systems must complete the following courses:

- MIST 301 Introduction to Programming
- MIST 302 Database Management System
- MIST 303 Systems Analysis and Design
- MIST 304 Data Communication & Networking

Minor in Management Requirements (12 CH)

Students seeking a minor in Management must complete the following courses:

- MAGT 301 Organizational Behavior
- MAGT 302 Human Resource Management
- MAGT 303 Entrepreneurship & Small Business Management
- MAGT 406 Total Quality Management

Minor in Accounting Requirements (12 CH)

Students seeking a minor in Accounting must complete the following courses:

- ACCT 221 Intermediate Accounting I
- ACCT 222 Intermediate Accounting II
- ACCT 331 Cost & Management Accounting
- ACCT 333 Auditing I

Minor in International Business (IB) for the Finance Major (12 CH)

Students with a major in Finance seeking a minor in International Business must complete 9 credit hours in minor requirements and 3 credit hours in minor electives as detailed below.

IB Minor Requirements (9 CH)

- MAKT 303 International Marketing
- MAGT 305 Comparative Management
- ECON 453 International Economics

IB Minor Electives (3 CH)

Students must complete a minimum of 3 credit hours in courses selected from the following list:

- MAKT 401 Marketing Research
- MAGT 406 Total Quality Management (TQM)
- ECON 214 Monetary Policy

No Minor Requirements (12 CH)

Students not seeking any particular minor (no minor) must complete 12 Credit Hours taken from available courses in any major offered at CBE excluding the student declared major

University Free Elective Requirements (8 CH)

Students must complete a minimum of 8 credit hours in free university electives.

DEPARTMENT OF MANAGEMENT AND MARKETING

College of Business & Economics Building, Room 117 (Men's Section)
Phone: (974) 4403-5033 / 5034
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Website: <http://www.qu.edu.qa/business/management/index.php>

Head

Rana Sobh

Faculty

Professors:

Shahid Bhuian, Marios Katsioloudes,

Associate Professors:

Amit Das, Shobha Das, Riadh Ladhari, Khurram Sharif,

Assistant Professors:

Bader Al-Esmael, Khalid Mohamed Al-Horr, Hend Abdul-Rahman Al-Muftah, Galanou Ekaterini, Mohammed Nishat Faisal, Deepak Lyengar, Amro Maher, Najam US Saqib, Rana Sobh

ABOUT THE DEPARTMENT

The Department of Management and Marketing provides students with a solid, innovative and applied education in management and marketing, to prepare them for leadership and responsibility positions in public and private organizations. Management involves the coordination of resources, both human and non-human, to achieve organizational objectives efficiently. It is essential to build market efficiency and sustainable profitability. Marketing is the area of management responsible for anticipating, managing and satisfying customer needs through product and service development and planning, pricing, advertising, promotion and distribution. Marketing is a driving force in creating successful public and private enterprises.

BACHELOR OF BUSINESS ADMINISTRATION IN MANAGEMENT

Objectives

The Management major aims to prepare students for positions of leadership and responsibility in contemporary organizations. More specifically, the major focuses on the following objectives:

- Provide students with the body of knowledge essential to making sound management decisions.
- Provide students with the practical experience and skills needed to become effective managers and meet future challenges in their organizations.
- Develop students' understanding and appreciation of ethical aspects in their organizations.

Major Declaration

In order to declare a major in Management, students should have completed a minimum of 45 credits and be in good academic standing. Students should obtain approval from their academic advisors, head of department, and associate dean for student affairs.

Learning Outcomes

Graduates of the Bachelor of Business Administration in Management are expected to:

- Demonstrate effective communication skills.
- Utilize information technology in identifying and solving management-related problems.
- Work effectively in teams.
- Appreciate ethical dimensions in management decisions.
- Solve management-related problems and make decisions in complex environments.
- Appreciate a global perspective in management.

Opportunities

The major in Management prepares undergraduate students for careers in business and to pursue graduate studies. Applied education and our strong industry links provide students with work opportunities in a variety of organizations. Our graduates are competitive in the job market and have successfully taken up positions of leadership and responsibility in all areas of business in government and private organizations, both at the local and international levels. Examples of future career opportunities include human resource managers, management consultants, managing directors, leaders of government and private institutions, and other general management and leadership positions.

DEGREE REQUIREMENTS

Major in Management

A minimum of 125 credit hours are required to complete the Bachelor of Business Administration, major in Management, including the following:

- A minimum of 33 credit hours in university core curriculum requirements.
- A minimum of 45 credit hours in college core requirements.
- A minimum of 6 credit hours in college supporting requirements.
- A minimum of 15 credit hours in major requirements.
- A minimum of 6 credit hours in major electives.
- A minimum of 12 credit hours in minor or No minor requirements and electives.
- A minimum of 8 credit hours in University free elective requirement.

Core Curriculum Program Requirements (33 credit hours)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

College Core Requirements (45 CH)

Students must complete the following list of courses:

- ACCT 110 Financial Accounting
- ACCT 116 Managerial Accounting
- ECON 111 Principles of Microeconomics
- ECON 112 Principles of Macroeconomics
- MAKT 101 Principles of Marketing
- MIST 201 Introduction to MIS
- FINA 201 Principles of Finance
- MAGT101 Principles of Management
- MAGT 304 Production & Operations Management
- MAGT 306 International Business
- MAGT 307 Internship in Business
- MAGT 405 Strategic Management
- MATH 221 Business Math II
- STAT 220 Business Statistics I
- STAT 222 Business Statistics II

College Supporting Requirements (6 CH)

Students must complete the following list of courses:

- MATH 119 Business Math I
- LAWC 215 Business Law

Major Requirements (15 CH)

Students must complete the following list of courses:

- MAGT 301 Organizational Behavior
- MAGT 302 Human Resource Management

- MAGT 303 Entrepreneurship and Small Business Management
- MAGT 305 Comparative Management
- MAGT 406 Total Quality Management

Major Electives (6 CH)

Students must complete a minimum of 6 credit hours in courses selected from the following list:

- MAGT 401 Quantitative Methods
- MAGT 402 Organization Theory
- MAGT 403 E-Business
- MAGT 404 Project Management

Minor or No Minor Requirements

Students with a major in Management may choose a minor in Accounting, Management Information Systems, Finance, Marketing, Economics, International Business, or the No minor option.

Minor in Management Information Systems Requirements (12 CH)

Students seeking a minor in Information Systems must complete the following courses:

- MIST 301 Introduction to Programming
- MIST 302 Database Management System
- MIST 303 Systems Analysis and Design
- MIST 304 Data Communication & Networking

Minor in Finance Requirements (12 CH)

Students seeking a minor in Finance must complete the following courses:

- FINA 301 Corporate Finance
- FINA 302 Investment
- FINA 303 Financial Markets & Institutions
- FINA 401 Portfolio Management

Minor in Economics Requirements (12 CH)

Students seeking a minor in Economics must complete the following courses:

- ECON 211 Intermediate Microeconomics
- ECON 212 Intermediate Macroeconomics
- ECON 214 Monetary Policy
- ECON 453 International Economics

Minor in Accounting Requirements (12 CH)

Students seeking a minor in Accounting must complete the following courses:

- ACCT 221 Intermediate Accounting I
- ACCT 222 Intermediate Accounting II
- ACCT 331 Cost & Management Accounting
- ACCT 333 Auditing I

Minor in Marketing Requirements (12 CH)

Students seeking a minor in Marketing must complete the following courses:

- MAKT 301 Consumer Behavior

- MAKT 302 Marketing Management
- MAKT 303 International Marketing
- MAKT 401 Marketing Research

Minor in International Business (IB) for the Management Major (12 CH)

Students with a major in Management seeking a minor in International Business must complete 9 credit hours in minor requirements and 3 credit hours in minor electives as detailed below.

IB Minor Requirements (9 CH)

- MAKT 303 International Marketing
- FINA 304 International Finance
- ECON 453 International Economics

IB Minor Electives (3 CH)

Students must complete a minimum of 3 credit hours in courses selected from the following list:

- MAKT 401 Marketing Research
- FINA 303 Financial Markets & Institutions
- ECON 214 Monetary Policy

No Minor Requirements (12 CH)

Students not seeking any particular minor (no minor) must complete 12 Credit Hours taken from available courses in any major offered at CBE excluding the student declared major

University Free Elective Requirements (8 CH)

Students must complete a minimum of 8 credit hours in free university electives

BACHELOR OF BUSINESS ADMINISTRATION IN MARKETING

Objectives

This major aims to prepare students for positions of leadership and responsibility in contemporary organizations. More specifically, the Marketing major focuses on the following objectives:

- Provide students with the knowledge and skills essential to make marketing decisions.
- Provide students with the practical experience needed to become effective marketing managers.
- Develop students' innovative and creative abilities.
- Develop students' ethical understanding and appreciation.

Major Declaration

In order to declare a major in Marketing, students should have completed a minimum of 45 credits and be in good academic standing. Students should obtain approval from their academic advisors, head of department, and associate dean for student affairs.

Learning Outcomes

Graduates of the Bachelor of Business Administration in Marketing are expected to:

- Demonstrate effective communication skills.
- Utilize information technology in identifying and solving marketing-related problems.
- Work effectively in teams.
- Appreciate ethical dimensions in marketing decisions.
- Solve marketing-related problems and make sound decisions in complex environments.
- Appreciate the global perspective in marketing.

Opportunities

The Marketing major prepares undergraduate students for careers in business and to pursue graduate studies. Applied education and our strong industry links provide students with work opportunities in a variety of organizations. Our graduates are competitive in the job market, and have successfully taken up positions of leadership and responsibility in all areas of business in public and private organizations, at both the local and international level. Examples of future career opportunities include brand managers, marketing consultants, marketing managers and directors, and other general management and leadership positions.

DEGREE REQUIREMENTS

Major in Marketing

A minimum of 125 credit hours are required to complete the Bachelor of Business Administration, major in Marketing, including the following:

- A minimum of 33 credit hours in university core curriculum requirements.
- A minimum of 45 credit hours in college core requirements.
- A minimum of 6 credit hours in college supporting requirements.
- A minimum of 15 credit hours in major requirements.
- A minimum of 6 credit hours in major electives.
- A minimum of 12 credit hours in minor or No minor requirements and electives.
- A minimum of 8 credit hours in University free elective requirements.

Core Curriculum Program Requirements (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

College Core Requirements (45 CH)

Students must complete the following list of courses:

- ACCT 110 Financial Accounting
- ACCT 116 Managerial Accounting
- ECON 111 Principles of Microeconomics
- ECON 112 Principles of Macroeconomics
- MAKT 101 Principles of Marketing
- MIST 201 Introduction to MIS
- FINA 201 Principles of Finance
- MAGT101 Principles of Management
- MAGT 304 Production & Operations Management
- MAGT 306 International Business
- MAGT 307 Internship in Business
- MAGT 405 Strategic Management
- MATH 221 Business Math II
- STAT 220 Business Statistics I
- STAT 222 Business Statistics II

College Supporting Requirements (6 CH)

Students must complete the following list of courses:

- MATH 119 Business Math I
- LAWC 215 Business Law

Major Requirements (15 CH)

Students must complete the following list of courses:

- MAKT 401 Marketing Research
- MAKT 301 Consumer Behavior
- MAKT 302 Marketing Management
- MAKT 303 International Marketing
- MAKT 304 Strategic Marketing

Major Electives (6 CH)

Students must complete a minimum of 6 credit hours in courses selected from the following list:

- MAKT 402 Sales Management
- MAKT 403 E-Marketing
- MAKT 404 Service Marketing
- MAKT 405 Promotion Management

Minor or No Minor Requirements

Students with a major in Marketing may choose a minor in Accounting, Management Information Systems, Finance, Management, Economics, International Business, or the No minor option.

Minor in Accounting Requirements (12 CH)

Students seeking a minor in Accounting must complete the following courses:

- ACCT 221 Intermediate Accounting I
- ACCT 222 Intermediate Accounting II
- ACCT 331 Cost & Management Accounting
- ACCT 333 Auditing I

Minor in Management Information Systems Requirements (12 CH)

Students seeking a minor in Information Systems must complete the following courses:

- MIST 301 Introduction to Programming
- MIST 302 Database Management System
- MIST 303 Systems Analysis and Design
- MIST 304 Data Communication & Networking

Minor in Finance Requirements (12 CH)

Students seeking a minor in Finance must complete the following courses:

- FINA 301 Corporate Finance
- FINA 302 Investment
- FINA 303 Financial Markets & Institutions
- FINA 401 Portfolio Management

Minor in Economics Requirements (12 CH)

Students seeking a minor in Economics must complete the following courses:

- ECON 211 Intermediate Microeconomics
- ECON 212 Intermediate Macroeconomics
- ECON 214 Monetary Policy
- ECON 453 International Economics

Minor in Management Requirements (12 CH)

Students seeking a minor in Management must complete the following courses:

- MAGT 301 Organizational Behavior
- MAGT 302 Human Resource Management
- MAGT 303 Entrepreneurship & Small Business Management
- MAGT 406 Total Quality Management

Minor in International Business (IB) for the Marketing Major (12 CH)

Students with a major in Marketing seeking a minor in International Business must complete 9 credit hours in minor requirements and 3 credit hours in minor electives as detailed below.

IB Minor Requirements (9 CH)

- FINA 304 International Finance
- MAGT 305 Comparative Management
- ECON 453 International Economics

IB Minor Electives (3 CH)

Students must complete a minimum of 3 credit hours in courses selected from the following list:

- FINA 303 Financial Markets and Institutions
- MAGT 406 Total Quality Management (TQM)
- ECON 214 Monetary Policy

No Minor Requirements (12 CH)

Students not seeking any particular minor (no minor) must complete 12 Credit Hours taken from available courses in any major offered at CBE excluding the student declared major

University Free Elective Requirements (8 CH)

Students must complete a minimum of 8 credit hours in free university electives

Minor in Business (24 CH)

The minor in Business is designed for students pursuing majors in colleges other than the College of Business & Economics (CBE). The minor provides coursework through which a student can obtain skills and learn tools used in business and learn the theories, techniques, and concepts of accounting, marketing, management, economics, and finance.

The minor in Business provides a background that will be useful for non-business students who wish to pursue careers in their majors by working for a business or by starting their own business. The minor in Business is not available to Business majors and is not to be considered as preparation for transfer into CBE to pursue a business major or a business degree.

Students seeking a minor in Business must complete a minimum of 24 credit hours, including the following:

- A minimum of 24 credit hours in Minor Requirements

Minor Requirements (24 CH)

Students must complete a minimum of 24 credit hours in Minor required courses:

- MAGT 101 Principles of Management
- MAKT 101 Principles of Marketing
- ACCT 110 Financial Accounting
- ECON 111 Principles of Microeconomics
- ECON 112 Principles of Macroeconomics
- MATH 119 Business Mathematics I
- FINA 201 Principles of Finance
- STAT 220 Business Statistics

COLLEGE OF EDUCATION

College of Education Building

Phone: (974) 4403-5100 / 5118

E-mail: Dean-Edu@qu.edu.qa

Website: <http://www.qu.edu.qa/Education>

Dean

Hissa Mohamed Sadiq

Associate Dean for Academic Affairs

Vacant

Associate Dean for Student Affairs

Fatima Al-Maadadi

ABOUT THE COLLEGE

The mission of the College of Education is to provide excellence in the initial and advanced preparation of education professionals by establishing a foundation that fosters life-long learning, teaching, research, and community partnerships. The college provides:

- An educational, motivational, and supportive environment for both learning and teaching in a climate characterized by responsible freedom.
- Highly qualified education professionals and on-going professional development by supporting scholarly activities, and by sharing the responsibility of educational reform through effective partnerships.

DEGREE OFFERINGS

The College of Education offers the following undergraduate degree program:

- **Bachelor of Education in Primary Education with four concentrations:**
 1. Arabic Studies (Arabic Language, Islamic Studies and Social Studies)
 2. Math and Science
 3. English/ESL
 4. Early Childhood

DEPARTMENT OF PSYCHOLOGICAL SCIENCES AND EDUCATIONAL SCIENCES

Education Technology Center, Room 220

Phone: (974) 4403-5100 / 5118

Email: noura.alattiyah@qu.edu.qa

Website: http://www.qu.edu.qa/education/primary_program/index.php

Head

Dr. Atman Aikhlief (Psychological Sciences)

Dr. Ghadnana Ali Bin-Ali (Educational Sciences)

Faculty

Professors:

Nassra Al Banai, Abdalla Al-Mannai, Badria Al-Mulla, Aisha Fakhroo, Atman Ikhliief, Eman Zaki

Associate Professors:

Abdulla Abu-Tineh, Mubarak Al-Akraf, Badria Al-Ammari, Asma Al-Attayah, Maryam Al-Buflasa, Fatma Al-Moutawa, Ahmad Al-Saai, Huda Al-Sobai, Huda Basheer, Hissa Fakhroo, Ramzi Nasser, Michael Romanowski

Assistant Professors:

Hissa Ali Bin Ali, Latifa Al-Magseeb, Alanood Al-Thani, Tamader Al-Thani, Maha Cherif, Abdihay Elsayed, Patricia Kerr, Batoul Khaliefa, Yasser Semmar

ABOUT THE DEPARTMENTS

The Department of Psychological Sciences and Educational Services aims to prepare highly qualified graduates in the field of education, who will have outstanding knowledge of the scientific foundations of their field, and exhibit practical experience and skills in professional roles as well as conduct and evaluate research using scientific methods. The Department is committed to the educational preparation of human power necessary to work at different education institutions at different jobs and specializations in a way that qualify them for continual professional development and continuing higher studies.

BACHELOR OF EDUCATION IN PRIMARY EDUCATION

Objectives

- Support the mission of Qatar University to provide experts needed for Qatari Society.
- Provide highly qualified primary teachers, so that all children in Qatar's primary schools may receive a world class education.
- Develop teacher-leaders, who will contribute to ongoing progress in teaching, scholarship, and leadership in Qatar.

Major Declaration

In order to declare a major in Primary Education, applicants must satisfy the minimum high school percentage requirement for the major in the

semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements. All candidates must also satisfy the English language testing requirements.

Learning Outcomes

Graduates from this major will:

- Demonstrate a knowledge of how primary-aged children grow and develop, and how that impacts their learning.
- Use their knowledge of the processes of educational reform in Qatari society to design cutting-edge educational programs for their students.
- Incorporate modern methods of teaching, including educational technology, into their own educational practices.
- Understand and apply current educational research methods to better their teaching practices.
- Engage in teaching practices that demonstrate a belief that all children can learn.

Opportunities

Graduates from the Primary Education major are prepared to seek employment in the educational sector, namely private, as well as government-run primary schools for children. Other possible job opportunities are also connected with the educational sector, such as working in international or governmental agencies connected with education.

DEGREE REQUIREMENTS

Major in Primary Education

A minimum of 120 credit hours are required to complete the major in Primary Education, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 36 credit hours of major requirements.
- A minimum of 6 credit hours of major free electives.
- A minimum of 45 credit hours of concentration requirements.

Core Curriculum Requirements (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (36 CH)

- EDUC 310 Foundations of Education in Qatar and School Reform
- EDUC311 Applications in Second Language Acquisition
- EDUC 312 Curriculum and Assessment
- EDUC 313 Developing Literacy in Children
- EDUC 314 Technology for Children
- EDUC 315 Child Development & Learning
- EDUC 316 Classroom Management
- EDUC 317 Inclusive Classrooms
- EDUC 318 Integrating Visual Arts
- EDEC 481, EDMS 481, EDAR 481, or EDEN 481 - Student Teaching

Major Free Electives (6 CH)

Students must take a minimum of 6 credit hours from the list of elective courses listed below:

- EDUC 200 Education and Societal Problems
- EDUC 201 Research Methodology
- PSYC 201 Introduction to Psychology
- PSYC 205 Social Psychology
- EDUC 203 Family Relationships
- EDUC 100 Photography

Concentration in Arabic Studies (45 CH)

Students must complete a minimum of 45 credit hours by completing the following concentration requirements:

- EDPR 446 Teaching Primary Level Arabic
- EDPR 447 Teaching Primary Level Islamic Studies
- EDPR 448 Teaching Primary Level Social Studies
- HIST 222 The Gulf in Modern Period
- HIST 111 History of the Muslim World I (600 -1187)
- HIST 213 Modern Arab History (1516-1919)
- GEOG 110 General Geography
- ARAB 110 Intro to Literature and Language
- ARAB 109 Language Skills
- ARAB 213 Grammar I
- ARAB 319 Grammar II
- ISLA 103 Quranic Exegesis
- ISLA 105 Analytical Hadith
- DAWA 113 Philosophy of Sirah
- ISLA 106 Jurisprudence of Worship

Concentration in Early Childhood (45 CH)

Students must complete a minimum of 45 credit hours by completing the following concentration requirements:

- EDEC 410 Play and the Theory of Movement

- EDEC 411 Health and Safety of Young Children
- EDEC 412 Community Outreach and Resources
- EDEC 413 Integrated Math and Science for Young Children
- EDEC 452 Teaching Reading and Writing for Young Children
- EDEC 453 Teaching Arabic Language to Young Children
- EDEC 454 Integrated Social Studies to Young Children
- EDEC 456 ESL and Young Children
- BIOL 101 Biology I
- BIOL 102 Biology II
- Math 103 Numbers and Basic Algebra
- GEOG 110 General Geography
- ENGL 150 Essay Writing I
- ENGL 156 Introduction to Literature I
- ARAB 213 Grammar I
- DAWA 113 Philosophy of Sirah

Concentration in English/ESL (45 CH)

Students must complete a minimum of 45 credit hours by completing the following concentration requirements:

- EDPR 453 Teaching Primary Level English (ESL I)
- EDPR 454 Teaching Primary Level English (ESL II)
- EDPR 455 Teaching Primary Level Reading
- EDPR 410 Reading and Writing in all Disciplines
- BIOL 101 Biology I
- MATH 103 Numbers and Basic Algebra
- MATH 104 Basic Geometry and Measures
- ENGL 153 Essay Writing II
- ENGL 155 Introduction to Language
- ENGL 156 Introduction to Literature I
- ENGL 157 Introduction to Linguistics
- ENGL 158 Introduction to Literature II
- ENGL 305 First Language Acquisition
- ENGL 309 Second Language Acquisition
- ENGL 426 Children's Literature

Concentration in Math and Science (45 CH)

Students must complete a minimum of 45 credit hours by completing the following concentration requirements:

- EDPR 410 Reading and Writing in all Disciplines
- EDPR 450 Teaching Primary Level Science
- EDPR 451 Teaching Primary Level Mathematics
- EDPR 452 Methods in Inquiry and Research
- BIOL 101 Biology I
- BIOL 102 Biology II
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I
- BIOL 221 Basic Ecology
- PHY 183 Introduction to General Physics
- GEOL 101 Principles of General Geology
- MATH 103 Numbers and Basic Algebra
- MATH 104 Basic Geometry and Measures
- MATH 203 Basic Analysis
- STAT 101 Statistics I
- ENGL 150 Essay Writing I

COLLEGE OF ENGINEERING

College of Engineering Building, Corridor 6 (Men's Section)
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Dean

Mazen Omar Hasna

Associate Dean for Academic Affairs
Vacant

Associate Dean for Research and Graduate Studies
Abdelmagid Salem Hammuda

Assistant Dean for Student Affairs
Waled Abdulla Mukahal

ABOUT THE COLLEGE

The College of Engineering, established in 1980, serves the State of Qatar by preparing graduates in a wide range of engineering disciplines, as well as in computing and architecture. The College aims to be recognized in the region for its outstanding education, research and community engagement, and for the quality of its socially responsible graduates. The main mission of the college is to prepare globally competent and socially responsible graduates, who can compete in an international working environment while taking into consideration our Islamic and Arabic heritage, as well as the local societal needs. Graduates of the college have significantly contributed to the huge industrial expansion that the State of Qatar has witnessed. They are currently playing a key role in the transformation of the economy of Qatar to a knowledge-based economy.

DEGREE OFFERINGS

The College of Engineering offers the following undergraduate degree programs:

- Bachelor of Architecture
- Bachelor of Science in Architectural Engineering (closed to new students)
- Bachelor of Science in Chemical Engineering
- Bachelor of Science in Civil Engineering
- Bachelor of Science in Computer Engineering
- Bachelor of Science in Computer Science
- Bachelor of Science in Electrical Engineering
- Bachelor of Science in Industrial and Systems Engineering
- Bachelor of Science in Mechanical Engineering

DEPARTMENT OF ARCHITECTURE AND URBAN PLANNING

College of Engineering Building, Room 219 (Women's Section)
Phone: (974) 4403-4340 / 4344
E-mail: architecture-urban@qu.edu.qa
Website: <http://www.qu.edu.qa/engineering/architecture>

Head

Ashraf M. Salama

Faculty

Professors:
Ashraf M. Salama

Associate Professors:
Hatem Galal A Ibrahim, Yasser O.M. Mahgoub

Assistant Professors:
Djamel Boussaa, Fodil Fadli, Rania Khalil, Lizmol Mathew, Djamel Ouahrani, Agatino Rizzo

ABOUT THE DEPARTMENT

The unprecedented growth in the building and urban development industry, already considered the second largest industry in Qatar and the region, has created a pressing demand for architects and planners with specialized training to design, plan and direct the activities of the industry. Responding to these demands, the Department of Architecture and Urban Planning (AUP), the newest academic unit at QU's College of Engineering, offers innovative undergraduate and graduate programs committed to graduating professionals capable of creating and managing sustainable environments. These are: the Bachelor of Architecture (B.Arch.) five-year undergraduate professional degree, and Master of Urban Planning and Design (MUPD).

Our programs strike a balance between knowledge content and knowledge delivery, while implementing hands-on experiential, active, and outcome-based learning approaches. Our student intake is governed by a rigorous admission process. Students enjoy close interaction with faculty members and educational facilities, studios, and laboratories that reflect up-to-date instructional technology. Our faculty members are responsive educators with research and professional expertise that foster the effective delivery of our programs

BACHELOR OF ARCHITECTURE

Objectives

The objectives of the program are to integrate knowledge-based and skill-based pedagogies in a balanced manner needed to graduate responsive professional architects. The three main objectives are:
1. Cognitive: Provide high-quality education that prepares students to assume professional roles in architecture, by offering sound knowledge in design theories and applications, building technology,

social, cultural, and environmental factors, and the application of information technology.

2. Affective: Prepare students to work effectively in multi-disciplinary teams within the building industry by providing knowledge in built environment related disciplines relevant to ethical responsibilities and professional obligations in architecture.

3. Psychomotor: Prepare students to acquire and develop skills for creative problem-solving and lifelong learning, including critical thinking and assessment of existing environments, active and experiential learning for developing design concepts and solutions, and communication and presentation of those solutions to peers, clients, decision makers, and the public.

Major Declaration

In order to declare a major in Architecture, students must satisfy the College of Engineering admission requirements and go through the specialization phase; students are assigned to programs based on the students' choices and according to their score in the general secondary education certificate or its equivalent, and the capacity of the programs within the college. An aptitude test and a personal interview are primary requirements for declaring a major in architecture. All students must declare their major and join the program before completing 36 credit hours.

Additional Requirements

In addition to the requirement of completing a program of 160 credit hours, which includes the senior graduation design project, students must go through compulsory practical training in the in the summers of the last two years of the program. Practical training does not count in the overall credit hours but is mandatory. It requires a minimum of 12 weeks of architectural training in design consulting firms, construction companies, architectural engineering consultancies, or relevant government agencies.

Learning Outcomes

Under the general theme of sustainable built environments, the program learning outcomes are as follows:

- **Design:** Ability to conceptualize and coordinate designs, addressing social, cultural, environmental and technological aspects of architecture.
- **People:** Ability to recognize the dialectic relationship between people and the built environment in the GCC/Arab region.
- **CAD:** Ability to apply and integrate computer technology in design processes and products.
- **Technology:** Ability to utilize cutting-edge building technology in design.
- **Communication:** Ability to apply visual and verbal communication skills at various stages of architectural design and project delivery processes.
- **Critical Thinking:** Ability to critically analyze building designs and conduct post-occupancy evaluation studies.
- **Research:** Ability to employ architectural research methods, including data collection and analysis to assess and propose improvements in existing built environments.

• **Collaboration:** Ability to work collaboratively with teams of architects and various interdisciplinary design teams involved in the building industry.

• **Equity:** Ability to recognize diversity of needs, values, behavioral norms, social patterns as they relate to the creation of the built environment.

The preceding learning outcomes are directly related to the course contents. However, they complement additional Student Performance Criteria (SPCs) mandated by the intended accreditation agency in architecture; the National Architectural Accrediting Board (NAAB) of Architecture Schools in North America.

Opportunities

Graduates of the Architecture program enjoy multiple employment opportunities as architects working in the fields of design and construction of architectural and urban projects. They have opportunities in government agencies, design firms, and consulting houses, real estate development companies, in addition to possibilities of establishing their own design firms. Additionally, graduates of the program may find opportunities to pursue post-graduate studies in architecture, urban design planning, and built environment related disciplines, and eventually pursue advanced careers in architecture and built environment-related realm.

DEGREE REQUIREMENTS

Major in Architecture

A minimum of 160 credit hours are required to complete the major in Architecture, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements.
- A minimum of 7 credit hours in College requirements.
- A minimum of 6 credit hours in College Electives.
- A minimum of 50 credit hours in Graphic Communication and Architectural Design Studios.
- A minimum of 15 credit hours in History and Theory.
- A minimum of 18 credit hours in Building Construction, Services, and Technology.
- A minimum of 16 credit hours in Civil Engineering Related courses.
- A minimum of 15 CH in major electives.
- A Compulsory non-credited summer practical training (12 weeks over 2 semesters)

Core Curriculum Requirements (33 CH)

Students must complete 33 CH from the CCP packages as detailed below

Common package (12 CH)

- ARAB 100 Arabic Language I
- ARAB 200 Arabic Language II
- ENGL 202 English Language I Post Foundation
- ENGL 203 English Language II Post Foundation
- DAWA 111 Islamic Culture

Social/Behavioral Sciences package (3 CH) (CCP package)
Any course in the CCP defines social and behavioural sciences package

Humanities /Fine Arts package (6 CH) (CCP package)
Students must complete a minimum of 6 Credit Hours from the CCP defined humanities and fine arts package with a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH) (CCP package)
• MATH 101 Calculus I

General Knowledge package (3 CH) (CCP package)
Any course in the CCP defines general knowledge package

General Skills package (3 CH) (CCP package)
Any course in the CCP defines general skills package

College Requirements (7 CH)
• MATH 102 Calculus II
• PHYS 191 General Physics for Engineering I
• PHYS 192 General Physics for Engineering Laboratory I

College Electives (6CH)
Students must complete a minimum of 6 credit hours in courses selected from the following list:
• GENG 106 Computer Programming
• GENG 107 Engineering Skills and Ethics
• GENG 360 Engineering Economics
• IENG 330 Operations Research
• MECH 485 Engineering Management

Major Requirements (99CH)
Students must complete 99 credit hours as from the sub-packages A,B,C, and D as detailed below:

A) Graphic Communication and Architectural Design Studios (50 CH)
• ARCT 110 Graphic Communication I
• ARCT 111 Graphic Communication II
• ARCT 120 Introduction to Architecture and Allied Arts
• ARCT 210 Perspective, Shade and Shadow
• ARCT 211 Architectural Design Studio I
• ARCT 212 Architectural Design Studio II
• ARCT 310 Architectural Design Studio III
• ARCT 311 Architectural Design Studio IV
• ARCT 410 Architectural Design Studio V
• ARCT 411 Architectural Design Studio VI
• ARCT 510 Comprehensive Design Studio
• ARCT 511 Senior Project Preparation and Programming
• ARCT 512 Senior Project

B) History and Theory (15 CH)
• ARCT 220 Climate and Architecture
• ARCT 221 History and Theory of Architecture I-Early and Western Civilizations
• ARCT 222 History and Theory of Architecture II-Islamic/Arab Civilizations
• ARCT 320 Design Methods and Theories
• ARCT 422 Research Methods in Architecture

C) Building Construction, Services, and Technology (18 CH)
• ARCT 230 Materials and Methods of Building Construction I
• ARCT 330 Materials and methods of Building Construction II
• ARCT 331 Environmental Control Systems I (Acoustics and Lighting)
• ARCT 332 Environmental Control Systems II (Sanitary and HVAC)
• ARCT 333 Construction Drawing and Detailing
• ARCT 531 Ethics and Professional Practice

D) Civil Engineering Related Courses (16 CH)
• ARCT 240 Theory of Structures I
• ARCT 241 Theory of Structures II
• ARCT 242 Surveying for Architects
• ARCT 340 Structures and Architectural Form I (Concrete Structures)
• ARCT 341: Structures and Architectural Form II (Steel and Shell Structures)
• ARCT 530 Construction and Project Management

E) Practical Training Courses - Mandatory (0 CH)
• ARCT 400 Practical Training I
• ARCT 500 Practical Training II

F) Major Electives (15 CH)
Students must complete a minimum of 15 credit hours in elective courses selected from the following list:
• ARCT 100 Independent Study
• ARCT 350 Arts in Architecture
• ARCT 351 Creativity and Innovation
• ARCT 420 Environment-Behaviour Studies
• ARCT 421 Introduction to Urban Design and Planning
• ARCT 430 Contract Documents
• ARCT 431 Cost Estimation, Valuation and Qualification
• ARCT 450 Interior Design Workshop
• ARCT 451 Computer Applications in Architecture (Advanced)
• ARCT 452 Contemporary Architecture in the Arab World
• ARCT 453 Criticism in Architecture
• ARCT 520 Landscape Architecture
• ARCT 550 Computer Applications in Urban Planning and G.I.S
• ARCT 551 Historic Preservation and Conservation

DEPARTMENT OF CIVIL AND ARCHITECTURAL ENGINEERING

College of Engineering - Corridor H, Room H206 (Men's Section)
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Head
Saleh Mubarak

Faculty

Professors:
Osman Elnawawy

Associate Professors:
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Assistant Professors:
Omar Al-Ansari, Hassan Al-Derham, Nasser Al-Nuaimi, Alaa Hawari, Khalid Naji, Khaled Salah Shaaban, Okan Sirin

ABOUT THE DEPARTMENT

The Department of Civil & Architectural Engineering is one of the six departments that constitute the College of Engineering at Qatar University. The role of the department is central to the future growth and development of Qatar, especially in light of the hosting of the World Cup in 2022. The Department currently offers one program - Civil Engineering, which focuses on developing the knowledge and skills needed for engineering professionals, and to become aligned with Qatar's needs and future plans for the 21st century. The Department also provides the State of Qatar with highly qualified engineers to meet the need of the civil engineering disciplines in the local labor market.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Objectives

The expected accomplishments of graduates of the Bachelor of Science in Civil Engineering program at Qatar University are as follows.
• Graduates will establish successful civil engineering careers in industrial, governmental, and/or private sectors, that contribute to the development of the country, the region, and beyond.
• Graduates will contribute effectively to the civil engineering profession and to society by mastering communication skills, using ethical practices, and pursuing lifelong learning.
• Graduates will provide public and private sectors with professional or innovative solutions to civil engineering and interdisciplinary problems.
• Qualified graduates will be prepared to pursue advanced studies if they so desire.

Major Declaration

In order to declare a major in Civil Engineering, students must satisfy the College of Engineering admission requirements and go through the specialization phase; students are assigned to programs based on the students' choices and according to their score in the general secondary education certificate or its equivalent, and the capacity of the programs within the college. All students must declare their major and join the program before completing 36 credit hours.

Learning Outcomes

Graduates of the Civil Engineering Department should have:

- An ability to apply fundamental knowledge of mathematics, science, and engineering.
- An ability to design and conduct experiments, as well as to analyze data.
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- An ability to function on multi-disciplinary teams.
- An ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively.
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- A recognition of the need for, and an ability to engage in life-long learning.
- A knowledge of contemporary issues.
- An ability to use techniques, skills, and modern engineering tools necessary for engineering practice.
- An ability to apply knowledge of mathematics through differential equations, calculus-based physics, chemistry, and at least one additional area of science, consistent with the program educational objectives.
- An ability to apply knowledge of four areas appropriate to civil engineering.
- An ability to conduct civil engineering experiments, analyze and interpret data.
- An ability to design a system, component, or a process in more than one civil engineering context.
- An ability to explain basic concepts in management, business, public policy, and leadership; and can explain the importance of professional licensure.

Opportunities

The rapid development currently taking place in Qatar has engineering and technology as its main backbone. Civil Engineers play a significant role as specialists in building infrastructure, and therefore have an important share in this development. By offering the sole civil engineering program in Qatar, the Department presents a leading contribution in all activities of the unprecedented infrastructures development in Qatar, through providing high-quality graduates and consultation services.

DEGREE REQUIREMENTS

Major in Civil Engineering

A minimum of 131 credit hours are required to complete the major in Civil Engineering, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 27 credit hours in college requirements.
- A minimum of 54 credit hours in major requirements
- A minimum of 12 credit hours in major technical electives.
- A minimum of 3 credit hours in additional science electives.
- A minimum of 2 credit hours in free electives.

Core Curriculum Requirements (33 CH)

Common package (12 CH)

- ARAB 100
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3CH)

Any Course in CCP defined social package

Humanities /Fine Arts package (3 CH)

Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

- MATH 101 Calculus I

Supplemental College / Program core requirements package (12 CH)

- PHYS 191 General Physics for Engineering I
- PHYS 192 Experimental General Physics for Engineering I
- PHYS 193 General Physics for Engineering II
- PHYS 194 Experimental General Physics for Engineering II
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I

College Requirements (27 CH)

- MATH 102 Calculus II
- MATH 211 Calculus III
- MATH 217 Mathematics for Engineers
- GENG 106 Computer Programming
- GENG 107 Engineering Skills and Ethics
- GENG 200 Probability and Statistics for Engineers
- GENG 300 Numerical Methods
- GENG 360 Engineering Economics
- GENG 111 Engineering Graphics

Major Requirements (54 CH)

- CVEN 210 Properties and Testing of Materials
- CVEN 212 Fluid Mechanics
- CVEN 213 Statics

- CVEN 214 Strength of Materials
- CVEN 220 Analysis of Structures
- CVEN 230 Geotechnical Engineering
- CVEN 270 Surveying for Construction
- CVEN 320 Design of Reinforced Concrete Members
- CVEN321 Analysis of Indeterminate Structures
- CVEN 330 Foundation Engineering I
- CVEN 340 Analysis and Design of Hydraulic Systems
- CVEN 350 Environmental Engineering
- CVEN 360 Highway Engineering
- CVEN 380 Construction Engineering
- CVEN 381 Contracts, Specifications, and Local Regulations
- CVEN 399 Practical Training
- CVEN 401 Civil Engineering Design Project I
- CVEN 402 Civil Engineering Design Project II
- CVEN 420 Design of Steel Structures

Major Technical Electives (12 CH)

Students must complete a minimum of 12 credit hours in elective courses selected from the following list:

- CVEN 422 Design of Reinforced Concrete Structures
- CVEN 423 Selected Topics in Structural Design
- CVEN 424 Structural Matrix Analysis
- CVEN 430 Foundation Engineering II
- CVEN 431 Selected Topics in Geotechnical Engineering
- CVEN 442 Selected Topics in Water Resources
- CVEN 453 Selected Topics in Environmental Engineering
- CVEN 460 Pavement Materials and Design
- CVEN 461 Traffic Engineering
- CVEN 462 Selected Topics in Transportation Engineering
- CVEN 481 Project Planning and Scheduling
- CVEN 482 Selected Topics in Construction Engineering and Management

Major Additional Science Electives (3 CH)

Students must complete a minimum of 3 credit hours in courses selected from the following list:

- BIOL 101 Biology I
- GEOL 101 Principal of General Geology
- MARS 101 Introduction to Marine Science

Free Electives (2 CH)

Students must complete a minimum of 2 credit hours from courses outside the College offering.

DEPARTMENT OF CHEMICAL ENGINEERING

College of Engineering - Corridor G, Room G118 (Men's Section)

Phone: (974) 4403-4130 / 4134

Email: che@qu.edu.qa

Website: <http://www.qu.edu.qa/engineering/chemical/>

Head

Farid Benyahia

Faculty

Professors:

Farid Benyahia, Ramazan Kahraman

Associate Professors:

Shaheen Al-Muhtaseb, Majeda Khraisheh, Hazim Qiblawey

Assistant Professors:

Salim Ahmad, Mohamed Al-Marri, Abdulreda Al-Sayegh, Mert Atilhan, Fadwa El-Jack, Mohammad Saleh

ABOUT THE DEPARTMENT

The Department of Chemical Engineering at Qatar University has 12 highly qualified faculty members and 7 teaching assistants, 2 of whom pursue graduate studies in North America to qualify as faculty members. It enjoys a remarkable working relationship with local industry, which supports the chemical engineering program in several ways, including professorial chair positions, student internships, guest lectures, industrially-based graduation projects, and process plant design award contest. The Department of Chemical Engineering is leading the newly launched Master of Science program in Environmental Engineering in the QU College of Engineering. The research priorities of the Department of Chemical Engineering are aligned with the national priorities of the state of Qatar in terms of research focus. These priorities are compatible with faculty members' expertise and personal development in the areas of environmental process engineering, hydrocarbons processing, desalination, and energy systems. The Department of Chemical Engineering has been successful at attracting research funding exceeding 19 Million US Dollars from QNRF under the NPRP and UREP funding schemes to sustain its research activities and train undergraduate students in research methods. Undergraduate students enjoy a remarkable support from the research-active faculty members in project work.

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Objectives

The graduates of the QU Chemical Engineering Program will:

1. Practice chemical engineering in a wide range of industries, including hydrocarbon processing, desalination, power generation, and government agencies.
2. Take an active role and participate in their continuous professional

development, including graduate studies when appropriate to their career goals.

3. Maintain ethical and professional standards in their career.

Major Declaration

In order to declare a major in Chemical Engineering, students must satisfy the College of Engineering admission requirements and go through the specialization phase; students are assigned to programs based on the students' choices and according to their score on the general secondary education certificate or its equivalent and the capacity of the programs within the college. All students must declare their major and join the program before completing 36 credit hours.

Learning Outcomes

- An ability to apply knowledge of mathematics, science, and engineering.
- An ability to design and conduct experiments, as well as to analyze and interpret data.
- An ability to design a system, component, or process to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- An ability to function on multidisciplinary teams.
- An ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively.
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- A recognition of the need for -and an ability to- engage in life-long learning.
- A knowledge of contemporary issues.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Opportunities

Graduates of the Chemical Engineering Program enjoy a wide range of career opportunities in the oil, gas, petrochemical, desalination, power generation, environmental regulations, and government sectors. Graduates can also pursue higher studies in Chemical Engineering or related fields.

DEGREE REQUIREMENTS

Major in Chemical Engineering

A minimum of 131 credit hours are required to complete the major in Chemical Engineering, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 27 credit hours of college requirements.
- A minimum of 60 credit hours of major requirements.
- A minimum of 9 credit hours of major electives.
- A minimum of 2 credit hours in free electives.

Core Curriculum Requirements (33 CH)
Common package (12 CH)

- ARAB 100
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Any Course in CCP defined social package

Humanities /Fine Arts package (3 CH)

Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

- MATH 101 Calculus I

Supplemental College / Program core requirements package (12 CH)

- PHYS 191 General Physics for Engineering I
- PHYS 192 Experimental General Physics for Engineering I
- PHYS 193 General Physics for Engineering II
- PHYS 194 Experimental General Physics for Engineering II
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I

College Requirements (27 CH)

- MATH 102 Calculus II
- MATH 211 Calculus III
- MATH 217 Mathematics for Engineers
- GENG 106 Computer Programming
- GENG 107 Engineering Skills and Ethics
- GENG 200 Probability and Statistics for Engineers
- GENG 300 Numerical Methods
- GENG 360 Engineering Economics
- ELEC 201 Electric Circuits

Major Requirements (60 CH)

- CHEM 102 General Chemistry II
- CHEM 104 Experimental General Chemistry II
- CHEM 211 Organic Chemistry
- CHEM 241 Physical Chemistry I
- CHEM 242 Experimental Physical Chemistry I
- CHEM 341 Physical Chemistry II
- CHME 201 Introduction to Chemical Engineering I
- CHME 202 Introduction to Chemical Engineering II
- CHME 212 Chemical Engineering Thermodynamics I
- CHME 213 Fluid Mechanics
- CHME 311 Heat Transfer
- CHME 312 Chemical Engineering Thermodynamics II
- CHME 313 Mass Transfer I
- CHME 314 Chemical Reaction Engineering
- CHME 315 Mass Transfer II

- CHME 324 Chemical Engineering Laboratory I
- CHME 325 Chemical Engineering Laboratory II
- CHME 399 Practical Training
- CHME 421 Plant Design I
- CHME 422 Plant Design II
- CHME 423 Process Control
- CHME 426 Chemical Engineering Laboratory III
- CHME 495 Graduation Project I
- CHME 496 Graduation Project II

Major Electives (9 CH)

Students must complete a minimum of 9 credit hours in elective courses selected from the following list:

- CHME 413 Process Modeling & Simulation
- CHME 431 Petroleum Refining Process
- CHME 433 Petrochemical Technology
- CHME 435 Polymer Engineering
- CHME 444 Aluminum Production Technology
- CHME 445 Desalination
- CHME 451 Introduction to Gas Engineering
- CHME 454 Natural Gas Treatment
- CHME 462 Pollution Control
- CHME 463 Water Processes
- CHME 466 Special Topics in Chemical Engineering I
- CHME 467 Special Topics in Chemical Engineering II
- CHME 470 Fund of Petroleum Engineering
- CHME 486 Corrosion Engineering
- CHME 497 Independent Study

Free Electives (2 CH)

Students must complete a minimum of 2 credit hours from courses outside the College offering.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

College of Engineering - Corridor E, Room E103 (Men's Section)
Phone: (974) 4403-4240 / 4244

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Website: <http://www.qu.edu.qa/engineering/computer>

Head

Qutaibah Malluhi

Faculty

Professors:

Sebti Foufou, Jihad Jaam, Ali Jaoua, Hasan Krad, Qutaibah Malluhi

Associate Professors:

Rehab Duwairi, Mohammad Saleh, Mohammed Samaka, Osama A. Shata

Assistant Professors:

Somaya Ali Al-Ali, Mohamed Al-Meer, Adel Cherif, Tarek Elfouly, Abdelkarim Erradi, Rachid Hadjidj, Osama Halabi, Loay Ismail, Khaled Khan, Amr Mohamed, Uvais Qidwai, Ryan Riley, Khaled Shaban,

ABOUT THE DEPARTMENT

Computer Science is that branch of science that deals with the theory and methods of processing information in digital computers, the design of computer software, and the applications of computers. Graduates of the program enjoy attractive career opportunities in Qatar and world-wide. The Computer Science Program at Qatar University was first offered in 1989, as the first computer-related undergraduate educational program offered in Qatar. The Computer Science program is home to over 250 undergraduate students, who engage in a broad range of research and learning activities that span the entire spectrum of computer science. These include working with databases, wireless communication, networking, mobile computing, software development, web systems, and many others. Computer Engineering is that branch of Engineering that combines skills from Electrical Engineering, Computer Science, and Mathematics, and applies them in areas like Networking, Data Communication, Instrumentation, and Intelligent System Automation.

The Computer Engineering Program at Qatar University was first offered in 2002. Although fairly new at Qatar University, the program is one of the most competitive programs at the College of Engineering. Graduates of this program are sought by the industry in Qatar with attractive positions and interesting career opportunities. Computer Engineering students engage in a broad range of research and learning activities with an emphasis on those that are highly relevant to Qatar and the region. This educational experience is culminated by a graduation project where teams are formed to build a complete hardware and software system resembling an industrial unit for a specific real-world application.

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING

Objectives

The objective of the major is to graduate students who shall be able to achieve most of the following:

1. Establish successful computer or engineering careers in industry and the government that will advance the economic development of the country, the region, and beyond.
2. Serve industry and government by contributing professionally to help solve interdisciplinary, open-ended, and optimization problems.
3. Contribute effectively to the computing or engineering profession by fostering effective interaction, ethical practices, and communication skills, while pursuing further education through lifelong learning.
4. Qualified graduates will be prepared to pursue advanced studies if they so desire.

Major Declaration

- Students are admitted competitively and must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements.
- Students who have not obtained the required admission average in the General Secondary school Certificate or its equivalent may be admitted when the Program's capacity allows more intake, provided that they achieve a score of 500 or higher on the TOEFL Test, as well as achieving 550 or higher in the Mathematics Part of the International SAT I Test and score an average of 75% or higher in math and science courses.
- Students may be asked to pass an interview before they get admitted in the major.

Learning Outcomes

1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as to analyze and interpret data.
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. An ability to function on multi-disciplinary teams.
5. An ability to identify, formulate, and solve computer engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of computer engineering solutions in a global, economic, environmental and societal context.
9. A recognition of the need for, and the ability to engage in life-long learning.
10. A knowledge of contemporary issues.

11. An ability to use the techniques, skills, and modern engineering tools necessary for computer engineering practice.

Opportunities

Computer engineers research, plan, design, develop, modify, evaluate and integrate computer and communication systems. Examples of potential employers are computer and telecommunication hardware manufacturers, telecommunications providers, information technology consulting companies, government agencies, educational and research institutions, and information technology departments throughout the private and public sectors. Sample career titles for Computer Engineering are Computer Engineer, Telecommunications Engineer, Hardware Circuit Designer, Hardware Engineer, Networks Engineer, Systems Engineer, Research Engineer, and Wireless Communication Engineer.

DEGREE REQUIREMENTS

Major in Computer Engineering

A minimum of 128 credit hours are required to complete the major in Computer Engineering, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 24 credit hours in college requirements.
- A minimum of 60 credit hours in major requirements.
- A minimum of 9 credit hours in major electives.
- A minimum of 2 credit hours in free electives.

Core Curriculum Requirements (33 CH)

Common package (12 CH)

- ARAB 100
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Any Course in CCP defined social package

Humanities /Fine Arts package (3 CH)

Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

- MATH 101 Calculus I

Supplemental College / Program core requirements package (12 CH)

- PHYS 191 General Physics for Engineering I
- PHYS 192 Experimental General Physics for Engineering I
- PHYS 193 General Physics for Engineering II
- PHYS 194 Experimental General Physics for Engineering II
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I

College Requirements (24 CH)

- MATH 102 Calculus II
- MATH 211 Calculus III
- MATH 217 Mathematics for Engineers
- GENG 107 Engineering Skills and Ethics
- GENG 200 Probability and Statistics for Engineers
- GENG 300 Numerical Methods
- GENG 360 Engineering Economics
- ELEC 201 Electric Circuits

Major Requirements (60 CH)

- ELEC 231 Fundamentals of Electronics
- ELEC 351 Signals and Systems
- CMPS 151 Programming Concepts
- CMPS 152 Programming Concepts Laboratory
- CMPS 205 Discrete Structures for computing
- CMPS 251 Object-Oriented Programming
- CMPS 252 Object-Oriented Programming Laboratory
- CMPE 261 Digital Logic Design
- CMPE 262 Digital Logic Design Laboratory
- CMPE 263 Computer Architecture and Organization I
- CMPS 303 Data Structures
- CMPE 363 Computer Architecture and Organization II
- CMPE 364 Microprocessors based Design
- CMPE 365 Microprocessors based Design Laboratory
- CMPE 370 Computer Engineering Practicum
- CMPS 405 Operating Systems
- CMPS 406 Operating Systems Laboratory
- CMPS 411 Software Engineering
- CMPE 455 Data Communication and Computer Networks I
- CMPE 456 Data Communication and Computer Networks I Laboratory
- CMPE 457 Data Communication and Computer Networks II
- CMPE 462 Computer Interfacing
- CMPE 476 Digital Signal Processing
- CMPE 478 Digital Signal Processing Laboratory
- CMPE 498 Design Project I
- CMPE 499 Design Project II

Major Electives (9 CH)

Students must complete a minimum of 9 credit hours in major elective courses by taking a maximum of 3 credit hours in the Common Electives sub-package, and the remaining required credit hours from the CE Electives sub-package:

Common Electives Sub-package (0-3 CH)

Students can take up to 3 credit hours from the following list of courses:

- CMPS 373 Computer Graphics
- CMPS 454 Wireless Networks and Applications
- CMPS 465 Parallel and Distributed Systems
- CMPE 475 Artificial Intelligence
- CMPE 480 Computer Vision
- CMPE 482 Multimedia Networks

- CMPS 485 Computer Security

CE Electives Sub-package (6-9 CH)

Students must complete at least 6 to 9 CH from the following courses:

- CMPS 351 Fundamentals of Database Systems
- CMPE 470 Modern Computer Organization
- CMPE 471 Selected Topics in Computer Engineering
- CMPE 472 Performance Evaluation
- CMPE 474 Artificial Neural Networks
- CMPE 481 Modeling and Simulation of Digital Systems
- CMPE 483 Introduction to Robotics
- CMPE 485 Fundamentals of Digital Image Processing

Free Electives (2 CH)

Students must complete a minimum of 2 credit hours from courses offered outside the College.

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Objectives

Graduates of the Computer Science major shall achieve most of the following:

- Establish successful computing careers in business, industry, and/or government that will contribute to the economic development of the country, the region, and beyond.
- Apply analytical, design, and implementation skills to innovatively formulate and to solve computing, business, and interdisciplinary problems.
- Contribute effectively to society and the computing profession by fostering effective interaction, ethical practices, and communication skills, while pursuing further education through lifelong learning.
- Qualified graduates will be prepared to pursue advanced studies if they so desire.

Major Declaration

- Students are admitted competitively and must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program, or satisfy the University's competency requirements.
- Students who have not obtained the required admission average in the General Secondary School Certificate or its equivalent may be admitted when the capacity allows more intake provided that they achieve a score of 500 or higher in the TOEFL Test as well as achieving 550 or higher in the Mathematics Part of the International SAT I Test and score an average of 75% or higher in math and science courses.

Learning Outcomes

By the time of graduation, students will be able to:

1. Apply knowledge of computing and mathematics appropriate to the discipline.
2. Analyze a problem, and identify and define the computing

requirements appropriate to its solution.

3. Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
4. Function effectively on teams to accomplish a common goal.
5. Demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities.
6. Communicate effectively with a range of audiences.
7. Analyze the local and global impact of computing on individuals, organizations, and society.
8. Recognize of the need for, and an ability to engage in, continuing professional development.
9. Use current techniques, skills, and tools necessary for computing practice.
10. Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
11. Apply design and development principles in the construction of software systems of varying complexity.

Opportunities

Computer Science is a very versatile field. Therefore, the program gives graduates a wide range of distinguished career opportunities. Computer Science graduates are sought after by almost all kinds of industries, including gas and oil, telecommunications, media, security, medicine, and many others within Qatar, the region, and beyond. Examples of job titles for computer science include Software Engineer, System Administrator, Application Developer, Systems Programmer, System Analyst, IT Security Specialist, Network Administrator, Database Administrator, IT Consultant, Multimedia Specialist and Web System Manager.

DEGREE REQUIREMENTS

Major in Computer Science

A minimum of 120 credit hours are required to complete the major in Computer Science, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements.
- A minimum of 21 credit hours of college requirements.
- A minimum of 46 credit hours in major requirements.
- A minimum of 15 credit hours of major electives.
- A minimum of 5 credit hours of additional compulsory courses.

Core Curriculum Requirements (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Any Course in CCP defined social package

Humanities /Fine Arts package (6 CH)

- A minimum of 3 CH in any course listed in the CCP defined Qatar and Gulf History sub-package
- A minimum of 3 CH in any Course in CCP defined Humanities/Fine arts package, other than courses in the Qatar and Gulf History sub-package

Natural Science/Mathematics package (3 CH)

Any Course in CCP defined Natural Science / Mathematics package

Supplemental College / Program core requirements package (6 CH)

- MATH 101 Calculus I
- MATH 102 Calculus II

College Requirements (21 CH)

- MATH 231 Linear Algebra
- PHYS 191 General Physics for Engineering I
- PHYS 192 Experimental General Physics for Engineering I
- PHYS 193 General Physics for Engineering II
- PHYS 194 Experimental General Physics for Engineering II
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I
- GENG 200 Probability and Statistics for Engineers
- GENG 300 Numerical Methods

Major Requirements (46 CH)

- CMPS 200 Computer Ethics
- CMPS 205 Discrete Structures for Computing
- CMPS 151 Programming Concepts
- CMPS 152 Programming Concepts Laboratory
- CMPS 251 Object-Oriented Programming
- CMPS 252 Object-Oriented Programming Laboratory
- CMPS 303 Data Structures
- CMPS 311 Object Oriented Modeling
- CMPE 263 Computer Architecture and Organization I
- CMPS 323 Design and Analysis of Algorithms
- CMPS 351 Fundamentals of Database Systems
- CMPS 352 Fundamentals of Database Systems Laboratory
- CMPS 356 Software Development of Enterprise Applications
- CMPS 405 Operating Systems
- CMPS 406 Operating Systems Laboratory
- CMPS 411 Software Engineering
- CMPE 455 Data Communication and Computer Networks I
- CMPE 456 Data Communication and Computer Networks I Laboratory
- CMPS 493 Senior Project I
- CMPS 499 Senior Project II

Major Electives (15 CH)

Students must complete a minimum of 15 credit hours in major elective courses by taking a maximum of 6 credit hours in the Common Electives sub-package, and the remaining required credit hours from the CS Electives sub-package:

Common Electives Sub-package (0-6 CH)

Students can take up to 6 credit hours from the following list of courses:

- CMPS 373 Computer Graphics
- CMPS 454 Wireless networks and Applications
- CMPS 465 Parallel and Distributed Systems
- CMPE 475 Artificial Intelligence
- CMPE 480 Computer Vision
- CMPE 482 Multimedia Networks
- CMPS 485 Computer Security

CS Electives Sub-package (9-15 CH)

Students must complete at least 9 to 15 CH from the following courses:

- CMPE 261 Digital Logic Design
- CMPS 321 Information Systems
- CMPS 345 Automata and Formal Languages
- CMPS 393 Modeling and Simulation
- CMPS 433 Multimedia Systems
- CMPS 445 Compiler Construction
- CMPS 451 Database Management Systems
- CMPS 466 Information Retrieval
- CMPS 497 Special Topics in Computing

Additional Requirements (5 CH)

Students must complete a minimum of 5 credit hours in additional compulsory courses including:

- MAGT 101 Principles of Management
- CMPS 307 Introduction to Project Management and Entrepreneurship

DEPARTMENT OF ELECTRICAL ENGINEERING

College of Engineering - Corridor F, Room F102 (Men's Section)

Phone: (974) 4403-4200 / 4204

E-mail: electrical@qu.edu.qa

Website: <http://www.qu.edu.qa/engineering/electrical/>

Head

Mohieddine Benammar

Faculty

Professors:

Mohieddine Benammar, Lazhar Ben-brahim, Boualem Boashash

Associate Professors:

Adnan Abu Dayya, Rashid Al-Ammari, Khalid Ellithy, Ridha Hamila, Farid Touati

Assistant Professors:

Nasser Al-Emadi, Mohammed Al-Hitmi, Mohammed Al-Naimi, Mazen Hasna, Tamer Khattab, Ahmed Massoud, Atif Iqbal, Nader Meskin

ABOUT THE DEPARTMENT

The Electrical Engineering major is offered to male and female students. The focus of this four-year program is to provide the graduating engineer with the appropriate skills in order to meet the challenges and demands of a fast growing state such as Qatar. In addition to preparing students for postgraduate studies, Electrical Engineering is a versatile discipline which offers a wide range of employment opportunities in power generation and distribution, the gas and petroleum industry, chemical and steel companies, consumer electronics, telecommunications, information systems, biomedical engineering, and many other fields.

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Objectives

Graduates of the Electrical Engineering major will:

- Utilize the technical expertise applicable to electrical engineering systems, or succeed in advanced electrical engineering studies.
- Act professionally and ethically in a modern work environment through effective communication and leadership, and responsible teamwork.
- Maintain the desire for innovation and engagement in lifelong learning in response to emerging technologies, social developments, and contemporary issues.

Major Declaration

In order to declare a major in Electrical Engineering, students must satisfy the College of Engineering's admission requirements and go through the specialization phase; students are assigned to programs based on the students' choices and according to their score on the

general secondary education certificate or its equivalent, and the capacity of the programs within the college. All students must declare their major and join the program before completing 36 credit hours.

Learning Outcomes

- An ability to apply knowledge of mathematics, science, and engineering.
- An ability to design and conduct experiments, as well as to analyze and interpret data.
- An ability to design a system, component, or process to meet desired needs within realistic constraints, such as economics, environment, society, politics, ethics, health and safety, manufacturability, and sustainability.
- An ability to function on multi-disciplinary teams.
- An ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively.
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- A recognition of the need for, and an ability to engage in lifelong learning.
- A knowledge of contemporary issues.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- A knowledge of probability and statistics, including applications.
- An ability to analyze and design electrical and electronic devices, software, and systems containing hardware and software components.
- A knowledge of advanced mathematics including differential equations, linear algebra, and complex variables.

Opportunities

Electrical Engineering is a versatile discipline, which offers a wide range of employment opportunities. The job of an electrical engineer usually involves design, analysis, feasibility studies, cost analysis studies, installation, operation, and maintenance of systems, plants, processes or equipment. Qatar university Electrical Engineering graduates find employment in Qatar in industries like power generation and distribution, gas and petroleum industry, chemical and steel companies, consumer electronics, telecommunications, information systems, medical and biomedical institutes, and many others. Furthermore we are proud that several of our graduates pursue their postgraduate studies at leading institutes around the world.

DEGREE REQUIREMENTS

Major in Electrical Engineering

A minimum of 131 credit hours are required to complete the major in Electrical Engineering, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 27 credit hours of college requirements.
- A minimum of 54 credit hours of major requirements.

- A minimum of 15 credit hours of major electives.
- A minimum of 2 credit hours in free electives.

Core Curriculum Requirements (33 CH)

Common package (12 CH)

- ARAB 100
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Any Course in CCP defined social package

Humanities /Fine Arts package (3 CH)

Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

- MATH 101 Calculus I

Supplemental College / Program core requirements package (12 CH)

- PHYS 191 General Physics for Engineering I
- PHYS 192 Experimental General Physics for Engineering I
- PHYS 193 General Physics for Engineering II
- PHYS 194 Experimental General Physics for Engineering II
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I

College Requirement Courses (27 CH)

- MATH 102 Calculus II
- MATH 211 Calculus III
- MATH 217 Mathematics for Engineers
- GENG 106 Computer Programming
- GENG 107 Engineering Skills and Ethics
- GENG 200 Probability and Statistics for Engineers
- GENG 300 Numerical Methods
- GENG 360 Engineering Economics
- ELEC 201 Electric Circuits

Major Requirements (54 CH)

- MATH 385 Advanced Mathematics
- ELEC 202 Electric Circuits II
- ELEC 203 Electric Circuits II Lab
- ELEC 231 Fundamentals of Electronics
- ELEC 261 Digital Systems Design
- ELEC 262 Digital Systems Design Lab
- ELEC 299 Electrical Engineering Seminar
- ELEC 311 Electromagnetics
- ELEC 312 Electric Machines
- ELEC 313 Electric Machines Lab
- ELEC 321 Power Systems Analysis
- ELEC 333 Electronics Engineering

- ELEC 334 Electronics Engineering Lab
- ELEC 341 Communications Engineering
- ELEC 342 Communications Engineering Lab
- ELEC 351 Signals and Systems
- ELEC 352 Control Systems
- ELEC 366 Embedded Systems
- ELEC 367 Embedded Systems Lab
- ELEC 371 Sensors and Instrumentation
- ELEC 375 Biomedical Engineering
- ELEC 399 Practical Training
- ELEC 498 Senior Design Project I
- ELEC 499 Senior Design Project II

Major Electives (15 CH)

Students must complete a minimum of 15 credit hours in the major elective courses listed below. Upon Department written approval, one major elective course may be selected from 300 and 400 level Engineering courses offered by other Engineering majors and counted towards satisfying the major electives required number of credit hours.

- ELEC 415 Power Electronics and Drives
- ELEC 416 Selected Topics in Electric Machines and Drives.
- ELEC 422 Advanced Power Systems Analysis
- ELEC 423 Electric Power Distribution Systems
- ELEC 424 Operation of Power Systems
- ELEC 425 Selected Topics in Power Systems
- ELEC 438 Selected Topics in Electronics
- ELEC 444 Digital Communications
- ELEC 446 Selected Topics in Communication Engineering
- ELEC 447 Wireless Communications
- ELEC 453 Advanced Control Systems
- ELEC 456 Digital Signal Processing
- ELEC 457 Selected Topics in Control System/Signal Processing
- ELEC 495 independent Study
- ELEC 469 Computer Networks
- ELEC 471 Selected Topics in Computer Engineering
- ELEC 472 Wireless Networks and Applications
- ELEC 481 Power Electronics and Renewable Energy
- ELEC 482 Selected Topics in Power Electronics
- ELEC 483 Electric Drives
- ELEC 484 Industrial Control
- ELEC 485 Introduction to Robotics
- ELEC 486 Advanced Biomedical Systems Engineering
- ELEC 487 Selected Topics in Biomedical Engineering
- ELEC 488 Medical Imaging Systems
- ELEC 495 independent Study

Free Electives (2 CH)

Students must complete a minimum of 2 credit hours from courses outside the College offering.

DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING

College of Engineering - Corridor H, Room H111 (Men's Section)

Phone: (974) 4403-4300 / 4304

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Website: <http://www.qu.edu.qa/engineering/mechanical/index.php>

Head

Saud Ghani

Faculty

Professors:

Abdelwahab Aroussi, Abdul Magid Salem Hamouda

Associate Professors:

Mohamed Al-Khawaja, Ameer Al-Salem, Saud Ghani, El-Sadig Mahdi, Shaligram Pokharel

Assistant Professors:

Khalifa Al-Khalifa, Mohamed Al-Qaradawi, Farayi Musharavati, Fatih Mutlu, W. Jong Yoon

ABOUT THE DEPARTMENT

The Department of Mechanical and Industrial Engineering is committed to excellence in teaching, research, and in providing service to the community. The Department offers two undergraduate majors; Industrial and Systems Engineering, and Mechanical Engineering. The Department has excellent specialized laboratories, workshop and computing facilities in various disciplines, and is comprised of an outstanding team of faculty members and supporting staff. Faculty members are actively engaged in both scholarly activities as well as creating a conducive and creative environment suitable for a pleasant student learning experience. The staff are focused on student-centered learning. Frequently, faculty members include students in research programs and interactions with industry. Students gain first-hand exposure to real-world engineering problems which, along with their classroom and laboratory work, prepare them with the skills that make them attractive candidates to many employers after graduation. Student chapters of professional societies are established at the Department (IIE and ASME).

BACHELOR OF SCIENCE IN INDUSTRIAL AND SYSTEMS ENGINEERING

Objectives

Graduates from the program are expected to achieve the following by 3-5 years after graduation:

1. Establish a successful career in the broad areas of industrial engineering and /or entrepreneurship.
2. Maintain competency in systems design, development, implementation and improvement of integrated systems.
3. Grow professionally, maintain ethical conduct and engage in

life-long learning in response to the contemporary needs of the society.

Major Declaration

In order to declare a major in Industrial and Systems Engineering (ISE), students must satisfy the College of Engineering admission requirements and go through the specialization phase; students are assigned to programs based on the students' choices and according to their score in the general secondary education certificate or its equivalent, and the capacity of the programs within the college. All students must declare their major and join the program before completing 36 credit hours.

Learning Outcomes

1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as to analyze and interpret data.
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. An ability to function on multidisciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. A recognition of the need for, and an ability to engage in life-long learning.
10. A knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
12. Understand systems approach to design, develop, implement and improve integrated systems that include people, materials, information, equipment, and energy.
13. An ability to apply statistical principles for analysis.

Opportunities

Industrial Engineers make systems work better, safer, cost-effective and more efficient. With its diversity, industrial engineering is used virtually in all sectors, including manufacturing, distribution, government, energy, health care, services and finance. A distinguishing feature of the ISE discipline is the integration of people, machines, process flow, materials and information. ISE aims to optimize performance of such systems using available resources in the most efficient way without degrading social and physical environments. Unlike other engineering disciplines that focus their attention purely on the technical aspects of a system, the Industrial Engineer incorporates human and economic considerations in system design. This offers a broad range of career opportunities for our graduates. The need for high-quality Industrial Engineers in a fast growing economy like Qatar is vital to maintain growth.

The Program is working towards maintaining ABET accreditation so that its graduates can pursue their graduate studies at any world-class university. The Department also offers a Ph.D and Master in Engineering Management. Students are encouraged to set their academic goals high enough to pursue advanced studies in industrial and systems engineering.

DEGREE REQUIREMENTS

Major in Industrial and Systems Engineering

A minimum of 128 credit hours are required to complete the major in Industrial and Systems Engineering, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 30 credit hours of college requirements.
- A minimum of 54 credit hours of major requirements.
- A minimum of 9 credit hours of major electives.
- A minimum of 2 credit hours in free electives.

Core Curriculum Requirements (33 CH)

Common package (12 CH)

- ARAB 100
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Any Course in CCP defined social package

Humanities /Fine Arts package (3 CH)

Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

- MATH 101 Calculus I

Supplemental College / Program core requirements package (12 CH)

- PHYS 191 General Physics for Engineering I
- PHYS 192 Experimental General Physics for Engineering I
- PHYS 193 General Physics for Engineering II
- PHYS 194 Experimental General Physics for Engineering II
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I

College Requirements (30 CH)

- MATH 102 Calculus II
- MATH 211 Calculus III
- MATH 217 Mathematics for Engineers
- GENG 106 Computer Programming
- GENG 107 Engineering Skills and Ethics
- GENG 111 Engineering Graphics
- ELEC 201 Electric Circuits

- GENG 200 Probability and Statistics for Engineers
- GENG 300 Numerical Methods
- GENG 360 Engineering Economics

Major Requirements (54 CH)

- GENG 210 Statics & Dynamics
- GENG 231 Materials Science
- MECH 223 Solid Mechanics
- MECH 230 Manufacturing Processes
- IENG 210 Work Methods and Measurements
- IENG 260 Thermodynamics
- IENG 310 Facility Planning and Layout
- IENG 320 Statistical Quality Control
- IENG 330 Operations Research
- IENG 337 Production Planning and Inventory Control
- IENG 350 Computer Simulation Systems
- IENG 410 Ergonomics and Safety Engineering
- IENG 420 Quality Management
- IENG 450 Production Automation
- IENG 452 Information Systems Engineering
- IENG 460 Manufacturing Systems Design
- IENG 481 Project Engineering
- IENG 498 Industrial Systems Design

Major Electives (9 CH)

Students must complete a minimum of 9 credit hours as follows:

Option 1: Students can take 9 CH from the courses listed below:

- IENG 331 Advanced Operations Research
- IENG 411 Maintenance Planning & Control
- IENG 421 Decision Analysis
- IENG 423 Design of Experiments
- IENG 425 Reliability Engineering
- IENG 441 Concurrent Engineering
- IENG 451 Expert Systems
- IENG 478 Innovation & Entrepreneurship
- IENG 479 Special Topics
- IENG 484 Supply Chain Management
- IENG 485 Financial Engineering & Risk Management
- IENG 486 Service Operation Management

Option 2: Students can take 6 CH from the courses listed above in option 1 and 3 CH from the following courses offered by the College of Business and Economics:

- ECON 452 Industrial Economics
- ECON 472 Managerial Economics
- ACCT 331 Cost and Management Accounting
- ACCT 421 Accounting Information Systems
- MAGT 405 Strategic Management

Free Electives (2 CH)

Students must complete a minimum of 2 credit hours from courses outside the College offering.

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Objectives

Graduates of the major are expected to achieve most of the following objectives:

- Establish a successful career as mechanical engineers in Gas and Oil, Petrochemicals, Public or Private sectors, and demonstrate professional engineering competence by progressing through positions of increasing responsibility.
- Develop into well-rounded citizens with responsibility towards society.
- Advance technically and professionally through continued learning, and have the ability to pursue graduate studies.

Major Declaration

In order to declare a major in Mechanical Engineering, applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements.

Learning Outcomes

1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to design and conduct experiments, as well as to analyze and interpret data.
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economics, environment, society, politics, ethics, health and safety, manufacturability, and sustainability.
4. An ability to function on multidisciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. A recognition of the need for, and an ability to engage in life-long learning.
10. A knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
12. An ability to work professionally in thermal and mechanical system areas.

Opportunities

Since 1985, the Department has produced a large number of outstanding engineers who have continued to excel in their chosen fields of work. Our graduates work with engineers and professionals from other disciplines to provide the fuel that drives this nation's industries and government operations. They are also employed in different sectors and other varied professions in Qatar and across the world.

As the program has received ABET Substantial Equivalency accreditation, its graduates can pursue their graduate studies at

any world-class university. The Department also offers a Master in Engineering Management, and students are encouraged to set their academic goals high enough to obtain advanced degrees in mechanical engineering.

Major in Mechanical Engineering

A minimum of 131 credit hours are required to complete the major in Mechanical Engineering, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 30 credit hours of college requirements.
- A minimum of 54 credit hours of major requirements.
- A minimum of 12 credit hours of major electives.
- A minimum of 2 credit hours in free electives.

Core Curriculum Requirements (33 CH)

Common package (12 CH)

- ARAB 100
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Any Course in CCP defined social package

Humanities /Fine Arts package (3 CH)

Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

- MATH 101 Calculus I

Supplemental College / Program core requirements package (12 CH)

- PHYS 191 General Physics for Engineering I
- PHYS 192 Experimental General Physics for Engineering I
- PHYS 193 General Physics for Engineering II
- PHYS 194 Experimental General Physics for Engineering II
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I

College Requirements (30 CH)

- MATH 102 Calculus II
- MATH 211 Calculus III
- MATH 217 Mathematics for Engineers
- GENG 106 Computer Programming
- GENG 107 Engineering Skills and Ethics
- GENG 111 Engineering Graphics
- GENG 200 Probability and Statistics for Engineers
- GENG 300 Numerical Methods
- GENG 360 Engineering Economics
- ELEC 201 Electric Circuits

Major Requirements (54 CH)

- GENG 221 Engineering Mechanics I, Statics
- GENG 222 Engineering Mechanics II, Dynamics
- GENG 231 Material Science
- MECH 213 Engineering Measurements
- MECH 223 Solid Mechanics
- MECH 230 Manufacturing Processes
- MECH 241 Thermofluids
- MECH 321 Mechanical Mechanisms
- MECH 322 Mechanical Vibrations
- MECH 323 Mechanical Design I
- MECH 342 Thermodynamics
- MECH 343 Fluid Mechanics
- MECH 344 Heat Transfer
- MECH 361 Control Systems
- MECH 399 Practical Training
- MECH 421 Mechanical Design II
- MECH 441 Energy Systems Laboratory
- MECH 448 Design of Energy Systems
- MECH 480 Senior Project I
- MECH 490 Senior Project II

Major Electives (12 CH)

Students must complete a minimum of 12 credit hours in courses selected from the following list:

- MECH 331 Machining and Forming Processes
- MECH 425 Finite Element Method
- MECH 426 Computer Aided Design
- MECH 427 Mechanics of Composite Materials
- MECH 431 Failure Analysis
- MECH 432 Welding and Casting Technologies
- MECH 433 Modern Machining Techniques
- MECH 435 Corrosion Engineering
- MECH 442 Refrigeration and Air conditioning
- MECH 443 Heat Transfer Systems
- MECH 445 Fluid Systems
- MECH 446 Turbo Machinery
- MECH 447 Heat Engines
- MECH 463 Mechatronics System Design
- MECH 464 Introduction to Robotics
- MECH 471 Selected Topics I
- MECH 472 Selected Topics II
- MECH 483 Operations Management
- MECH 485 Engineering Management
- MECH 486 Quality Analysis and Control
- MECH 499 Independent Study

Free Electives (2 CH)

Students must complete a minimum of 2 credit hours from courses outside the College offering.

COLLEGE OF LAW

Business & Economics Building, 1st Floor (Women's Section)
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Website: <http://www.qu.edu.qa/law>

Dean

Hassan Okour

Assistant Dean for Academic Affairs

Myrna El Fakhry Tuttle

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Associate Professors:

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Assistant Professors:

Mohammed Al-Kulaifi, Mohamed Amar, Mohamed Salem Abou El Farag, Imad Kattan, Hanan Maleeb, Hassan Okor, Zain Sharar, Jon Truby, Bashir Saad Zaghoul

Lecturers:

Francis Botchway, Myrna El Fakhry Tuttle, Ayad Haroon, Nazzal Mansour,

ABOUT THE COLLEGE

The mission of Qatar University College of Law is to provide its students with the finest legal education that shall equip them to unparalleled professional success. The mission of Qatar University College of Law shall extend as well to the production of the highest quality of legal scholarship and the provision of distinctive service to the local and the international community.

DEGREE OFFERINGS

The College of Law offers the following undergraduate degree program:

- Bachelor of Law (LL.B)

ABOUT THE LAW PROGRAM

The law program at Qatar University has an outstanding tradition of uniquely blending knowledge and legal expertise with the acquirement and practice of applicable field skills. In addition to the courses required for students to build their legal capabilities, the program provides many other elective modern and international legal courses, including intellectual property, foreign investments, labor law, international humanitarian law, human rights, international trade law and international criminal law.

BACHELOR OF LAW (LL.B)

Objectives

The major in Law is intended to:

- Enable students to acquire basic legal facts, concepts, principles and theories.
- Uphold students' conception of rights at both national and international levels.
- Prepare students to understand, interpret, analyze and apply legal rules.
- Enable students to acquire drafting and pleading skills.
- Deepen students' commitment to professional legal ethics and values.
- Develop students' ability to practice legal critical thinking and solve problems.

Major Declaration

In order to declare a major in Law, students must satisfy the minimum high school percentage requirement for the major in the semester of admission. In addition, applicants must either successfully complete all requirements of the Foundation Program or satisfy the University's competency requirements.

Law Faculty

Courses offered by the College of Law are instructed by an esteemed group of faculty members who have received their degrees from prominent universities in the U.S.A, UK and France. These professionals have undertaken a vast amount of personal research, preparing and publishing various modern studies that have appeared in many law journals. It is a longstanding tradition of the College to reflect such caliber and ingenuity of our faculty members in the superiority of our students.

The College of Law also benefits from the legal experience of many specialists when it comes to practical matters, particularly in teaching practical requisites, such as law of criminal procedures, civil and commercial contracts, in addition to oil, gas and intellectual property contracts.

Learning Outcomes

The law major provides the opportunity for graduating students to realize the importance of the sovereignty of law and the value of rights. It enables graduates to conduct an analysis of any legal provisions and apply them to relevant situations. These graduates will have the ability to write legal memoranda and draft contracts in a systematic manner. They will be able to negotiate to settle disputes. They will feel confident to profess their cases and plead effectively in front of the judicial bodies, and be able to solve legal problems using different strategies governed by high legal ethics and values in practicing the profession of law.

Opportunities

Graduates from the College of Law may expect to find engaging work opportunities in both the private and public sectors. They have the chance to become judges, to work in the public prosecution, or to be legal researchers for the State's ministries. They are free to pursue status and success in shareholding companies, banks, insurance and

investment firms, oil and gas companies, and many other institutions that may fulfill their personal and academic ambitions. Alternatively, they may choose to start their own law and consulting offices and work independently. There is never a limitation of opportunities available, so that students may continue expanding their focus and expertise, and join the best international universities to pursue their higher studies, or to work as law professors at Qatar University and many other educational institutions.

DEGREE REQUIREMENTS

Major in Law

A minimum of 123 credit hours are required to complete the major in Law, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 63 credit hours of major requirements.
- A minimum of 27 credit hours of major Electives.

Core Curriculum Program (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 202
- ENGL 203
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Any Course in CCP defined social package

Humanities/Fine Arts package (3 CH)

Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Any Course in CCP defined Natural Science/ Mathematics package

Supplemental College/Program core requirements package (9 CH)

- LAWC 101 Introduction to Law
- LAWC 111 Legal Research and Writing I
- LAWC 250 Family Law

Major Requirements (63 CH)

Students must complete the following courses:

- LAWC 213 Sources of Obligations
- LAWC 214 Effects of Obligations
- LAWC 217 Commercial Law
- LAWC 222 Constitutional Law
- LAWC 223 Legal Research and Writing II
- LAWC 302 Advocacy Skills
- LAWC 314 Law of Civil Contracts I
- LAWC 315 Labor Law
- LAWC 316 Law of Procedures in Civil and Commercial Matters I

- LAWC 321 Administrative Law
- LAWC 323 Criminal Law I (General Part)
- LAWC 324 Criminal Law II (Special Part)
- LAWC 329 Commercial Papers and Banking Transactions
- LAWC 339 Public International Law
- LAWC 348 Corporate Law
- LAWC 409 Externship
- LAWC 411 Real Rights
- LAWC 413 Private International Law
- LAWC 422 Law of Criminal Procedures
- LAWC 433 Oil and Gas Law
- LAWC 450 Law of Procedures in Civil and Commercial Matters II

Major Electives (27 CH)

Students must complete a minimum of 12 credit hours in courses where the language of instruction is Arabic and 15 credit hours in courses where the language of instruction is English, to be selected from the following:

Elective Law Courses Taught in Arabic (12 CH):

Students must complete a minimum of 12 credit hours from the following courses:

- LAWC 112 Science of Crimes and Penalties
- LAWC 202 Public Finance and Taxation
- ISLA 201 Principles of Islamic Jurisprudence
- LAWC 351 Administrative Judiciary
- LAWC 353 Real and Personal Securities
- LAWC 354 Law of Public Service
- LAWC 414 Law of Civil Contracts II
- FIQH 403 Fiqh of Inheritance and Bequest
- LAWC 484 GCC Law
- LAWC 499 Legal Ethics
- LAWC 407 Special Topics I

Elective Law Courses Taught in English (15 CH):

Students must complete a minimum of 15 credit hours from the following courses:

- LAWC 102 Human Rights
- LAWC 113 International Humanitarian Law
- LAWC 253 Anglo-American Legal System
- LAWC 333 Law of Electronic Commerce
- LAWC 335 Intellectual Property
- LAWC 345 International Trade Law
- LAWC 443 International Criminal Law
- LAWC 449 Environment Laws and Regulations
- LAWC 451 Alternative Dispute Resolutions
- LAWC 459 Drafting of Business Contract
- LAWC 464 International Investment Law
- LAWC 408 Special Topics II

COLLEGE OF PHARMACY

College of Sciences Building (Women's Section)

Phone: (974) 4403-5333

E-mail: pharmacy@qu.edu.qa

Website: www.qu.edu.qa/pharmacy

Dean

Peter Jewesson

Associate Dean for Academic Affairs

Sherief Khalifa

Associate Dean for Research and Graduate Studies

Mohamed Ibrahim

Assistant Dean for Faculty and Student Affairs

Banan Mukhalalati

Director, Doctor of Pharmacy Program

Kerry Wilbur

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Professors:

Peter Jewesson, Sherief Khalifa, Mohamed Ibrahim

Associate Professors:

Husam Younes

Assistant Professors:

Ahmed Awaisu, Daoud Al Badriyeh, Emily Black, Dalia Hamdy, Maguy El Hajj, Bridget Javed, Ashraf Khalil, Nadir Kheir, Fatima Mraiche, Shankar Munusamy, Sana Sukkari, Kerry Wilbur

Lecturers:

Banan Mukhalalati

Teaching Assistants:

Reem Al Mannai, Alla El Awaisi, Shaima Gharabih, Nahla Jabr, Mohamad Najjar

The mission of the College is to prepare our students to provide optimal pharmaceutical care and advance health care outcomes, to promote research and scholarly activity, and to serve as a pharmacy resource for Qatar, the Middle East and the world. Our vision is to be the leading pharmacy school in the Middle East region.

The specific goals of the program are:

1. To foster integration of knowledge and skills, and to develop our student's general and professional abilities in a systematic ability-based curricula.

2. To integrate knowledge with practical experience to enhance career path and development.
3. To contribute to the professional education of practitioners.
4. To advance pharmaceutical and health outcomes by the conduct of internally and externally funded independent and collaborative research.
5. To provide an intellectual and academic atmosphere that is conducive to recruitment and development of qualified faculty.

DEGREE OFFERINGS

The College of Pharmacy offers the following undergraduate degree programs:

- Bachelor of Science in Pharmacy (BSc (Pharm))

BACHELOR OF SCIENCE IN PHARMACY

Objectives

The specific objectives of the Pharmacy major are:

- To foster integration of knowledge and skills, and to develop our student's general and professional abilities in a systematic, ability-based BSc and PharmD curricula that incorporates the following areas: biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; pharmacy practice; and clinical pharmacy.
- To integrate knowledge with practical experience to enhance career path and development.
- To contribute to the professional education of practitioners.
- To advance pharmaceutical and health outcomes by the conduct of internally and externally funded independent and collaborative research, and to disseminate the results of these efforts at well-recognized local, regional, and international conferences and in high-quality, peer-reviewed journals.
- To provide an intellectual and academic atmosphere that is conducive to recruitment and development of qualified faculty.

Major Declaration

In order to declare a major in Pharmacy, applicants must completely satisfy the minimum high school grade, English proficiency, PCAT, Foundation Program requirements, prerequisite core curriculum and general science course work (minimum of 33 credit hours total) prior to application. Admission is competitive and a limited number of seats are available. Qualified applicants may be invited for an interview with the Admission Committee and only select applicants will be accepted into the major program on the basis of academic and non-academic criteria. Details can be found on the college website at www.qu.edu.qa/pharmacy.

Additional Requirements

Completion of the major in Pharmacy (BSc (Pharm)) requires successful completion of 173 credit-hours of courses as outlined in the study plan. This includes six 4 credit-hour experiential training rotations in select hospital, clinic and community settings.

Learning Outcomes

Graduates of the major in Pharmacy will foster student achievement and mastery of the desired educational outcomes specific to the pharmacy degree, including:

- Care Provider: Pharmacy graduates use their knowledge, skills and professional judgment to provide pharmaceutical care and to facilitate management of patient's medication and overall health needs.
- Communicator: Pharmacy graduates communicate with diverse audiences, using a variety of strategies that take into account the situation, intended outcomes of the communication and the target audience.
- Collaborator: Pharmacy graduates work collaboratively with teams to provide effective, quality health care and to fulfill their professional obligations to the community and society at large.
- Manager: Pharmacy graduates use management skills in their daily practice to optimize the care of patients, to ensure the safe and effective distribution of medications, and to make efficient use of health resources.
- Advocate: Pharmacy graduates use their expertise and influence to advance the health and well-being of individual patients, communities, and populations, and to support pharmacist's professional roles.
- Scholar: Pharmacy graduates have and can apply the core knowledge and skills required to be a medication therapy expert, and are able to master, generate, interpret and disseminate pharmaceutical and pharmacy practice knowledge.
- Professional: Pharmacy graduates honor their roles as self-regulated professionals through both individual patient care and fulfillment of their professional obligations to the profession, the community and society at large. Adopted for the purposes of CCAPP Accreditation from the Association of Faculties of Pharmacy of Canada Educational Outcomes for a Baccalaureate Pharmacy Graduate in Canada. June 3, 2010.

Opportunities

Career opportunities for graduates of the major in Pharmacy are diverse and widely available. The BSc (Pharm) curriculum is designed to prepare first-degree-to-practice graduates for careers primarily in community and hospital settings. Graduates are also expected to be prepared for careers in the pharmaceutical industry, health sciences research, government, pharmacy organizations, and academia. The accredited curricular design represents a hybrid of programs offered in North America, the U.K. and the Middle East.

Graduates of the major in Pharmacy are eligible to apply for the Doctor of Pharmacy (PharmD) program which commenced in 2011. The PharmD curriculum is designed to prepare advanced practitioners, researchers and academicians for virtually any health care setting. BSc (Pharm) graduates who wish a research and academia focussed career will also be eligible to apply for the MSc (Pharm) program which also commenced in 2011. The MSc (Pharm) degree is intended to provide

an opportunity for students to advance their knowledge in specific areas of interest within the pharmaceutical sciences and to prepare them for future research and teaching positions in this discipline. The program will be designed to prepare young scientists for careers in pharmaceutical education, research, industry, and related areas of specialized practice.

For further information, visit our website at www.qu.edu.qa/pharmacy.

DEGREE REQUIREMENTS

Major in Pharmacy

A minimum of 173 credit hours are required to complete the major in pharmacy, including the following:

- A minimum of 33 credit hours in Core Curriculum requirements
- A minimum of 17 credit hours in College Core requirements
- A minimum of 115 credit hours in Major Requirements
- A minimum of 8 credit hours in Major Electives

Core Curriculum Program (33 CH)

Common package (12 CH)

- ARAB 100 Arabic I
- ENGL 202 English Language I – Post Foundation
- ENGL 203 English Language II – Post Foundation
- DAWA 111 Islamic Culture

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined social package

Humanities /Fine Arts package (3 CH)

Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Students must complete a minimum of 3 Credit Hours from the following courses:

- MATH 101 Calculus I

Supplemental College/Program core requirements package (12 CH)

- CHEM 351 Basic Biochemistry
- CHEM 352 Experimental Biochemistry
- CHEM 239 Physical Chemistry (with Lab)
- CHEM 101 General Chemistry I
- CHEM 103 Experimental General Chemistry I

College Core (17 CH)

Students should complete a minimum of 17 credit hours in College Core courses, 6 of which in supporting courses and the remaining 11 credit hours in General Science courses, as detailed below:

A minimum of 6 credit hours of supporting courses including:

- STAT 151 Introduction to Applied Statistics
- BIOL 101 General Biology (with lab)

A minimum of 11 credit hours of General Science courses including:

- BIOM 211 Human Anatomy (with lab)
- BIOM 215 Human Physiology (with lab)
- BIOM 243 Introduction to Pathology
- CHEM 211 Organic Chemistry I (with lab)

Major Requirements (115 CH)

A minimum of 115 credit hours of compulsory courses including:

- PHAR 200 Medicinal Chemistry I
- PHAR 201 Medicinal Chemistry II
- PHAR 210 Pharmaceutics I
- PHAR 220 Foundations of Pharmacology & Pharmacotherapeutics I
- PHAR 221 Foundations of Pharmacology & Pharmacotherapeutics II
- PHAR 230 Pharmacy and Health Care I
- PHAR 231 Pharmacy and Health Care II
- PHAR 240 Professional Skills I
- PHAR 241 Professional Skills II
- PHAR 250 Microbiology for Pharmacy
- PHAR 305 Pharmacy Research, Evaluation and Presentation Skills I
- PHAR 306 Pharmacy Research, Evaluation and Presentation Skills II
- PHAR 310 Pharmaceutics II
- PHAR 311 Pharmaceutics III
- PHAR 316 Pharmacokinetics I
- PHAR 317 Pharmacokinetics II
- PHAR 320 Pharmacology I
- PHAR 321 Pharmacology II
- PHAR 330 Structured Professional Practice Experience I
- PHAR 340 Professional Skills III
- PHAR 341 Professional Skills IV
- PHAR 350 Pharmacy Ethics and Law
- PHAR 359 Interpretation of Lab Data I
- PHAR 360 Interpretation of Lab Data II
- PHAR 361 Patient Assessment Laboratory I
- PHAR 362 Patient Assessment Laboratory II
- PHAR 370 Pathophysiology I
- PHAR 371 Pathophysiology II
- PHAR 380 Pharmacotherapy I
- PHAR 381 Pharmacotherapy II
- PHAR 390 Integrated Case-Based Learning I
- PHAR 391 Integrated Case-Based Learning II
- PHAR 405 Pharmacy Research, Evaluation and Presentation Skills III
- PHAR 406 Pharmacy Research, Evaluation and Presentation Skills IV
- PHAR 410 Pharmaceutics IV
- PHAR 415 Toxicology
- PHAR 420 Pharmacology III
- PHAR 421 Pharmacology IV
- PHAR 425 Pharmacognosy, Alternative/Complementary Treatments
- PHAR 430 Structured Professional Practice Experience II
- PHAR 440 Professional Skills V

- PHAR 441 Professional Skills VI
- PHAR 450 Healthcare delivery systems
- PHAR 470 Pathophysiology III
- PHAR 471 Pathophysiology IV
- PHAR 480 Pharmacotherapy III
- PHAR 481 Pharmacotherapy IV
- PHAR 485 Pediatrics/Geriatrics
- PHAR 490 Integrated Case-Based Learning III
- PHAR 491 Integrated Case-Based Learning IV
- PHAR 505 Pharmacy Research, Evaluation and Presentation Skills V
- PHAR 506 Pharmacy Research, Evaluation and Presentation Skills VI
- PHAR 525 Pharmacoepidemiology & pharmacoconomics
- PHAR 530 Structured Professional Practice Experience III
- PHAR 531 Structured Professional Practice Experience IV
- PHAR 532 Structured Professional Practice Experience V
- PHAR 533 Structured Professional Practice Experience VI
- PHAR 535 Pharmacy Management
- PHAR 590 Integrated Case-Based Learning V

Major Electives (8 CH)

A minimum of 8 credit hours in elective pharmacy courses:

- PHAR 445 Rx Elective I
- PHAR 446 Rx Elective II
- PHAR 545 Rx Elective III

COLLEGE OF SHARIA AND ISLAMIC STUDIES

Sharia Building (Women's Section)

Phone: (974) 4403-4418

E-mail: shareastd@qu.edu.qa

Website: <http://www.qu.edu.qa/sharia>

Dean

Aisha Yousef

Associate Dean for Academic Affairs

Dheen Mohammed

Associate Dean for Student Affairs

Sultan Al-Hashemi

ABOUT THE COLLEGE

The mission of the College of Sharia and Islamic Studies is to produce graduates who know the basic resources of Islam and the principles and methods of Islamic jurisprudence, and who are capable of presenting the message of Islam and able to address contemporary issues through a combination of tradition and modernity.

DEGREE OFFERINGS

The College of Sharia and Islamic Studies offers the following undergraduate Degree programs:

- Bachelor of Dawa and Mass Communication
- Bachelor of Islamic Studies

DEPARTMENT OF DAWA AND ISLAMIC CULTURE

Sharia Building (Women's Section)
Phone: (974) 4403-4454 / 4455
E-mail: lanak@qu.edu.qa
Website: http://www.qu.edu.qa/sharia/dept_dawa.html

Head

Dr. Yousef Mahmood Al-Sidekey

Faculty

Professors:
Abdelsalam Bishr, Deen Mohamed Saheb

Associate Professors:
Zakaryya Abdelhady

Assistant Professors:
Mohammed Aiash, Ameena Al-Ansari, Shafi Al-Hajri, Musaab Al-Idrisi, Hamed Al-Marwani, Basyouny Nehela

ABOUT THE DEPARTMENT

The Department offers a Bachelor of Dawa and Mass Communication degree; its main purpose lies in producing a team of specialized scholars who are capable of presenting the message of Islam as a tolerant, humane, peace-loving, culturally pluralistic and socially dynamic religion. In this way, we are hopeful of serving Qatari society, as well as the Arab-Islamic world and humanity at large.

BACHELOR OF DAWA AND MASS COMMUNICATION

Objectives

- Serving the Islamic world by preparing a team of competent scholars who are able to serve at Centers of Islam and Culture in the western world, where there is a dire need for such people who can relate with the "other" as mentioned in the objectives of the program.
- Produce graduate who are progressive, enlightened, understand their religion and are endowed with tolerance, moderation and open-mindedness. They should be trained to engage in dialogue far from extremist and fanatic tendencies.
- Acquaint them thoroughly with modern trends of thought and their religious and philosophical approaches as well influential social and political tendencies which have gained currency.
- Enable them to understand and appreciate the challenges and demands of time and be capable of accommodating themselves according to its needs.
- Create in them the ability to soundly analyze modern social values and behavioral patterns and take a sensibly objective stance towards them.
- Produce graduates endowed with religious commitment, who work in television and broadcasting corporations as well as internet sites, who are additionally capable of doing research work for Islam.
- Train our graduates to understand Islam through its belief system,

heritage and civilization, and present it in a cultured and acceptable way to the modern mind. In this way they would be expected to safeguard Islamic-Arabic intellectually and in all other aspects.

- Induce in them a positive view and stance towards the culturally "other" and encourage dialogue between civilizations and religions.
- Enable them to present Islam with its wisdom, amenability and adaptability.

Major Declaration

Applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission. A personal interview is also required.

Learning Outcomes

- Understand the nature of different thoughts and philosophies.
- Consider a variety of ways to make decisions and solve problems.
- Preserve and promote pride in Islamic values & ethics.
- Make others know the tolerance of the message of Islam.
- Hold discussions with others in a methodological & contemporary way.
- Discuss intellectual issues in the dialogue of civilizations, as per contemporary trends.
- Use modern, mass-adopted technologies.
- Write scientific research by using diverse tools.

Opportunities

The Program will attract students who are desirous of working in religiously-oriented mass media, in the field of Islamic Dawa in Qatar and abroad, in the field of teaching, in the field of religious and civilization dialogue, and in the field of Islamic Culture. The Program is geared to serve Qatari society by producing graduates who are:

- Teachers of Islamic Sciences
- Religious Specialists
- Religious media figures
- Preachers and Imams for mosques

Major in Dawa and Mass Communication

A minimum of 120 credit hours are required to complete the major in Dawa and Mass Communication, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 39 credit hours of major requirements.
- A minimum of 12 credit hours of major electives.
- A minimum of 24 credit hours in minor requirements and electives.
- A minimum of 12 credit hours of free electives.

Core Curriculum Program (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 200 English Language I for Arts, Shareea and Education
- ENGL 201 English Language II for Arts, Shareea and Education
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science/Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (39 CH)

- ISLA 101 Studies in Islamic Creed
- ISLA 102 Quranic Sciences
- ISLA 104 Sciences of Hadith
- DAWA 113 Philosophy of Sirah
- DAWA 204 Research Methodology
- DAWA 202 Introduction to General Philosophy
- DAWA 203 Principles & Methodology of Dawa
- DAWA 301 Contemporary issues of Fiqh
- DAWA 302 World Religions (Comparative Studies)
- DAWA 303 Comparative Mysticism
- DAWA 401 Area Studies
- DAWA 402 World Religious Thought
- DAWA 403 Graduation Project (Capstone)

Major Electives (12 CH)

Students must complete a minimum of 12 credit hours in courses selected from the following list:

- DAWA 114 Modern techniques of DAWA
- ISLA 201 Principles of Islamic Jurisprudence
- ISLA 106 Fiqh of Worship
- DAWA 117 Ethics
- DAWA 214 Textual Study of the Quran
- DAWA 205 School of Islamic thought
- DAWA 206 International Organization & Human Rights
- DAWA 207 Islamic Institutions
- ISLA 308 Contemporary Intellectual Trends
- DAWA 305 Modern Philosophy
- DAWA 306 History of Religion
- DAWA 404 Sociology of Religion
- DAWA 405 Independent Studies

Minor in Mass Communication (24 CH)

Students must complete the minor in Mass Communication

Free Electives (12 CH)

Students must complete a minimum of 12 Credit Hours in free electives from courses outside the major

DEPARTMENT OF ISLAMIC STUDIES

Sharia Building (Women's Section)
Phone: (974) 4403-4418 / 4473
E-mail: shareastd@qu.edu.qa
Website: <http://www.qu.edu.qa/sharia/>

Head

Dr. Haya Thamer Albadi

Faculty

Professors:
Mohamed Abdessalam, Mohamed Abu Assi, Ali Almuhamadi, Abdelhakim Assaadi, Alhaj Doush, Saleh Karim, Mohamed Shbeer

Associate Professors:
Sheika Alatia, Hessa Algazal, Adnan Alhamaoui, Abderrahman Ali, Abdelhamid Brashek, Abdelhakim Klifi, Abduljabar Saeed, Haya Thamer

Assistant Professors:
Issa Abdullah, Maarouf Adam, Ebrahim Alansari, Osama Alashkar, Sultan Alhashemi, Mohamed Alsheeb, Naouar Alshelly, Hassan Yeshou

About the Department

The Department offers a Bachelor of Islamic Studies degree, and its main purpose lies in producing a team of specialized scholars who are capable of presenting the message of Islam and able to address contemporary issues through a combination of tradition and modernity.

BACHELOR OF ISLAMIC STUDIES

Objectives

The Islamic Studies major aims to help students:

1. Promote the right understanding of Islam as a method of life away from extravagance and negligence.
2. Deal with basic resources of Islam and legal texts according to the original right device, and its application in the real life.
3. Develop balanced critical thinking and research, through different methods.
4. Positively connect with the heritage of Islamic thoughts, through different schools of jurisprudence, theology, Sufism and philosophy. These will benefit the students in addressing contemporary life issues.
5. Thoroughly understand the Islamic History and development of Islamic Civilization and its human achievements.
6. Promote good manners regarding differences, deal objectively with different opinion, encourage dialogue between civilizations, and realize effective coexistence under multiculturalism.
7. Acquire modern means of communication and information technology to address contemporary issues.
8. Logically face ideological and behavioral deviances, and wrong judgments.
9. Become advisors and researchers who will meet the needs of society, by spreading Islamic thought and values.

Major Declaration

Applicants must satisfy the minimum high school percentage requirement for the major in the semester of admission.

Learning Outcomes

At the end of the program, the student should:

1. Know the basic resources of Islam and the principles and methods of Islamic jurisprudence.
2. Share noble humanitarian Islamic values.
3. Scientifically analyze Islamic legal texts.
4. Know and scientifically devise Islamic Rulings and combine tradition and modernity.
5. Positively use the Scientific Islamic Heritage to address contemporary issues.
6. Positively interact with others and refrain from excessive and extreme behavior.
7. Write scientific research in different branches of Islamic knowledge and have the necessary language tools.
8. Know intellectual and cultural Islamic heritage.
9. Combine tradition and modernity.
10. Know and critically deal with Western efforts in the field of Islamic Studies.

Opportunities

This Islamic Studies major is geared to serve the Qatari society by producing graduates who are:

- Teachers of Islamic Studies.
- Workers in Islamic courts and the Ministry of Justice.
- Religious media figures.
- Preachers and Imams in the Ministry of Islamic Affairs.
- Workers in the Supreme Council for Family affairs.
- Workers in Research Institutions.
- Workers in Islamic Financial Institutions.

DEGREE REQUIREMENTS

Major in Islamic Studies

A minimum of 120 credit hours are required to complete the major in Islamic Studies, including the following:

- A minimum of 33 credit hours in core curriculum requirements.
- A minimum of 42 credit hours of major requirements.
- A minimum of 9 credit hours of major electives.
- A minimum of 24 credit hours of concentration requirements and electives.
- A minimum of 12 credit hours of free electives.

Core Curriculum Program (33 CH)

Common package (15 CH)

- ARAB 100
- ARAB 200
- ENGL 200 English Language I for Arts, Shareea and Education
- ENGL 201 English Language II for Arts, Shareea and Education
- DAWA 111

Social/Behavioral Sciences package (3 CH)

Courses in CCP defined Social/Behavioral Sciences package

Humanities /Fine Arts package (6 CH)

Courses in CCP defined Humanities/Fine Arts package. Students must complete a minimum of 3 Credit Hours from courses listed in the Qatar and Gulf History Sub-package, which is part of the Humanities/Fine Arts package.

Natural Science/Mathematics package (3 CH)

Courses in CCP defined Natural Science / Mathematics package

General Knowledge package (3 CH)

Courses in CCP defined General Knowledge package

General Skills package (3 CH)

Courses in CCP defined General Skills package

Major Requirements (42 credit hours)

- ISLA 101 Studies in Islamic creed
- ISLA 102 Quranic sciences
- ISLA 103 Quranic Exegesis
- ISLA 104 Sciences of Hadith
- ISLA 105 Analytical Hadith
- ISLA 106 Fiqh of worship
- ISLA 201 Principles of Islamic jurisprudence
- ISLA 202 Logic and research methodology
- ISLA 203 Fiqh of transactions
- ISLA 204 Sufism and Ethics
- ISLA 301 Contemporary Methods in I.S
- ISLA 302 Family law
- DAWA113 Philosophy of Sirah
- ISLA 401 Graduation Project

Major Electives (9 credit hours)

- ISLA 207 Analytical Exegesis
- ISLA 210 Thematic Hadith
- ISLA 308 Contemporary Intellectual Trends
- ISLA 205 Intellectual Foundations of Islamic Civilization
- ISLA 209 Islamic Studies in Contemporary Thought
- ISLA 306 Studies in World Religions
- ISLA 206 The objectives of the Sharia
- ISLA 107 Precepts of Fiqh
- DAWA 207 Islamic Institutions
- ISLA 307 Islamic Constitutional and Administrative Law
- ISLA 211 Islamic Studies on the legislative and Legal thought
- ISLA 212 Islamic Penal Code

Concentration in Sharia (24 credit hours)

Students must complete a minimum of 15 CH in concentration requirements and a minimum of 9 CH in concentration electives

Sharia Concentration Requirements (15 CH)

- FIQH 303 Fiqh of Zakat and Awqaf
- FIQH 304 Islamic Ruling and Implications
- FIQH 305 Introduction to Islamic Fiqh
- FIQH 402 Companies, Documentation and Donations
- FIQH 403 Fiqh of Inheritance and Bequest

Sharia Concentration Electives (9 CH)

- FIQH 319 Fiqh of Procedures
- FIQH 415 Islamic International Law
- FIQH 418 Contemporary Ijtihad
- FIQH 425 Al-Qiyas (Analogy)
- FIQH 325 The Philosophy of Islamic Law
- FIQH421 Fiqh of Evidence

Concentration in Usuluddin (24 credit hours)

Students must complete a minimum of 15 CH in concentration requirements and a minimum of 9 CH in concentration electives

Usuluddin Concentration Requirements (15 CH)

- USUL 301 Principles of Exegesis
- USUL 302 Islamic Theology
- USUL 335 Contemporary Studies in Quran and Sunna
- USUL 403 Methods of AL-Muhaditheen Theoretical and Practical
- DAWA 302 World Religions (Comparative studies)

Usuluddin Concentration Electives (9 CH)

- USUL 308 Thematic Hadith
- USUL 405 Miracle of the Quran
- USUL 407 Thematic Exegesis
- USUL 409 Islamic Philosophy
- USUL 439 Contemporary Muslim World





CHAPTER 13 COURSE LISTINGS

ACCT 110 **Financial Accounting** **Credits: 3**

This course introduces financial accounting for various business entities. Topics covered include accounting concepts and principles based on generally accepted accounting principles (GAAP). Emphasis will be on analyzing, recording, classifying, and communicating information, including the preparation of financial statements.

Prerequisite
(COMP 002 OR IC3 2350 OR CPT2 060 OR COMP F003 OR MATH 119)
AND (ENGL 004 OR ENGL 202 OR IBT 061 OR T02 500 OR IELT 5.5 OR
CBT 173 OR ENGL F073)

ACCT 111 **Principles of Accounting I** **Credits: 3**

Principles of accounting and the relationship between accounting and other disciplines are introduced. Topics examined include accounting concepts, principles, and policies according to generally accepted accounting principles (GAAP). The approach of the balance sheet equation will be introduced as well as types of journals, ledgers, and financial reports.

Prerequisite
ENGL 198 AND MATH 119

ACCT 116 **Managerial Accounting** **Credits: 3**

This course provides an introduction to management accounting as it applies to the use of accounting information in planning and controlling business operations. Students are introduced to cost terms, cost behavior, cost-volume-profit analysis, variable costing, budgeting, and relevant costs for decision making.

Prerequisite
ACCT 110 OR ACCT 111

ACCT 221 **Intermediate Accounting I** **Credits: 3**

Essential financial resources in different types of corporations, with special emphasis on preparation of working capital statements and cash flow statements; accounting practices related to equity and various types of assets, and addresses the standards related to financial disclosure.

Prerequisite
ACCT 116 OR ACCT 112

ACCT 222
Intermediate Accounting II
Credits: 3

Accounting procedures related to various types of liabilities, including issuing securities and bonds, training and practicing on recording these procedures in the corporation's records and journals.

Prerequisite
ACCT 221

ACCT 331
Cost and Management Accounting
Credits: 3

This course provides an in-depth study of cost/management accounting concepts and principles as they apply to manufacturing and service environments. Students are introduced to cost accumulations and assignments using traditional and contemporary cost accounting approaches, and budgeting. The use of accounting information in planning, controlling, and evaluating business decisions both short- and long-term to be covered.

Prerequisite
ACCT 116 OR ACCT 112

ACCT 333
Auditing I
Credits: 3
Addresses the concepts and definitions related to auditing. Special attention is given to the tasks of the internal and external auditors in private and public organizations; the Auditors' Code of ethics, engagements, and the legal liabilities to clients and third parties. Evaluation of Internal Control (IC) systems, types of auditors' reports, the general auditing standards (GAS), and tests to be applied during the implementation of the auditor's program are also covered. Case studies will be an integral part of this course.

Prerequisite
ACCT 116 OR ACCT 112

ACCT 411
Government Accounting
Credits: 3
Compares the accounting information systems in public economic units with those in the private business enterprises. The general framework of the State Budget will be addressed, in addition to the accompanying detailed timetable needed for its special preparation. Students will be trained to apply the basics of recording the financial transactions in the governmental administrative units given the internal control system related to the use of public funds.

Prerequisite
ACCT 116 OR ACCT 112

ACCT 412
Managerial Accounting
Credits: 3
Use of accounting information in a rational decision-making process in both the short term and the long run. Marginal contribution, cost-volume-profit (CVP), divisional performance analysis, and budgeting planning and control will be addressed.

Prerequisite
ACCT 325

ACCT 413
Auditing II
Credits: 3
Applying the relevant aspects of the internal control structure components to the revenue cycle as well as expenditure. Emphasis will be laid on materiality, risk, and audit strategy. The student will be trained on how to design and execute the audit programs related the balance sheet items.

Prerequisite
ACCT 333

ACCT 415
Cost Accounting II
Credits: 3
Cost accounting process systems, cost accounting reports, calculating the costs of each process, and the average cost per cost element (raw material, labor, and overhead). Additional topics examined are the standard cost system, variance analysis for all cost elements, the cost of byproducts and how to spilt the common cost among different products. The cost construction system, as well as preparing the cost's reports will also be addressed.

Prerequisite
ACCT 325

ACCT 418
Advanced Accounting
Credits: 3
This course aims at covering the conceptual and practical aspects of accounting in financial accounting and reporting for corporations. The main topics contain the following: business combination, consolidated financial statements, foreign translation of financial statements of foreign affiliates, and corporate reorganization.

Prerequisite
ACCT 221

ACCT 421
Accounting Information Systems
Credits: 3
Concepts, nature, and range of information systems, particularly

the Accounting Information System (AIS). The requirements of an acceptable AIS, as well as the cost/benefit approach will be addressed. Relationship between AIS and other information systems within the organization; flowcharts, computer applications, and other tools will be studied as elements of AIS.

Prerequisite
ACCT 116 OR ACCT 112

ACCT 424
International Accounting
Credits: 3
Presenting accounting issues related to international business transactions, harmonization of accounting principles, and comparative accounting systems. Topics covered include changes of the accounting environments, accounting of changing prices, international financial statement analysis, auditing for global operations, taxation, managerial accounting issues, and the International Accounting Standards (IAS).

Prerequisite
ACCT 116

ACCT 428
Financial Statements Analysis
Credits: 3
Performance evaluation of projects from an accounting and financial perspective; use time series and trend analysis in deriving results from financial and cash flow statements. Special attention is given to Balanced Performance Measurements (BPM).

Prerequisite
ACCT 116 OR ACCT 112

ARAB 043
Arabic Language Basics
Credits: 3

ARAB 044
Arabic Language Basics - Advanced
Credits: 3

ARAB 100
Arabic Language I
Credits: 3
The course aims to provide students the important skills to communicate in Arabic; listening, speaking and reading, with attention to writing skills in relation to each. This is done through content that includes a variety of topics related to Contemporary Arabic, through deep analysis of linguistics and literary texts. The course has been introduced in an interactive learning environment based on: 1) student activities, 2) Developing student skills, 3) learning and collaborative methods, 4) Communication skills for self-expression and ideas in different ways, 5) Solving problems through critical thinking skills and creativity, and 6) The absorption of ideas in different contexts. The

assessment process uses a variety of tools to measure the attainment of student learning outcomes.

ARAB 107
Arabic Language Basics
Credits: 3
This course is designed to introduce learners of Arabic as a second/foreign language to the basic structures of Arabic and to its uses in common situations of everyday communication; through a content which relates to every-day familiar situations and some apparent aspects of the Arab culture. The course aims to enable the Non-Native Speaker student to acquire fundamental working knowledge of the Arabic Language through interactive exercises and drills. This is done within a framework of the essentials of syntax and morphology in a student-centered learning environment, in order to be able to successfully handle a number of interactive, task-oriented, and social situations.

ARAB 110
Intro to Literature & Language
Credits: 3
This course aims at building students' familiarity with and competence in Arabic literature in its various genres, so as to increase their ability to appreciate literature and to develop their awareness of its concepts through the study of poetry and short story.

ARAB 200
Arabic Language II
Credits: 3
The course aims at enabling the student to master the skill of the Arabic writing, and scientific and professional communication. These aims will be realized by the course content, which combines the basics of the language and linguistic rules to regulate the methods of writing, and experience on the skills of the Arabic writing in the following forms: 1) Functionally and creatively, 2) Traditionally and contemporary, and 3) Descriptively and analytically. Furthermore, the course aims at handling written problems by self-learning and collaborative environments that develop creative skill, dialogue, discussion, and critical thinking. It will also promote methods of written expression toward both the self and career, including help in the acquisition of knowledge, and building cultural awareness and good citizenship. The performance of the student will be evaluated through the various assessment tools that focus on the students' writing skills, in order to achieve the desired learning outcomes.

Prerequisite
ARAB 100 Concurrent OR (ARAB 105 Concurrent AND ARAB 106 Concurrent)

ARAB 201
Arabic Language Basics - Advanced
Credits: 3
This course aims to enable the students of non-speakers of Arabic to acquire the core skills in Contemporary Arabic, represented by listening,

speaking, reading, and writing. These skills at this level are expected to qualify them to communicate in the daily life situations. This course also helps students to express themselves orally and in writing on familiar topics. This course is based on an active learning environment, through authentic sources, audio-visual, educational and culture material. A variety of assessment tools will be implemented.

ARCH 110
Principles of Architectural Design
Credits: 2

Introduction to design principles and the graphic techniques and methods in architectural design and presentation; the relationship between art, design, and architecture; drawing tools and materials; visual perception, Gestalt perception; visual design fundamentals in architecture; expression in architecture; the building program; the social imagery of the building type; series of exercises involves an understanding of principles that include figure/ground, center of gravity, similarity, nearness, proximity, symmetry, scale, order, dominance, image-ability, legibility, identity, diversity, unity.

ARCH 111
Architectural Graphics I
Credits: 2

Principles of architectural graphics; spatial relationships of points, lines, planes, and solids and voids; architectural drafting conventions; orthographic projections; shades, shadows and perspective techniques; series of exercises advances basic graphic skills emphasizing two and three dimensional thinking including drawing of floor plans, cross sections, graphic diagrams; free hand sketching; model making techniques.

Prerequisite
ARCH 110

ARCH 211
Architectural Graphics II
Credits: 2

Introduction to procedures in computer-aided design and graphics used in producing 2D plans and sections, and three-dimensional electronic models associated with architectural design and building construction; series of exercises develops skills in CAD drafting in 2D and 3D, and image processing; presentation packages are utilized for the production, management, rendering and presentation.

Prerequisite
ARCH 111

ARCH 212
Architectural Design Studio I
Credits: 3

Introduction to project design; simple but complete architectural design projects that place emphasis on space, order, context, and form; projects are hypothetical in nature in real sites; concept development; space definition; contextual constraints; site design; architectural

programming; materials; and technology; explorations of functional, aesthetic, and structural aspects of buildings; developing a complete a set of graphics for architectural design projects.

Prerequisite
ARCH 211

ARCH 221
Engineering Mechanics
Credits: 3

Fundamental concepts and principles of mechanics and force systems; Centroids and centers of gravity, moments of inertia; concepts of free-body-diagram; principles of equilibrium of particles and rigid bodies in two and three dimensions; external forces and concept of stress; stresses and strains; axial loading and axial deformation; Hook's law, stresses due to temperature; torsion; pure bending; transverse loading and shear stresses in beams and thin walled members; principal stresses and strains.

Prerequisite
MATH 102

ARCH 222
Analysis of Structures
Credits: 3

Structural engineering; calculation of reactions for statically determinate beams, frames, trusses, and composite structures; force calculation in trusses; shear and moment diagrams for beams and frames; deflection calculations; introduction to arches.

Prerequisite
ARCH 221

ARCH 223
Surveying for Architecture
Credits: 3

Introduction; measuring units, significant figures, direct distance measurements with tapes, tape corrections; electronic distance measurements; levels and leveling; longitudinal profiles and cross sections; contouring; area and volume computations; the theodolite and angular measurements; optical distance measurements; rectangular coordinates; traverse surveys and computations; mapping.

Prerequisite
MATH 211

ARCH 260
Human-Environment Interactions
Credits: 2

Introduction to design and architecture as discipline, a profession and role and responsibilities of the architect towards the society within its cultural and physical context; human factors involved in design; the dialectic relationships of social, psychological, behavioral, technical/technological and cultural impacts on the creation of built

environments; design, culture, architecture and human sciences, psychological processes; human needs and how the social sciences can contribute to architectural design and practice; human interaction with the spatial environment; design components of the built environment; the process of designing built environments; ethical implications for future architects and designers.

Prerequisite
ARCH 110

ARCH 261
History and Theory of Architecture I
Credits: 2

Chronological development of architecture from pre-history, to Egyptian, Greek, and Byzantine; the development of structural systems, materials, construction and other building systems in the civilizations of Middle and Near East; the path of the principal architectural thoughts and events which led to the development of major architectural and town planning theories; starting with Vitruvius' "Ten Books of Architecture", to the European Art Nouveau movement (1890-1910) and the early influence of reinforced concrete. Concepts of architectural space, form and vocabulary, as well as major town planning concepts and theories from these periods are discussed and critically analyzed.

Prerequisite
ARCH 260

ARCH 311
Architectural Design Studio II
Credits: 3

Systematic design procedures; complex architectural design projects that place emphasis on analysis of contextual constraints, programmatic requirements, and problem solving processes in architectural design; projects simulate real life conditions with real, visitable sites; activities and objectives, problem definition; generating alternatives; evaluation; selection of solution and communication of project design; considerations of behavioral and cultural aspects, user requirements, building function, construction materials and systems, environmental constraints and climatic influences are emphasized in the projects.

Prerequisite
ARCH 212

ARCH 312
Architectural Design Studio III
Credits: 3

The comprehensive nature of architectural design; complex and challenging architectural and urban design projects that involve real, visitable sites and possibly real clients; project emphasize program development; definition of client needs; comprehensive site analysis of real urban context; introducing infill complex projects the serve a community; developing criteria for design, intervention strategies; generating alternatives; evaluation of alternatives; selecting and developing a final solution; considerations of project contextual

constraints and all factors involved in trade-off thinking processes.

Prerequisite
ARCH 311

ARCH 313
Community and Neighborhood Design Workshop
Credits: 2

Introduction to community design theories and techniques, participatory design; collaborative design processes; community involvement in decision making; understanding community needs and resources; housing types; new understanding neighborhood planning and design theories; gated communities; housing design; housing types; community support; projects involve the use of community information in establishing collaborative design process; and developing solutions based on community needs and preferences.

Prerequisite
ARCH 311

ARCH 321
Structural Design I
Credits: 3

Limit-state design of reinforced concrete structures; loads and load combinations acting on reinforced concrete structures; design of beams; deflections and cracks; design and analysis of floor systems (slabs); and design of columns; design of stairs.

Prerequisite
ARCH 222

ARCH 322
Geotechnical Engineering
Credits: 3

Soil and rock composition; soil-water system; classification of soil; stress distribution in soil; compressibility of soil; settlement analysis for shallow foundations; soil compaction; shear strength of soil; types of foundations; soil bearing capacity for shallow foundations; introduction to deep foundations, excavation and retaining structures; subsurface investigation.

Prerequisite
ARCH 221

ARCH 323
Engineering Fluid Mechanics
Credits: 3

Fluid statics; continuity, momentum, and energy principals via control volumes; ideal and real fluid flow; similitude and dimensional analysis; closed-conduit flow, pumps; study of plumbing systems and fixtures including waste water, water supply, and venting systems; applications to engineering problems.

Prerequisite
ARCH 221

ARCH 324
Structural Design II
Credits: 2

Loads on steel structures; structural systems and general layout; design of tension members, compression members, columns, beams, and beam-columns; connections; corrosion protection of steel structures; cost estimate of steel structures; introduction to composite steel-concrete constructions; reinforced concrete framed structures; reinforced concrete foundation.

Prerequisite
ARCH 321

ARCH 331
Heating, Ventilation & Air Conditioning
Credits: 3

Study of the fundamental principles and engineering procedures for the design of heating, ventilating, and air conditioning systems; HVAC system characteristics; Psychrometric use applications; system and equipment selection; duct design and layout; attention is given to energy conservation techniques and computer applications.

Prerequisite
ARCH 323

ARCH 332
Computer Aided Arch Acoustics, Light
Credits: 3

Acoustical design for good hearing conditions and noise control; construction details, materials, acoustical properties of room shapes; sound absorption, transmission; theory and application of lighting in buildings; electric light sources, related equipment circuitry; illumination design procedures; day-lighting. exposure to a broad spectrum of modeling software packages; utilizing computers in lighting analysis and design, and room acoustics evaluation.

Prerequisite
ELEC 201

ARCH 341
Materials and Methods for Building Construction I
Credits: 2

Elements and properties of construction materials and components; fabrication and construction technologies, methods, and processes of different types of materials; properties of building materials; wood, masonry, concrete, steel and glass construction techniques; on-site and off-site processes; interior and exterior finishes; assemblies, detailing and building codes. Lab assignments involve the utilization of Computer Aided Design and Drafting software packages.

Prerequisite
MATH 102 AND ARCH 212 AND CHEM 101

ARCH 342
Materials and Methods for Building Construction II
Credits: 2

Continuation of elements and properties of construction materials and components; fabrication and construction technologies, methods, and processes of different types of materials; labs place emphasis on developing construction drawings and details of buildings. Lab assignments involve the utilization of Computer Aided Design and Drafting software packages.

Prerequisite
ARCH 341

ARCH 350
Thermodynamics
Credits: 3

Introductory examples of energy conversion systems; basic concepts and definitions; properties of pure substance, ideal gases, work and heat; the first law of thermodynamics and its application to systems and control volumes; the second law of thermodynamics and the concept of efficiency; the entropy and irreversibility; selected applications to engineering problems including vapor-power cycles, refrigeration cycles and simple gas turbine cycles.

Prerequisite
MATH 211

ARCH 360
History and Theory of Architecture II
Credits: 2

Chronological development of architecture from the Early Christian period through the Gothic, to the Renaissance and Baroque periods; from the Baroque period through the Industrial Revolution to the Modern movements; theoretical foundations of 20th century trends in architecture, in the light of worldwide historical developments and their social and technological influences; Modern movement and developments leading to the Post-Modern architectural aesthetics.

Prerequisite
ARCH 261

ARCH 399
Practical Training
Credits: 3

Practical training involves two options offered to Architectural Engineering students based on departmental approval
Option A: Supervised 8-week training period at an approved engineering entity (consulting, contracting, industrial, government), intended to provide students with hands-on experience at the work place.
Option B: Supervised 8 weeks of intensive studio work a summer session that involves a field trip and an architectural design workshop that is jointly organized by the department and other departments of

one of the European Universities
In either option, evaluation is based on: daily performance, supervisors input, students report, and a short presentation. Students are required to submit comprehensive summer training reports together with the necessary proof of documents.

ARCH 400
Senior Project I
Credits: 3

In Senior Project, emphasis is placed upon program development, response to contextual constraints; and deep involvement in articulating a complete design solution reaching to a high degree of practicality and implement-ability.

Prerequisite
ARCH 312

ARCH 401
Senior Project II
Credits: 3

In Senior Project II, emphasis is placed upon transforming the architectural design schematic drawings into construction documents, including the development of system design and analysis techniques, such as integrated design of structural, mechanical, and electrical and environmental systems. Project outcomes are developed with consideration given to social, cultural, ethical, environmental, accessibility, safety, and reliability factors.

Prerequisite
ARCH 400

ARCH 411
Introduction to Interior Architecture
Credits: 2

Introduction to concepts of interior space, color, color schemes in interior spaces; natural and artificial lighting; material selection, furnishing styles; application on home, commercial, and office interiors; way-finding systems and signage design; impact of interior space qualities on human comfort, behavior, and attitude; series of exercises on detailing interior spaces including rendering, coloring, and furnishing; developing interior schematic design packages.

Prerequisite
ARCH 312

ARCH 412
Introduction to Urban Design and Landscape Architecture
Credits: 2

Introduction to history and theory of urban spatial design; chronological development of urban spaces throughout history; urban space design; human and public activities; installation art in public spaces; principles

of landscape design; site design problems, incorporating a mixture of cultural, environmental, and historical topics provide a framework for students to develop their analytical skills, communication techniques, and general understanding of public space design.

Prerequisite
ARCH 312 AND ARCH 360

ARCH 413
Overview of City and Regional Planning
Credits: 2

History of urban planning; urban and regional theory and analysis; growth management; smart growth; new urbanism; management of regional growth and modeling; land use planning methods; urban engineering, infrastructure, transportation, and environmental planning and assessment; sustainable urban development; regional economic analysis and development.

ARCH 431
Building Energy Conservation Technologies
Credits: 2

Identification of the optimal energy performance achievable with various types of buildings and service systems; reduction of infiltration; control systems and strategies to achieve optimal energy performance; effective utilization of daylight, heat pumps, passive and active solar heaters, heat storage and heat pipes in new and old buildings.

ARCH 441
Construction Engineering
Credits: 2

Introduction to the construction industry; time and cost processes; introduction to project budgeting; quantity take off; equipment processes; safety of construction sites; computer applications in construction engineering.

Prerequisite
ARCH 341

ARCH 442
Contracts Administration
Credits: 2

Law of contracts; formation principles; performance of breach of contract obligation; termination of agreement; pre-qualification; contract for construction and engineering services; specifications; professional liability; insurance and bonds; legal aspects in construction and construction claims; arbitration of disputes; local regulations.

Prerequisite
ARCH 441

ARCH 443
Project Budgeting
Credits: 2

Concepts of pricing and markup, development of historic costs, life cycle

costing, change order and conceptual estimating, and emphasizing microcomputer methods; project budgeting techniques; balance sheet and financial management; quantity surveying including cost estimating for large projects and other engineering works.

Prerequisite

ARCH 341

ARCH 444 Project Planning and Scheduling Credits: 2

Introduction to Project Management Body of Knowledge (PMBOK), network methods of project planning & scheduling, such as AON, PERT, bar-charting, line-of-balance, and CPM techniques. Project compression analysis and control; computer applications in project management; the laboratory component of this course covers modern project management tools and techniques on the personal computer.

Prerequisite

ARCH 341

ARCH 445 Management Information Systems in Construction Credits: 2

Understanding the potential, advantages, and difficulties associated with using Information Technology to gain a strategic advantage in the building industry; knowing the various components of any Information System; selection of suitable hardware and software for a certain design or construction task; development and implementation of buildings-oriented databases; use of the Internet to develop web pages for project information.

Prerequisite

ARCH 332

ARCH 460 Islamic Architecture in the Arab World Credits: 2

Chronological development of Islamic civilization and architecture from Umayyad in Syria and Iraq, through the classical and late classical periods in Spain, North Africa, the Middle East, including Mesopotamia, Fatimid, Ayyubid, Mamluk, and Ottoman architecture; influences of Islamic architecture on other architectural styles of the same periods and vice versa; Islamic art, geometry, calligraphy and variations in cultural attitudes in architectural styles; development and evaluation of contemporary architecture in Muslim communities is introduced.

Prerequisite

ARCH 360

ARCH 461 Qatari Architecture and Contemporary Practices Credits: 2

Comprehensive understanding of latest developments in the

Architecture of Qatar; highlights of traditional Qatari architecture; relationship to developments in the GCC member countries and the global context; impact of trans-national practices; architectural practice in Qatar; the architectural and urban scene of Qatar; series of research reports on current projects and interviews with principals of Qatari architects.

Prerequisite

ARCH 360

ARCH 462 Trends in Contemporary Architecture Credits: 2

Exploration of emerging ideas, concepts, and methods in architecture and urban design; building types for special populations including children, seniors, under-represented communities, people with special needs; sustainable and green architecture, sustainable communities; smart growth and new urbanism; critical regionalism; urban conservation and renewal; series of research reports on current projects involving intensive library and online research.

Prerequisite

ARCH 360

ARCH 463 Facility Management Operation, and Maintenance Credits: 2

Principles of facility management (FM); facility management skills and functions; planning, administration and space utilization; human and environmental factors, health, safety, security; building support services; building operation and maintenance; approaches and strategies for effective management and operation of facilities; information systems in facility management.

Prerequisite

ARCH 312 AND ARCH 331

ARCH 464 Post Occupancy Evaluation of Buildings Credits: 2

Introduction to post occupancy evaluation (POE) and facility performance evaluation (FPE); the building performance concept; performance measurement; elements of building performance: spatial, technical, behavioral, and technological criteria; indoor environmental quality; types and levels of effort of POE; planning and implementing post occupancy evaluation studies.

Prerequisite

ARCH 260

ARCH 491 Independent Study Credits: 3

Skill development and training in various topics according to student

progress. Topics may include theoretical issues and or exercises and projects performed individually in which the student develops critical thinking and technical writing in architecture, and research skills.

ARCT 100 Independent Study Credits: 3

Skill development and training in various topics according to student progress. Topics may include theoretical issues and or exercises and projects performed individually in which the student develops critical thinking and technical writing in architecture, and research skills.

ARCT 110 Graphic Communication I Credits: 3

Introduction to graphics, skill development in manual architectural drawing, and related principles of architectural graphics; spatial relationships of points, lines, planes, and solids and voids; architectural drafting conventions; orthographic projections; principles of shades, shadows and perspective techniques. A series of exercises is introduced to advance basic graphic skills and emphasize two- and three-dimensional thinking, including drawings of floor plans, cross sections, graphic diagrams; free hand sketching; model making techniques.

ARCT 111 Graphic Communication II Credits: 3

Introduction to procedures in computer-aided design and graphics used in producing 2D plans and sections, and three-dimensional electronic models associated with architectural design and building construction; series of exercises develops skills in CAD drafting in 2D and 3D, and image processing; presentation packages are utilized for the production, management, rendering and presentation.

Prerequisite

ARCT 110

ARCT 120 Intro to Architecture & Allied Arts Credits: 3

Introduction to architecture and allied arts. It involves theory and exercise applications of basic design and visual principles, including architectural form, painting, graphics, sculpture, music, drama, visual culture. Topics include the ontology of architecture; Composition: design and elements of composition. Form: Gestalt perception, visual properties of form, regular and irregular. Space: definition, elements defining space, organization of form & space. Photography: technical and architectural aspects. Proportion and Scale in architecture and art forms. Fundamentals of architecture: convenience, durability, aesthetics.

ARCT 210 Perspective, Shade and Shadow Credits: 3

Introduction to sciagraphy and definition of shade and shadow in

architecture. Shadow of planes, Shadow of volumes "Application of shade and shadow on the Architectural Drawings". Introduction to perspectography. Drawing perspective with two vanishing points; Drawing perspective using measuring points; Presentation techniques of perspective; Application for a fully presented perspective; Interior perspective and Sectional perspective; exercises involve manual and computer applications.

Prerequisite

ARCT 110

ARCT 211 Architectural Design Studio I Credits: 4

Introduction to project design; simple but complete architectural design projects that place emphasis on programmatic aspects: space, order, context, and form; projects are hypothetical in nature in real sites; concept development; space definition; spatial requirements; adjacency requirements; contextual aspects.

Prerequisite

ARCT 111

ARCT 212 Architectural Design Studio II Credits: 4

Designing simple but complete architectural design projects; involves analytical thinking in design; response to site constraints; site design; architectural programming; materials; technology; explorations of functional, aesthetic, and structural aspects of buildings; developing a complete a set of graphics for architectural design projects.

Prerequisite

ARCT 211

ARCT 220 Climate and Architecture Credits: 3

Introduction to the various forces that shape the human environment with a particular focus on ecological determinants; Integration and internalization of environmental considerations aimed toward sustainable environments; Various issues are studied, including derelict land (brown fields), successful use of open spaces, indoor environmental qualities, as well as economic derivatives and human health matters; Natural Elements (air, sun and water) are examined as they interact with human needs within buildings or building complexes.

Prerequisite

PHYS 191

ARCT 221
History and Theory of Architecture I (Early and Western Civilizations)
Credits: 3

Chronological development of architecture. The first part includes pre-history, Egyptian, Greek, Byzantine and the modern times; the development of structural systems, materials, construction and other building systems in the civilizations of the Middle and Near East; the path of the principal architectural thoughts and events which led to the development of major architectural and town planning theories; starting with Vitruvius' "ten Books of Architecture", to the European Art Nouveau movement (1890-1910) and the early influence of reinforced concrete. The second part of the course includes evolution from the Early Christian period through the Gothic, to the Renaissance and Baroque periods; the Industrial Revolution to the Modern movements; theoretical foundations of 20th century trends in architecture; Concepts of architectural space, form and vocabulary, as well as major town planning concepts and theories from these periods are discussed and critically analyzed.

Prerequisite
ARCT 120

ARCT 222
History and Theory of Architecture (2) (Islamic/Arab Civilizations)
Credits: 3

This course emphasizes chronological development of Islamic civilization and architecture from Umayyad in Syria and Iraq, through the classical and late classical periods in Spain, North Africa, the Middle East, including Mesopotamia, Fatimid, Ayyubid, Mamluk, and Ottoman architecture; influences of Islamic architecture on other architectural styles of the same periods and vice versa; Islamic art, geometry, calligraphy and variations in cultural attitudes in architectural styles; development and evaluation of contemporary architecture in Muslim communities is introduced.

Prerequisite
ARCT 120

ARCT 230
Materials and Methods of Building Construction (1)
Credits: 3

Introduction to the principles and fundamentals of building construction; the basic concepts of structural systems and foundations according to building loads and soil characteristics; the basic units of wall construction systems; the different methods of building insulation; the basic elements of buildings (Walls, Roofs and Floors); the use of different materials (Reinforced concrete, Wood and Steel) for both construction and finishing of these elements; the relation between the used materials and the related adequate construction system or systems.

Prerequisite

ARCT 111

ARCT 240
Theory of Structures I
Credits: 3

Introduction to analysis of structures. Fundamental concepts and principles of mechanics and force systems; Centroids and centers of gravity, moments of inertia; concepts of free-body-diagram; principles of equilibrium of particles and rigid bodies in two and three dimensions; external forces and concept of stress; stresses and strains; axial loading and axial deformation; Hook's law, stresses due to temperature; torsion; pure bending; transverse loading and shear stresses in beams and thin walled members; principal stresses and strains.

Prerequisite
MATH 102

ARCT 241
Theory of Structures II
Credits: 3

Structural engineering; calculation of reactions for statically determinate beams, frames, trusses, and composite structures; force calculation in trusses; shear and moment diagrams for beams and frames; deflection calculations; introduction to arches.

Prerequisite
ARCT 240

ARCT 242
Surveying for Architects
Credits: 3

Introduction to surveying; measuring units, significant figures, direct distance measurements with tapes, tape corrections; electronic distance measurements; levels and leveling; longitudinal profiles and cross sections; contouring; area and volume computations; the theodolite and angular measurements; optical distance measurements; rectangular coordinates; traverse surveys and computations; mapping.

Prerequisite
MATH 102

ARCT 310
Architectural Design Studio III
Credits: 4

Conducting design projects that involve complex functions and activities; introduction to systematic design procedures; complex architectural design projects that place emphasis on conceptual thinking and the analysis of contextual constraints, programmatic requirements, and problem solving processes in architectural design; projects attempt to simulate real life conditions with real visit-able sites; activities and objectives, problem definition.

Prerequisite
ARCT 212

ARCT 311
Architectural Design Studio 4
Credits: 4

Continuation of Architectural Design Studio (3) with emphasis on addressing the relationship between concept and context, idea generation and alternative solutions; evaluation; selection of solution and communication of project design; considerations of behavioral and cultural aspects, user requirements, building function and activities, construction materials and systems, environmental constraints and climatic influences are also addressed.

Prerequisite
ARCT 310

ARCT 320
Design Methods and Theories
Credits: 3

Introduction to design methods and theories since the fifties, as they apply to different design professions, design creativity, design management, pre-design studies, design processes, mandates of design processes set by professional organizations, the changing role of the architect, participatory architecture, architectural programming, design briefing, post occupancy evaluation.

Prerequisite
ARCT 221

ARCT 330
Materials and Methods of Building Construction II
Credits: 3

Continuation of elements and properties of construction materials and components; fabrication and construction technologies, methods, and processes of different types of materials. Labs place emphasis on developing construction drawings and details of small buildings. Lab assignments involve the utilization of Computer Aided Design and Drafting software packages.

Prerequisite
ARCT 230 AND ARCT 230

ARCT 331
Environmental Control Systems (1) (Acoustics and Lighting)
Credits: 3

Appreciation and understanding of the physical requirements of buildings, and the acoustics and lighting systems involved, exposure to indicators of smart technologies is provided. The first component of the course involves exposure to acoustical design for good hearing conditions and noise control; construction details, materials, acoustical properties of space shapes and forms; sound absorption and transmission and sound insulation. The second component introduces electrical systems, illuminations, day-lighting, electric light sources and related equipment circuitry; illumination design procedures. Both

components involve training on the use of modeling software packages; utilizing computers in lighting analysis and design, and room acoustics evaluation.

Prerequisite
ARCT 211 AND ARCT 230

ARCT 332
Environmental Control Systems (2) (Sanitary and HVAC)
Credits: 3

Appreciation and understanding of the physical requirements of buildings and the sanitary and HVAC systems involved. The first component involves water supply and draining systems, fixtures, and private sewerage systems. The Second component involves the study of Heating, Ventilation and Air Conditioning (HVAC), central heating and cooling systems, distribution media, delivery devices, HVAC system characteristics; psychrometric use applications; system and equipment selection; duct design and layout. Both components address applications in different building scales and types. Attention is given to energy and resource conservation techniques and computer applications.

Prerequisite
ARCT 211 AND ARCT 230

ARCT 333
Construction Drawing and Detailing
Credits: 3

Training on mastering execution documents for large scale projects. Detailed execution drawings of floor plans, sections, and building facades; materials and finishes. Detailing of staircases, selected accessories, and outdoor complementary elements. Understanding of how a complete of execution drawings can be developed in an integrated manner (building architectural elements and components/building systems).

Prerequisite
ARCT 330

ARCT 340
Structures and Architectural Form (1) (Concrete Structures)
Credits: 2

Introduction to material properties involved in RC, behavior of RC sections, design of RC beams, slabs, columns, selection of suitable RC structural systems for different areas and purposes, detailing of RC structures, selection of appropriate system according to different area and span requirements and different building functions. A research project for a real-life RC structure is conducted coupled with site visits.

Prerequisite
ARCT 241

**ARCT 341
Structures and Architectural Form (2) (Steel and Shell Structures)**

Credits: 2
Introduction to steel structures. The study of steel member behavior, design of tension members, compression members, steel beams, steel trusses, connections, plates, and bracing, analysis of combined RC and SS shell structures. Impact on developing architectural forms for relevant functions is addressed. A research project for a real life RC structure is conducted coupled with site visits.

Prerequisite
ARCT 241

**ARCT 350
Arts in Architecture**

Credits: 3
Acquaintance with arts that are involved in architectural works such as : all kinds of: mosaics, stained glass, fresco painting, colored reliefs and other techniques; research techniques of different ancient and modern architectural styles. Analysis and assessment of color utilization in building facades and building interiors. Series of exercise and project applications on the use of color in architecture.

Prerequisite
ARCT 120

**ARCT 351
Creativity and Innovation**

Credits: 3
Introduction to creativity and creative problem solving techniques, innovation strategies, collective thinking. Types of thinking; convergent, and divergent. Creative mental abilities, whole-brain thinking. Group projects involve applications of brainstorming, synetics, and delphi techniques.

Prerequisite
ARCT 120

**ARCT 400
Practical Training 1**

Credits: 0
6-week compulsory practical training in the summer. This does not count in the overall program credit hours. Students undertake professional training in an architectural office, consulting firm, construction company, or a relevant government agency. Upon completion, students submit portfolios, technical reports, and presentations on their training and the experience gained.

**ARCT 410
Architectural Design Studio 5**

Credits: 5
Introduction to community design theories and techniques, participatory

design; collaborative design processes; community involvement in decision making; understanding community needs and resources; housing types; new understandings in neighborhood planning and design theories; gated communities; housing design; housing types; community support; design projects involve the use of community information in establishing collaborative design processes; and developing solutions based on community needs, preferences, and other contextual constraints.

Prerequisite
ARCT 311

**ARCT 411
Architectural Design Studio 6**

Credits: 5
Emphasis is placed on sustainable design and project delivery processes. A major project incorporating a number of factors influencing the full spectrum of built environments from the urban scale to the minor detail. Sustainability is the major driver of the project addressing different parameters including lighting, sound, energy conservation strategies, construction systems, structural aspects, and indoor environmental quality.

Prerequisite
ARCT 410

**ARCT 420
Environment-Behavior Studies**

Credits: 3
Appreciation and understanding of cultural, social, and psychological issues in architectural and urban design, and their value toward successful design practices. An overview and analysis of the literature of major scholars, researchers, and practitioners. Critical discussion of human behavior in different building types and urban environments. Intensive discussion of issues that pertain to ways in which information about socio-cultural factors and environment-behavior knowledge can be applied to design projects.

Prerequisite
ARCT 320

**ARCT 421
Introduction to Urban Design and Planning**

Credits: 3
Introduction to history of urban planning and design; history and evolution of public spaces in different contexts, diversity, integration into buildings and landscape; urban and regional theory and analysis; smart growth; new urbanism; land use planning methods; urban engineering, Infrastructure, transportation, and environmental planning and assessment; sustainable urban development; Urban design issues.

Prerequisite
ARCT 222 AND ARCT 311

**ARCT 422
Research Methods in Architecture**

Credits: 3
Understanding of basic principles of research techniques. Emphasis is placed on methodological and presentational aspects of architectural and built environment research. Fundamental aspects of communicating research are introduced, including writing and presenting research findings and concluding statements. Knowledge of differentiating between research, reports, articles and essays; an investigation of various methods for descriptive, analytical, explanatory, and critical research. Research projects focus on applying research techniques and tools in visual, social and technical terms.

Prerequisite
ARCT 320

**ARCT 430
Contract Documents**

Credits: 3
Continuation of construction drawing and detailing, introduction to laws of contracts; formation principles; performance of breach of contract obligation; termination of agreement; pre-qualification; contract for construction and engineering services; specifications; professional liability; insurance and bonds; legal aspects in construction and construction claims; arbitration of disputes; local regulations, selected project applications.

Prerequisite
ARCT 333

**ARCT 431
Cost Estimation, Valuation, and Quantification**

Credits: 3
Appreciation and understanding of the economics of building. Primary methods for cost estimation needed in systems development, including line item estimation, parametric estimation, level-of-effort, front- and rear-loaded estimation, and probabilistic loading. The estimation methods are placed in context of a Work Breakdown Structure and program schedules, while explaining the entire estimation process.

Prerequisite
ARCT 333

**ARCT 440
Foundations and Soil Mechanics**

Credits: 3
Soil and rock composition; soil-water system; classification of soil; stress distribution in soil; compressibility of soil; settlement analysis for shallow foundations; soil compaction; shear strength of soil; types of foundations; soil bearing capacity for shallow foundations; introduction to deep foundations, excavation and retaining structures; subsurface investigation.

Prerequisite

ARCT 242 AND ARCT 241
**ARCT 450
Interior Design Workshop**

Credits: 3
Understanding and practicing theory and practical application in the design of interior spaces, and how different factors affect the integration of functional requirements into the spatial quality of a space, including day-lighting, artificial lighting, furniture, wall design, color application, and human comfort. Exercise and small scale projects are integral components of this course.

Prerequisite
ARCT 120

**ARCT 451
Computer Applications in Architecture (advanced)**

Credits: 3
Theories and projects relating to the new and future possibilities of the architectural design process, explored through the digital medium; concepts, metaphors, techniques and expressions available to the designer in the virtual world, are discussed and exemplified – the new applications and opportunities that the digital world has to offer “ digital architects ” of the future are explored, together with functional and aesthetic concepts that physical architecture may take on board.

Prerequisite
ARCT 120

**ARCT 452
Contemporary Architecture in the Arab World**

Credits: 3
Comprehensive understanding of latest developments in the architecture of the Arab world, with special focus on GCC countries; highlights of traditional local architecture; relationship to developments in the region and their global context; impact of trans-national practices; architectural practices in different countries; series of research projects on current undertakings and interviews with principals of regional architects.

Prerequisite
ARCT 120

**ARCT 453
Criticism in Architecture**

Credits: 3
Introduction to the basics and fundamentals of architectural criticism; discussion of the act of creating architecture, and its “what and why”; reviews of architectural movements and the various directions of criticism they engendered. Emphasis is placed on the conceptions of criticism; different types and rhetoric of criticism are discussed in detail, with a view to develop the student’s ability to understand, analyze and

interpret architectural works, as well as the meanings and intentions associated with them. Ideological and philosophical trends underlying selected architectural movements are cross-examined through selected examples.

Prerequisite

ARCT 120

ARCT 500 Practical Training 2 Credits: 0

6-week compulsory practical training in the summer. This does not count in the overall program credit hours. Students undertake professional training in an architectural office, consulting firm, construction company, or a relevant government agency. Upon completion, students submit portfolios, technical reports, and presentations on their training and the experience gained.

ARCT 510 Comprehensive Design Studio Credits: 6

The comprehensive nature of architectural design is the driver of the studio; A complex and challenging architectural and/or urban design project that involves a real, visitable site, and possibly real clients. The project emphasizes program development; definition of client needs; comprehensive site analysis of real urban context; introducing infill complex projects that serve a community; developing criteria for design and intervention strategies; generating alternatives; evaluation of alternatives; selecting and developing a final solution; considerations of project contextual constraints and all factors (social, formal, and technical) involved in trade-off thinking processes.

Prerequisite

ARCT 411

ARCT 511 Senior Project Preparation and Programming Credits: 3

Understanding and training in design management and the practice of pre-design studies. Emphasis is placed upon program development, response to contextual constraints; and deep involvement in articulating a complete program and pre-design document, reaching a high degree of practicality and implementation.

Prerequisite

ARCT 411

ARCT 512 Senior Project Credits: 6

Amalgamating the different types of knowledge acquired in the previous courses into a comprehensive design project. Continuation of senior project programming, and transforming the program and pre-design knowledge into a complete project that illustrates a

deep understanding of design as an intellectual endeavor, including a consideration of socio-cultural, formal, technical, and contextual aspects.

Prerequisite

ARCT 511

ARCT 520 Landscape Architecture Credits: 3

Introduction to the fundamentals of landscape architecture, study of the relation between landscape and architectural design; design of exterior spaces as they relate to and complement building designs; theoretical and historical background of landscape design, site analysis, environmental issues, and plant materials; landscape elements and classification; landform, plant life, microclimate; land use and land preservation, elements and methods of landscape design; study of aesthetic and functional values.

Prerequisite

ARCT 421

ARCT 530 Construction and Project Management Credits: 3

Building law and different building regulations that pertain to spatial design including daylight lighting, ventilation and courts, stairs, heights, projections, fire protection, license requisites, license obligations; highlights of urban planning law concerning urban planning terminology, general plans, implementation and detailed plans, land subdivision, and planning regulations of city centers, industrial zones and district redevelopment. Construction industry; time and cost processes; introduction to project budgeting; quantity take off; equipment processes; safety of construction sites; computer applications in construction management.

Prerequisite

ARCT 320 AND ARCT 333

ARCT 531 Ethics & Professional Practice Credits: 3

Different aspects of professional practice; People and organizations involved in building industry; Professional services during different phases of building projects are introduced and clarified; Different practical problems of economic decisions. Different types of professional fees during the project implementation are highlighted. Specifying professional ethics; clarifying the different professional relationships between involved parties in the profession. Ethics of professional practice are emphasized, and students learn ethical and legal responsibilities for public health, safety and welfare, property rights, accessibility and other factors affecting design, as well as construction and architectural practice.

Prerequisite

ARCT 420 AND ARCT 422

ARCT 550 Computer Applications in Urban Planning and GIS Credits: 3

Computer aided planning processes, computer-based geographic information handling--GIS and desktop mapping technology; fundamental concepts and structure of GIS in the context of other related disciplines such as cartography, remote sensing and urban planning. Topics include basic GIS concepts such as map characteristics, spatial data models, relational databases, and spatial analysis; sources of data, data quality and database management.

Prerequisite

ARCT 120

ARCT 551 Historic Preservation and Conservation Credits: 3

Introduction to historic preservation in an architectural context with a focus on building materials, properties and technologies of conservation and restoration. Topics include the history of the field, the development of its theories, the different levels of intervention, an overview of the technical conservation matters including traditional building techniques, and the relevant compatible approaches to conserve historic buildings, discussion on the means to enhance and to appropriate conservation methods according to selected cases.

Prerequisite

ARCT 120

ARCT 552 Management Information Systems in Construction Credits: 3

Investigation of the potentials, advantages, and difficulties associated with using Information Technology to gain a strategic advantage in the building industry; knowing the various components of any Information System; selection of suitable hardware and software for a certain design or construction task; development and implementation of buildings-oriented databases; use of the Internet to develop web pages for project information and scheduling.

Prerequisite

ARCT 120

ARCT 553 Project Planning and Scheduling Credits: 3

Introduction to the Project Management Body of Knowledge (PMBOK), network methods of project planning and scheduling, such as AON, PERT, bar-charting, line-of-balance, and CPM techniques. Project compression analysis and control; and computer applications in project management.

Prerequisite

ARCT 120

ARTE 121 Basics of Design Credits: 3

This course teaches the elements and principles of visual design, including line, shape, space, value, texture, volume, and color. It also includes skill development in organizing these elements and applying the visual principles of harmony, variety, balance, intensity, rhythm, proportion, repetition and contrast.

ARTE 122 Basics of Drawing Credits: 2

This course introduces the students to the elements of art, such as the point, line, form, color, and texture. Students will be trained in geometrical perspective and the skills of pencil and ink drawing in making works that encompasses the elements of art. Emphasis will be on drawing still-life, in addition to mastering lighting and shading techniques.

ARTE 123 History and theory of Art Education Credits: 2

This course involves an analytical study of the historical discourse of teaching various aspects of art in education. It also gives a historical overview of how adults interpret children's art and how that impacts children. Besides, educational and psychological theory that affected art education and its developments will be touched upon. The course also covers some theories in the history of art education under the light of Plato's idealist philosophy, Descartes rationalist philosophy and Rousseau's naturalist philosophy.

ARTE 124 Drawing Credits: 3

This course focuses on improving the skills of the students in using pencils, as well as different types of ink in making artworks. Through the process, the students will understand how to employ the elements of an artwork: (point, line, shape, and color). The focus will use still-life and nature for improving the ability to render in light and shade, as well as improving perspective skills.

ARTE 125 Logo and Art of Advertising Credits: 2

This course introduces students to artistic guidelines as well as various styles of creating posters and logos, through hand use and computer use alike. Besides, the course also introduces students to the use of graphic software used in posters and logos. During the course of the study, students will also design posters and logos for hypothetical entities.

Prerequisite

ARTE 121

ARTE 220

Art craft

Credits: 3

This course introduces students to the different materials; natural and synthetic, with concentration on the ones that are available in the environment. The course also aims to train students in using combined types of mediums from the environment in designing and producing cohesive 2D and 3D forms of artistic expression.

ARTE 223

Ceramics: Function and Expression

Credits: 4

This course familiarizes students with different types of clay, as well as the methods of shaping it. It also familiarizes students with the methods and chemicals compounds used in making the glaze layer. The course also introduces students to the firing process and its stages. The course also emphasizes the use of clay for producing clay works driven from the local culture and utilizes it aesthetically.

ARTE 224

Art of Book Drawing

Credits: 2

This course introduces the students to the art of illustration, with emphasis on illustration of children's books; educational, literary, and scientific. Students will illustrate children's books using the naturalist expressionist mode, the imaginative expressionist mode, the decorative mode, and the abstractionist mode.

Prerequisite

ARTE 121

ARTE 225

Painting

Credits: 3

This course introduces students to tools and materials used in painting. It also introduces students to the methods of preparing the painting surface for oils and acrylics mediums. The course also touches on various schools of art expression; traditional and contemporary. Students will compose artworks using nature, still life, and landscapes as subject-matters.

Prerequisite

ARTE 124

ARTE 320

Technology of Ceramics

Credits: 4

This course introduces students to different sorts of pottery oxides and glazes besides their uses. Students will be introduced to the steps of the firing process, with emphasis on applications regarding the glazing materials. Students will also learn about types of kilns and temperature

control used for various types of pottery, as well as for glazing it.

Prerequisite

ARTE 223

ARTE 321

Metals and Mina Craft

Credits: 3

Identification with the local metals that can be used in creating artworks such as wires, copper, silver and aluminums delicate slices is emphasized. Training in different formation methods manually and using machines would be done for "Simple formations" to produce home products and personal jewelry using the bases and foundations of design previously studied in other syllabi.

ARTE 322

Ornamental Board

Credits: 2

This course involves applications in the field of establishing compositional relations through the distribution of artwork's elements following the methods of adjacency, touching, overlapping, and intersection. Training will aim at achieving aesthetic values such as rhythm, balance, proportion, and unity; this will be done in both 2D and 3D forms of artistic expression.

Prerequisite

ARTE 121

ARTE 323

History of Modern Art

Credits: 3

This course offers an analytic detailed study of modern arts and its origins, as well as its relation to different civilizations and the bilateral influences among these cultures. Modern art schools such as impressionism, expressionism, abstraction, futurism up to the media art will all be discussed.

ARTE 324

Manual Printmaking

Credits: 4

This course introduces students to the basic principles and methods of printmaking. It aims to familiarizing students with the mediums and tools used in printing, as well as different methods of printing (fingerprint, stencil, batik, notes, ties and printing using direct approaches). Practices in dealing with these types will be conducted, with the aim of perfecting the use skills, as well as causing touch and aesthetic effects in producing functional artwork.

ARTE 325

Computer Graphics

Credits: 3

This course familiarizes students with the computer components, as well as computer applications pertinent to visual imagery. Students will explore the capabilities of the computer as a new technological media

that can be employed in the field of art expression. The focus will be on software such as Adobe Photoshop, as well as other painting software for producing creative visual images.

Prerequisite

ARTE 121 OR MCOM 101

ARTE 326

Seminar

Credits: 2

This syllabus concentrates on discussing the art problems that students meet during their study of the different syllabi, analyzing them, experimenting with them and trying to reach conclusions. This syllabus also discusses the philosophical issues in art through the scientific method in study and analysis. It implements training in necessary research skills, problem-solving techniques, and interactive discussions.

ARTE 420

Wood Making

Credits: 4

This course introduces the students to wood as a medium for art expression, in addition to the types of wood, the characteristics of wood, and its ability to produce art forms. The course also acquaints the students with tools and materials used in woodwork, in addition to showing the difference between utilitarian woodworks and expressionist woodworks. The course also touches on the history of woodwork and the use of wood in different cultures and different artistic traditions. Basics of technical drawing will be taught to enable students make preliminary presentational drawings.

ARTE 421

Manual Weaving

Credits: 4

This course teaches the principles of weaving with a historical overview of this art, from prehistoric ages to modern age. Differences in weaving styles across ages will be explored. Concentration will be on producing artworks using the manual (manual weaving tool) and achieving the values of touch, color, transparency, and space.

Prerequisite

ARTE 121

ARTE 422

Criticism and Art Appreciation

Credits: 2

This course offers an overview of art philosophy of different civilizations from ancient times to modern times. The course also touches on children's art. Comparative analyses of samples of artworks from different cultures and different ages will be conducted for finding out similarities and differences. Students will also complete research papers, in which they explore different approaches to art criticism. Students will also engage in analyzing different artworks, as well as visiting museums and art exhibitions and submit reports about the activities.

ARTE 423

Art in the Educational Stages

Credits: 3

This course discusses the definition of the role of art education in different stages of education, as well as its role in building well-rounded students. In addition, the course also discusses how art education integrates with other disciplines taught in schools. The course also touches on art curriculum planning and how art education planning relates to society and the environment. The course explains the role of art education in organizing and holding exhibitions, as well as organizing extracurricular activities. It also clarifies how art education works as a medium in expressing and exchanging values and concepts among students, as well as clarifying some of the problems that face the art teacher and how to overcome them.

ARTE 425

Aesthetics of the Arabic Calligraphy

Credits: 2

This course deals with Arabic calligraphy from an aesthetic perspective through employing it in different new ways aside from the conventional methods of writing. Emphasis will be on exercises in creating artworks by using the words of the Arabic calligraphy according to the methods used in making expressive artworks. Analyzing works of renowned Arabic calligraphers will be conducted for the sake of using their expertise in this field.

ARTE 426

Heritage Studies of Popular Art

Credits: 2

This course introduces students to the visual elements of the Arab/ Islamic culture; the arts and the inherited handicrafts, in addition to understanding its contents, symbolic meaning, and what it carries in terms of aesthetics. Students will study a selection of the traditional heritage artworks in museums and specialized references to write reports to connect the learners with their cultural heritage in order to preserve that heritage and to get inspiration for making their own artworks.

ARTE 429

Art for Special Education

Credits: 2

This course introduces students to special groups and how that relate to special needs, in addition to knowing differences between one category and the other. The course explains the characteristics and the special needs of those who are artistically talented. The course also addresses issues pertinent to the hearing impaired, mute, and the blind, as well as touches on special groups' patterns and styles of expression, and includes use of modern educational methods for nurturing these groups through the use of art.

ARTE 430
Psychology of Art
Credits: 2

The course introduces the students to art psychology and its importance in understanding children’s artistic expressions, in addition to understanding individual differences and the psychological impact of art expressions on humans. The course also touches on issues such as genius and insanity, art therapy, and the psychological implications of art philosophy. Creative thinking skills and pertinent to art making will also be addressed, in addition to studying the theoretical model for building an innovative mind.

ARTE 433
Independent study
Credits: 3

Through this course, independent studies in all major areas of the program can be assigned by the subject teacher to the student who applies for this kind of independent study. This independent study is only offered to address the need of students who need a certain number of credit hours to complete the total number of hours required for graduation. Credit hours for this study ranges between one hour and three hours.

ARTE 434
Capacity Course
Credits: 3

This course offers opportunities for students to apply the knowledge and skills they acquired throughout their course of study in the various aspects of the program. The study is based on conducting a project designed and carried out by the student and supervised by a faculty member. Through the research, a solution to some of the problems surrounding art and art education are tackled theoretically practically. Suggestions to remedy these problems should be offered. The project should reflect the knowledge and skills the student acquired in the program.

Prerequisite

ARTE 124 AND ARTE 220 AND ARTE 223 AND ARTE 225 AND ARTE 325 AND ARTE 121

BIOL 101
Biology I
Credits: 3

Biology 101 is the first introductory course for biology majors and minors, covering important biological concepts, including biochemistry, cell structure and function, photosynthesis, cellular respiration, cellular reproduction, genetics, and biotechnology. The laboratory introduces basic laboratory skills such as safety, microscope use, measurement, and reinforces concepts discussed in lecture. There are two hours of lecture and three hours of laboratory per week.

BIOL 102
Biology II
Credits: 3

This course covers the following: Structure and functions of ecosystem; Diversity and biological interrelationships; Principles of taxonomy; Viruses; Monera Protista; Fungi; Plants; and Animal diversity (invertebrates and vertebrates)

Prerequisite

BIOL 101

BIOL 103
Freshman Seminar
Credits: 0

The course is given in the first semester of the freshman year. Faculty involved in the program, as well as invited external speakers (including stakeholders), provide “snapshot” general overview presentations of selected topics of relevance to the core curriculum. The course is attended by students and all faculty associated with the program. As such, this course provides a forum, very early in the program, for students, faculty, and stakeholders to interact. In addition, students have the opportunity to develop a broad holistic appreciation of the scope of the program and its relevance, before they become involved with other coursework.

BIOL 110
Human Biology
Credits: 3

An introduction to human biology. Principles of structure and function of human body; nutrition & digestion, the circulatory system, the blood, the immune system, respiration, the urinary system, the nervous system, the sense, the skeleton & muscles, the endocrine system. Principles of human genetics, human development and aging. These systems are approached through an understanding of their functioning in the healthful condition followed by examples of the common disease conditions resulting from their dysfunction.

BIOL 211
Cell Biology
Credits: 3

Cell theory and cellular types. Molecular basis of cell membranes. Intercellular junctions. Receptors, Cell structure and functions. Nucleus, Nucleolus. RER. Ribosomes. SER. Golgi Complex Secretory granules. Lysosomes. Phagosomes. Pinocytosis. Exocytosis, Endocytosis. Peroxisomes. Protein synthesis. Mitochondria. Plastids. Cytoskeleton Cellular motility. Microfilaments.

Prerequisite

BIOL 101

BIOL 212
Genetics
Credits: 3

Chromosomes and genes, Mendelian inheritance Modification of Mendelian inheritance; Gene interaction, Inheritance and environment; Sex determination. Sex linkage, Sex-limited and sex-influenced characters. Linkage and crossing over. Chromosome mapping. Mutation. Cytoplasmic inheritance. Quantitative inheritance. Gene action. Genetic engineering.

Prerequisite

BIOL 101

BIOL 221
Basic Ecology
Credits: 3

Principles of ecosystems. Energy flow in ecological systems. Food chain and the food web. Production and ecological efficiency. Development and evolution of the ecosystem. Natural ecosystems. Biogeochemical cycles. Limiting factors and tolerance level. Population ecology. Community ecology. Biological interrelationships. Overview of the ecology of Qatar.

Prerequisite

BIOL 101

BIOL 241
Microbiology
Credits: 3

Aspects of general microbiology. The scope of microbiology and germ theory. Classification of microorganisms. Cellular composition of eukaryotes and prokaryotes. Nutrition and metabolism. Culture media and microorganisms. Growth and control of microorganisms. Applied aspects of microorganism in food and environment. Microbes and diseases.

Prerequisite

BIOL 101 OR BIOL 102

BIOL 310
Molecular Cell Biology
Credits: 3

This course focuses on current knowledge of cell structure and function at the cellular, sub-cellular and molecular levels. Topics include: molecular components of cell membranes; membrane-bound organelles; microtubules; cytoskeletal components; extracellular matrix; membrane transport; electrical properties of cells; intracellular compartments and protein sorting; intracellular vesicular traffic; cell communication; signaling and signal transduction; regulated proteolysis; cell cycle and programmed cell death (apoptosis); cancer. A laboratory course in cell biology, taken concurrently with the lecture course, emphasizes protein chemistry, gel electrophoresis, Western blotting, immunoanalysis, in vitro translation, transfection, subcellular fractionation, and microscopy techniques.

Prerequisite

BIOL 241

BIOL 311
Molecular Biology
Credits: 3

Chemical basis of genetic material. Chromosomes and DNA. DNA replication, Transcription. Translation. Genetic code, Gene regulation in prokaryotes and eukaryotes. Gene mutation and repair of DNA.

Prerequisite

BIOL 101

BIOL 312
Animal Histology
Credits: 3

Basic tissue types. Structure and function of the organs and systems. Circulatory, exo- or endoskeleton, respiratory, digestive system and its glands, urinary, Immune endocrines, reproductive system and sense organs.

Prerequisite

BIOL 101

BIOL 321
Principles of Environmental Biology
Credits: 3

Environmental Biology deals with interaction of biotic and physical components of the environment. However, as defined by specialists, the field of study lies between ecology and environmental science. Since the former deals with the study of nature while the latter concentrates on the impact of human activities on the environment, Environmental Biology creates the link between the two; while conceptual ecology is highlighted, the inevitable human presences and influence is taken into consideration. The approach is therefore more restorational than the old-fashioned conservational outlook.

Prerequisite

BIOL 221

BIOL 322
Desert Biology
Credits: 3

World desert formations. Desert environments. Limiting physical factors. Desert ecosystems. Structure and function. Diversity of desert flora, fauna, and soil organisms. Plant morphological and physiological adaptations. Animal morphological, physiological and behavioral adaptations. Living strategies of desert organisms. The problem of desertification and its control. Overview of the desert wild life in Qatar.

Prerequisite

BIOL 221

BIOL 343
General Parasitology
Credits: 4

Scope of parasitology. Biological associations with special reference to parasitism. Basic concepts: hosts, specificity, parasite populations and their interactions, infections and diseases. Types and taxonomy of animal parasites, Host parasite relationships. Zoonoses Biology. Pathogenicity and epidemiology of representatives of animal parasites and their relationships with man, animals and plants. General principles of control methods of parasitic disease and their limitations.

Prerequisite
BIOL 102

BIOL 351
Plant Anatomy and Physiology
Credits: 3

Principles of plant physiology. Energy flow through plant living system. Enzymes, Water relations. Water transport. Mineral nutrition. Photosynthesis. Respiration, Metabolism of carbohydrates, proteins, and lipids. Growth Hormone functions.

Prerequisite
BIOL 102 AND CHEM 351

BIOL 362
Animal Anatomy and Physiology
Credits: 3

Physiology is the science of “how living systems work”. It combines the sciences of anatomy, chemistry, and physics into a meaningful fascination that none of these has on its own. This course provides students with the fundamental knowledge of functional anatomy and physiology. Focus will be on the organization of the mammalian body in a comprehensive way to cover the physiology of organs and systems with emphasizes on the underlying biophysical and biochemical principles of organ function. The laboratory sessions provide experiences in physiological testing and data analysis skills that apply to the concepts and topics covered in lectures.

Prerequisite
BIOL 102 AND CHEM 351

BIOL 399
Internship
Credits: 0
The internship aims at providing students with experience within the working environment.

BIOL 412
Genetic Engineering & DNA Tech
Credits: 3
This course focuses on how biotechnology is revolutionizing medicine, agriculture and biomedical, pharmaceutical, environmental and food

industries. Specific topics such as recombinant DNA technology, plant genetic engineering, gene therapy, forensic DNA analysis, patents and technology transfer related to the human genome project will be discussed. Projects include DNA isolation and purification, gel electrophoresis, and prokaryotic and eukaryotic cell transfection.

Prerequisite
BIOL 311

BIOL 421
Ecophysiology
Credits: 3

The environment of living organisms. Extreme Environments. Morphological, structural, physiological, and biochemical responses to temperature, water, light, drought, salinity. Mechanisms of adaptation and resistance.

Prerequisite
BIOL 362 Concurrent AND CHEM 351 Concurrent

BIOL 422
Environmental Management & Conservation
Credits: 3

Concepts of conservation of natural resources. Case studies: Endangered species, Fragile communities, ecosystems, marine and terrestrial habitats. Agricultural and industrial pollution. Land contamination and deterioration. Reclamation, restoration, management and practical conservation. Environmental monitoring. Policies and economics of natural resources. Environmental legislation. Conservation and management in Qatar.

Prerequisite
BIOL 221

BIOL 433
Monitoring and Toxicology
Credits: 3

It studies environmental monitoring and assessment with emphasis on the Gulf region; principles in the design of monitoring systems; use of monitoring data in assessing the consequences of natural resource management and pollution risks; monitoring systems designed to estimate exposure both at the individual and population levels; development of monitoring systems for management of renewable natural resources in agriculture, fisheries and coastal and desert ecosystems.

Prerequisite
BIOL 310

BIOL 442
Biotechnology
Credits: 3
The concept of biotechnology, Recent advances and trends in biotechnology. The principles of genetic engineering and strain selection

and maintenance. Separation of bio-production. Plant & Animal biotechnology. Animal cell cultivation systems. Fermentation technology using microorganisms. Biotechnology processing of pharmaceuticals, chemicals and biological factors. The ethical aspects of biotechnology and society. Animal, plant, medical and environmental biotechnology application. Biotechnology potential and activities in Qatar.

Prerequisite
BIOL 311

BIOL 443
Biotechnology & Bioremediation
Credits: 3

This course covers the use of organisms to alleviate environmental problems. Topics include the biology of the organisms involved and their bioremediation processes. Plants act to absorb and concentrate heavy metals from soils whereas micro-organisms, invertebrates and plants degrade organic toxins and remove excess nutrients from soils, substrates and water. The processes include extraction, absorption, concentration, and degradation of contaminants. Examples cross-reference courses involving engineering principles such as the design and use of immobilized bacteria in trickling filter design for sewage gas purification.

Prerequisite
BIOL 310

BIOL 444
Immunology
Credits: 3
Basic concepts. Innate immunity: determinants and mechanisms. Acquired immunity, types, antigens and antibodies. Immune response. Immunoglobulins, Monoclonal antibodies. Anatomical, cellular and genetic basis of immunity. Complement proteins and their role in immunity. Antigen, antibody reactions. Immunopathology. Immunodeficiency, hypersensitivity and auto immunity. Histocompatibility and organ transplantation. Immunogenetics.

Prerequisite
BIOL 362 Concurrent OR BIOM 215 Concurrent

BIOL 451
Cell & Tissue Culture
Credits: 3
Cell and tissue culture are major tools for biotechnology applications, testing and improvement. These are an essential step in the production of genetically modified organisms(GMOs) which have received much national and international attention in recent years, interfacing with society in ways that few would have imagined a decade ago. As the scientific capabilities to engineer plants, animals, insects, and microorganisms for applications that could pose great benefits to society grow rapidly, so do the number of potential challenges and concerns. Many issues associated with cell and tissue culture pervade other areas of scientific pursuit, and there seem to be more commonalities

than differences. In light of this, this course concentrates on the different uses of tissue culture both in animal and plant studies; the establishment and requirements of both plant tissue culture lab and animal tissue culture lab. The basic concepts of totipotency, organized growth, growth regulators types and functions, and the different factors that affect the success of the culture were rather emphasized in the theoretical part. In the laboratory part the establishment, maintenance and subculture of different types of plant cell / tissue culture were a major task. Beside this the effect of different growth regulators types, concentrations and combinations were also experimental.

Prerequisite
BIOL 351 Concurrent AND BIOL 362 Concurrent

BIOL 452
Molecular Analytical Techniques
Credits :3

It uses a combination of lecture and hands-on laboratory exercises to acquaint students with advanced laboratory skills. Students are taught the essentials of how to maintain a detailed laboratory notebook. The course is writing intensive and implements Excel spreadsheets. Topics include multitasking, hands-on experience with analytical equipment, strategies that can be used in experimental design, troubleshooting experiments and outcomes.

Prerequisite
BIOL 310

BIOL 496
Research
Credits :3
It is undertaken by students in their senior year after completing 90 hours of credit. Research projects are selected with departmental approval and may involve one or more supervisors. Students submit a research thesis that documents their work.

Prerequisite
Departmental Approval

BIOM 211
Human Anatomy
Credits: 3
Body organization, anatomical position and terminology, skeletal system, skeleton, Joints, muscles, digestive system, cardiovascular system and lymphatic system, respiratory system, urinary system, female and male genital systems, endocrine system, nervous system. Surface anatomy of the organs, X-ray, ultrasound and applied anatomy.

BIOM 212
Human Histology
Credits: 3
Different types of microscope, the cell, epithelial tissue, connective tissue proper, cartilage, bone, muscular tissue, blood, vascular system, lymphatic system, lymphatic tissue, digestive system, respiratory system,

urinary system, female genital system, male genital system, central nervous system, special sense organ and endocrine system.

Prerequisite

BIOL 101

BIOM 213 Human Embryology

Credits: 3

Gametogenesis, ovulation, fertilization, implantation, bilaminar germ disc, trilaminar germ disc, embryonic period, fetal period, fetal membranes, placenta and congenital malformations. Assisted reproductive techniques, development of urogenital, cardiovascular and gastrointestinal systems.

Prerequisite

BIOM 211 OR BIOL 362

BIOM 215 Human Physiology

Credits: 3

Cell metabolism, regulation of body fluids and electrolytes, functions and disorders of blood components, physiology of cardiovascular respiratory and renal systems, nervous and endocrine coordination, sensory receptors, the immune system, hormonal regulation of reproduction and development.

Prerequisite

BIOL 101

BIOM 217 Human Genetics

Credits: 3

Principles of medical genetics and their application in pathology. Chromosome structure and function. Mendelian pattern of inheritance. Mitochondrial diseases and multifactorial inheritance and its role in human variation and human diseases. Cytogenetic disorders. Gene mapping and molecular structure of the gene. Hemoglobinopathies. Biochemical genetics. Immunogenetics. Cancer genetics. Genetic counseling. Tissue culture techniques. Chromosome preparation from different tissue.

Prerequisite

BIOL 101

BIOM 243 Introduction to Pathology

Credits: 2

The principles and mechanism of pathological processes. Cell injury, reversible and persistent cell injury reactions (atrophy, hypertrophy, dysphasia, etc). Necrosis and apoptosis. Acute, chronic and granulomatous inflammations. Systemic manifestations of inflammation. The extracellular matrix and cell interaction. Wound healing repair. Immune-mediated diseases. Immune deficiencies and

autoimmunity. Neoplasia classification into benign and malignant tumor markers. Invasion and metastasis. Cell cycle kinetics. Oncogenes, viruses and human cancer. Chemical carcinogenesis. Physical carcinogenesis.

BIOM 301 Lab Management, Safety and Quality Control

Credits: 3

This course is designed as a team taught course to introduce students with clinical laboratory regulations, including quality control, laboratory safety, basic safe use of equipment, and quality assurance. Basic knowledge of motivation, commitment, and human needs; management theory; organizational forms and cultures; power in organizations. Communication skills, education methods and training; decision making; groups and teams. Total quality management, laboratory accreditation and audit; efficiency and effectiveness. Health, safety and welfare of the workforce; work safety legislation, hazards of the work place, risk assessment, safety policies, safety audits and inspection.

BIOM 322 Medical Microbiology

Credits: 4

Relationships between the hosts' and pathogens' epidemiological aspects, and mode of transmission of microbial diseases. Zoonotic diseases. Microbial pathogenicity and mechanism of virulence. The role of pathogenic bacteria and viruses in causing disease laboratory diagnosis, methods of prevention and treatment.

Prerequisite

BIOL 241 OR BIOL 240

BIOM 323 Medical Parasitology

Credits: 3

Medical parasitology. Biomedical sciences and tropical medicine. Nomenclature and taxonomy of animal parasites. Position of parasitism amongst other biological associations. General structure and ultra structure. Classification, biology, life cycle, epidemiology, pathogenicity and diagnosis of selected medically important examples of the following groups: Protozoa, platy- helminthes, acanthocephalan and zoonosis. Control of parasitic diseases.

Prerequisite

BIOL 241

BIOM 324 Medical Virology

Credits: 2

Prerequisite

BIOM 243

BIOM 345

Chemistry of Metabolism

Credits: 2

Prerequisite

CHEM 351

BIOM 346 Clinical Chemistry

Credits: 4

Basic renal physiology, macroscopic and microscopic analysis of urine, renal pathology, and disease correlations.

Prerequisite

CHEM 351

BIOM 352 Radiation Protection and Exposure Methods

Credits: 3

BIOM 400

Seminar

Credits: 2

BIOM 401 Special Topics

Credits: 1

This is a professor guided course designed for special studies students who were pre 2008 graduates of the program. The content covers educational methodologies, international accreditation, certification and licensure concepts and practices. Other course content is included to satisfy coverage of required NAACLS content.

BIOM 402 Special Topics

Credits: 2

This professor guided course is designed to introduce students to the principles of critical thinking and to provide instructional and learning opportunities for them to apply critical thinking strategies to given specified content areas within biomedical science. It incorporates self-directed learning and teamwork in an atmosphere of active learning.

BIOM 403 Special Topics

Credits: 3

BIOM 404 Clinical Microscopy

Credits: 2

BIOM 405 Modern Techniques in Biomedical Sciences

Credits: 2

BIOM 406

Introduction to Clinical Medicine

Credits: 2

BIOM 411 Forensic Science

Credits: 2

The course includes the legal importance of forensic medicine and its contribution to justice. It includes penology and criminology as a science, as well as all the aspects related to death and the cadaver. Traumatology, including criminal injuries, different types of wounds, traffic accidents, burns, and the concept of the forensic medicine prognosis. In addition, asphyxiology receives a broad and in depth attention so that the students may distinguish the juridical causes of death. Sexology and legal obstetrics are highlighted due to their frequency in the practice of forensic medicine.

BIOM 418 Pharmacology & Toxicology

Credits: 2

Drugs and chemical used in therapy responsible for house hold and industrial poisoning as well as environmental pollution, their effects on human in therapeutic & potentially toxic aspects of drugs administration. The actions of different classes of toxicants such as solvents, pesticide and heavy metal.

Prerequisite

BIOM 215

BIOM 422 Diagnostic Microbiology

Credits: 2

Various methods for the diagnosis of pathogenic bacteria isolated from different clinical specimens, with emphasis on normal flora of the human body. Collection and handling of different pathological specimens. The antimicrobial sensitivity test.

Prerequisite

BIOM 322

BIOM 426 Clinical Immunology

Credits: 3

Molecular diversity and control of immune system and its association with disease states. Modern application of antibodies and cytokines in diagnosis and treatment of disease. The immune system and its relation to infection, transplantation and immunopathology with special emphasis on immunological techniques.

Prerequisite

BIOM 243 Concurrent

BIOM 444

Histopathology

Credits: 2

Introduction to general pathology. Pathological lesions and diseases in various tissues and organs. The theoretical and practical aspects of techniques used in a histopathology laboratory. Fixation, processing, blocking decalcification of routine and special staining methods. Cardiovascular, respiratory, gastrointestinal, hepato-biliary, urinary, male and female reproductive, endocrine, lymphoreticular, musculoskeletal and central nervous systems.

Prerequisite

BIOM 212

BIOM 445

Cytopathology

Credits: 2

The cytological appearance of normal reactive and chronic processes. Recognition of cellular structures of different organs and body fluids in health and disease. The cytology of uterine cervix, pleural and peritoneal fluids, urine and cerebrospinal fluid. The principles of fine needle aspiration biopsies. The preparation and staining of smears by Papanicolaou's and Romanovsky's methods.

Prerequisite

BIOM 212

BIOM 446

Urine Analysis and Body Fluids

Credits: 2

Basic renal physiology, macroscopic and microscopic analysis of urine, renal pathology, and disease correlations.

Prerequisite

BIOM 211 AND BIOM 215 AND BIOM 322 AND BIOM 346

BIOM 451

Hematology & Hemostasis

Credits: 4

Formation and maturation. Blood cells differential and their functions. General principles and iron metabolism. Types of anemia. Methods of microscopic analysis. Haemoglobinopathies and methods of detection. Hemorrhage, blood groups and blood transfusion. Leukemia and its classification. Clotting mechanisms and disorders. Detection of coagulation disorders.

Prerequisite

BIOM 243 Concurrent AND BIOM 215

BIOM 452

Immunohematology & Blood Bank

Credits: 3

Principles of blood transfusion and blood banking. Tests carried out on donors and recipients. Diseases that result from blood transfusion and their methods of detection. Methods for preparing plasma,

concentrated RBC's, concentrated platelets and blood clotting factors. Blood substitutes. Study the role of immune reactions in blood transfusions.

Prerequisite

BIOM 451

BIOM 463

Endocrinology

Credits: 3

Introduction to hormones and chemical signals. Receptors. Basic principle of endocrine physiology. Synthesis, secretion and mode of action of various hormones. Hormonal control of metabolism. Hypothalamic and pituitary hormones. Thyroid gland and its hormones. Adrenal glands and calcium homeostasis. Hormonal assays. Hormonal control of reproduction in males and females.

Prerequisite

BIOM 215 OR BIOL 362

BIOM 491

Clinic Practice in Chemistry

Credits: 3

Supervised clinical practice in the clinical chemistry laboratory, providing experience in procedures and methods of evaluating and monitoring the presence and progression of disease, operation of instrumentation, observation of quality assurance practices, and use of appropriate safety measures.

Prerequisite

BIOM 346

BIOM 492

Clinic Practice in Hematology

Credits: 3

Supervised clinical practice in the clinical hematology laboratory, providing experience in procedures and methods of evaluating and monitoring the presence and progression of disease, operation of instrumentation, following quality assurance practices, and using appropriate safety measures.

Prerequisite

BIOM 451

BIOM 493

Clinical Practice in Immunology

Credits: 3

Supervised clinical practice in the clinical immunohematology laboratory, providing experience in procedures and methods of evaluating and monitoring the presence and progression of disease, operation of instrumentation, following quality assurance practices, and using appropriate safety measures.

Prerequisite

BIOM 426, Department Approval

BIOM 494

Clinical Practice in Microbiology

Credits: 3

Supervised clinical practice in the clinical microbiology laboratory providing experience in procedures and methods of evaluating and monitoring the presence and progression of disease, operation of instrumentation, following quality assurance practices, and using appropriate safety measures.

Prerequisite

BIOM 422, Department Approval

BIOM 495

Clinical Practice in immunohematology

Credits: 3

Supervised clinical practice in the clinical immunology laboratory, providing experience in procedures and methods of evaluating and monitoring the presence and progression of disease, operation of instrumentation, following quality assurance practices, and using appropriate safety measures.

Prerequisite

BIOM 426, Department Approval

BIOM 496

Professional Development

Credits: 1

Study of the national, regional, and local professional associations related to biomedical sciences; professional certifications and licensure requirements; mechanisms and requirements for continuing education; broad knowledge of the topics emphasized in certification examinations.

Prerequisite Department Approval

BIOM 497

Research Project I

Credits: 3

The student is directed to develop research project on a practical and/or theoretical subject in the field of Biomedical Sciences using scientific methods under the supervision of staff member.

BIOM 498

Research Project II

Credits: 1

The student is directed to develop research project on a practical and/or theoretical subject in the field of Biomedical Sciences using scientific methods under the supervision of staff member.

CHEM 101

General Chemistry I

Credits: 3

Chemistry and Measurement and significant figures. Atoms, molecules and ions. Formulas and names. Stoichiometry and chemical calculations. Chemical reactions. Thermochemistry and enthalpy changes. Quantum theory of the atom and electron configuration. Chemical bonding and molecular geometry.

CHEM 102

General Chemistry II

Credits: 3

Gases and States of Matter. Properties of Solutions. Rates of Reaction and Chemical Equilibrium. Acids and Bases and Acid-Base Equilibria. Solubility and Complex Equilibria. Thermodynamics and Equilibrium. Electrochemistry.

Prerequisite

CHEM 101

CHEM 103

Experimental General Chemistry I

Credits: 1

Safety in the Lab. Measurement of mass, volume and density. Identification of an unknown compound. Qualitative analysis of anions. Empirical formula of a compound. Thermal decomposition of hydrates. Stoichiometric determination. Acid-base and redox titrations. Enthalpy of reactions.

Prerequisite

CHEM 101 Concurrent

CHEM 104

Experimental General Chem II

Credits: 1

Determination of Molar Mass. Softening of hard water. Rate of a Chemical reaction. Determination of Chemical Equilibrium. Relative Strengths of some Acids. Acid-base titration and determination of pKa of a weak acid. Solubility product constant. Calorimetry and Electrochemistry.

Prerequisite

CHEM 103

CHEM 211

Organic Chemistry I

Credits: 3

Bonding and isomerism – alkanes and cycloalkanes – alkenes and alkynes – aromatic compounds – alcohols, phenols and thiols – ethers and epoxides – aldehydes and ketones – carboxylic acids and their derivatives – amines. Experimental : Separation and purification processes – determination of physical constants – identification of different functional groups (alcohols, phenols, aldehydes, ketones, carboxylic acids and amines) – carbohydrates (simple sugars and polysaccharides) – separation

of mixtures of organic compounds – preparation of simple organic compounds (aspirin and methylbenzoate).

Prerequisite

CHEM 101 Concurrent AND CHEM 103

CHEM 212 Organic Chemistry II Credits: 3

Stereochemistry and chiral molecules – Ionic reaction – Nucleophilic substitution and elimination reactions of alkyl halides – radical reactions – conjugated unsaturated systems – aldehydes and ketones (aldol reactions) – synthesis and reactions of dicarbonyl compounds – phenols and aryl halides (nucleophilic aromatic substitution)- carbohydrates.

Prerequisite

CHEM 211

CHEM 213 Experimental Organic Chemistry Credits: 1

An introduction to methods of synthesis and analysis of pertinent organic reaction types, giving students experience in the use of organic laboratory techniques and report writing. Students receive hands-on experience in the experimental methods of organic chemistry. Many organic chemical reactions are examined in the context of their reaction mechanisms.

Prerequisite

CHEM 212

CHEM 221 Inorganic Chemistry I Credits: 3

Valence-Shell Electron-Pair Repulsion Model. Bonding theories. Symmetry and symmetry elements and point groups. Transition metals and coordination chemistry.

Prerequisite

CHEM 101 OR CHEM 201

CHEM 222 Experimental Inorganic Chem Credits: 1

Synthesis and characterization of complex compounds. Cis-trans isomerism. Stabilization of unusual oxidation states by ligands. Magnetic and spectroscopic properties of complex compounds.

Prerequisite

CHEM 221 Concurrent

CHEM 231

Analytical Chemistry I

Credits: 2

Introduction to analytical chemistry - statistical evaluation of analytical data - aqueous and buffered solution - chemical equilibrium - titration methods of analysis (neutralization reactions, precipitation titrations, redox and compleximetric titrations)- gravimetric methods of analysis – spectrophotometry.

Prerequisite

CHEM 101

CHEM 234 Experimental Analytical Chemistry Credits: 1

Gravimetric analysis – Neutralization reactions – Precipitation reactions – Oxidation and reduction reactions – Complexometry.

Prerequisite

CHEM 103, CHEM 231 Concurrent

CHEM 239 Physical Chemistry with lab for Credits: 4

This course provides pre-pharmacy students with an overview of physical chemistry and its application in the life sciences. The course includes both lectures and lab work. Throughout the course, theory will be complemented by examples from life science and molecular biology.

Prerequisite

CHEM 101 AND CHEM 103

CHEM 241 Physical Chemistry I Credits: 3

The kinetic model of gases: molecular interaction, the Vander Waals equation. Chemical thermodynamics: The first law, work, heat and energy, The second law, entropy and free energy, Free energy, chemical potential, effect of temperature and pressure on free energy changes, Tourton's and Richard's rules - Free energy changes and equilibrium constant, effect of temperature on the equilibrium constant. Absolute entropy- the third law. Phase diagrams and the phase rule: phase stability and phase transition, the physical liquid surface; surface tension, curved surface, and capillary action.

Prerequisite

CHEM 102

CHEM 242 Experimental Physical Chemistry I Credits: 1

Introduction and laboratory safety experiment design– Determination of the gas constant, R - the Faraday Constant and Avogadro's number –Molecular radius from viscosity measurements – Molecular weight of a polymer. Molecular weight (Rast method and/or Beckmann's method)

- Electrochemical cells and thermodynamics – Heat of solution – Heat of vaporization – Standard enthalpy change – Surface tension – Heat of adsorption Dissociation constant of an acid Phase diagrams – Cooling curves – Two components – three components systems.

Prerequisite

CHEM 103 AND CHEM 241 Concurrent

CHEM 275 Principles of Environmental Chemistry Credits: 3

This course provides an understanding of the source, fate, and reactivity of compounds in natural and polluted environments. Emphasis is placed on the environmental implications of energy utilization, and on the chemistry of the atmosphere, hydrosphere, and lithosphere in the region.

Prerequisite

CHEM 101 AND CHEM 103

CHEM 311 Organic Chemistry III Credits: 3

Fused polynuclear aromatic hydrocarbons – nonbenzenoid aromatic hydrocarbons – dyes (nomenclature, classification and examples) – heterocyclic compounds (five and six membered ring compounds) – other heterocyclic compounds (e.g. indole, imidazole, coumarins and flavones) – chemotherapy (sulphonamides, some antibiotics and antimalarial compounds).

Prerequisite

CHEM 211

CHEM 312 Organic Chemistry IV Credits: 2

Spectroscopic techniques (infrared, ultraviolet, nuclear magnetic resonance and mass spectrometry) in identification of organic compounds (problems and answers). Experimental: Preparation of some organic compounds (multi-steps preparations) – identification of organic compounds using different spectroscopic methods.

Prerequisite

CHEM 212

CHEM 315 Environmental Chemistry Credits: 2

This course introduces students to major topics of current interest in environmental chemistry. Topics covered include atmospheric chemistry, the greenhouse effect, the ozone layer, aquatic chemistry, water pollution and water treatment, and geochemistry. A survey of major analytical techniques and some persistent chemicals of environmental

concern is also included.

Prerequisite

CHEM 203 AND CHEM 210

CHEM 321 Inorganic Chemistry II Credits: 3

General properties of main and transitional elements. Group elements' similarities and differences. Synthesis, properties and reactions of some important nonmetallic compounds.

Prerequisite

CHEM 221

CHEM 322 Inorganic Chemistry III Credits: 3

Synthesis, properties and reactions of organometallic compounds. Inorganic reaction mechanisms, including substitution, as well as redox reactions.

Prerequisite

CHEM 210 OR CHEM 221

CHEM 331 Analytical Chemistry II Credits: 3

Introduction to modern methods of instrumental analysis: separation techniques (gas, and high liquid chromatography); spectroscopic methods (atomic and molecular absorption spectroscopy); and electrochemical methods including polarography, potentiometry, and conductometry, Experimental: Practical application of instruments in analysis including potentiometry, polarography, conductometry and spectrophotometry and gas and liquid chromatography.

Prerequisite

CHEM 231 AND CHEM 234

CHEM 341 Physical Chemistry II Credits: 3

Chemical kinetics; reaction orders, first, second and third orders; reactions approaching equilibrium; parallel first order reactions; consecutive elementary reactions; the Michaels- Menten mechanism, the Lindemann-Hinshelwood mechanism; theories of the rate constant (collision theory and activated complex theory) – equilibrium electrochemistry, ion activities, electrochemical cells – dynamic electrochemistry, – processes at solid surfaces – surface growth – surface composition – surface sensitive techniques – the adsorption processes.

Prerequisite

CHEM 241 OR CHEM 286

CHEM 342
Physical Chemistry III
Credits: 2

This course will introduce students to computational chemistry and its basis in quantum chemistry.

Quantum chemistry principles, including the Schrodinger equation and its resulting wave functions for electrons in atoms and molecules, are presented in way useful in computational chemistry, introducing wave functions and basis sets from semi-empirical, ab initio, Hartree-Fock and SCF methods. Activities such as building molecules, calculating their energies, minimizing the structures, as well as calculating their vibrational frequencies will be conducted during the course. The following software will be used to achieve our goal: Gaussian, Gauss View, Spartan and molecular modeling. Also, different kinds and levels of calculations as HF, RHF, AM1, PM3 and others will be demonstrated, applying different basis sets.

Prerequisite
CHEM 241

CHEM 351
Basic Biochemistry
Credits: 3

Amino acids and peptides, protein structure, protein function, hemoglobin and myoglobin, enzymes (classification – mechanism of action and kinetics - regulation), vitamins and nutrition, carbohydrates structure, Glycoconjugates, lipids classification, lipid structure, lipids in the structure of biological membranes, lipids in cell signaling, structure of nucleotides, structure of RNA and DNA, DNA synthesis, RNA synthesis, protein synthesis, gene expression.

Prerequisite
CHEM 211

CHEM 352
Experimental Biochemistry
Credits: 1

Quantitative determination of D-glucose by means of anthrone or glucose oxidase, Quantitative determination of amino acids by ninhydrin, Quantitative determination of proteins by Folin-lowry method, Bio-Rad assay of proteins, enzyme assays and factors affecting enzyme activity, acid value of simple lipids, effect of lipase on simple lipids, enzyme-linked immunosorbent assay (ELISA), polymerase chain reaction (PCR).

Prerequisite
CHEM 351 Concurrent

CHEM 375
Industrial Chemistry I
Credits: 3

Introduction to industrial chemistry, resources of chemical materials,

research and development, worldwide chemical industry impact, technological economy, energy, chemical industry impact on environment, industrial catalysis, cements.

Prerequisite
CHEM 241 Concurrent

CHEM 391
Biochemistry
Credits: 3

Methodology of proteins purification, isoenzymes and electrophoretic separation techniques, water and air pollution, toxicity, soil chemistry, food chemistry, industrial and biomedical importance of carbohydrates, functional genomics, diagnostic and forensic DNA techniques.

Prerequisite
CHEM 351

CHEM 442
Experimental Phys Chemistry II
Credits: 1

Experiment design, Chemical kinetics: Catalytic decomposition of H₂O₂ (the rate constant, order, activation energy) saponification of Ester (Conductometric determination) – Iodination of cyclohexane (Spectrophotometric determination) – Reaction order (initial rate method) – Kinetics of sucrose inversion (polarimetry) – Electrochemistry: activity coefficient – transference number – Decomposition voltage – Applications on emf measurements (pH, solubility product). Surface Chemistry: adsorption isotherms.

Prerequisite
CHEM 341 Concurrent

CHEM 461
Special Topics
Credits: 3

Advanced level of study in selected areas of various disciplines. Topics such as: photochemistry, photophysics, corrosion, laser chemistry, bioinorganic chemistry, polymers, organometallic, and natural products

CHEM 462
Research Project
Credits: 3

Advanced level of study in selected areas.

CHME 201
Introduction to Chemical Engineering I
Credits: 3

The basic principles and techniques used for calculation of material balances in chemical engineering processes are introduced. The material covered involves fundamentals of material balance calculations, including reactive and non-reactive systems, formulation and solution of increasingly complex chemical engineering process problems and familiarization with physical properties and behavior of ideal and real

gases.

Prerequisite
PHYS 191 AND MATH 101 AND CHEM 101

CHME 202
Introduction to Chemical Engineering II
Credits: 3

Vapor-liquid equilibrium calculations for systems containing one condensable component and for ideal multi-component solutions, including bubble and dew point calculations. Forms of energy, the first law of thermodynamics, thermodynamic data, energy balance equation for closed and open systems, simultaneous material and energy balances. Balances on non-reactive systems that involve heating and cooling, compression and decompression, phase changes, mixing of liquids, and dissolving of gasses and solids in liquids. Balances on reactive systems using either the heat of reaction method or the heat of formation method.

Prerequisite
CHME 201

CHME 212
Chemical Engineering Thermodynamics I
Credits: 3

Fundamental concepts. Thermodynamic properties of fluids. Equations of state. Diagrams, tables, and generalized correlations of thermodynamic properties. Work and heat. First law of thermodynamics. Heat effect. Second law of thermodynamics. Power and refrigeration cycles.

Prerequisite
CHME 201

CHME 213
Fluid Mechanics
Credits: 3

Fluid statistics. Viscosity of fluid and type of flow. Mass, energy, and momentum balance. Bernoulli's equation. Pressure and Flow measurements. Potential flow. Fluid friction in pipes and fittings. One – dimensional gas flow. Pump and compressor design. Flow in packed beds and Ergun equation. Fluidization. Introduction to gas-liquid flow. Surface forces.

Prerequisite
CHME 201 AND MATH 102

CHME 311
Heat Transfer
Credits: 3

Conduction, convection and radiation. Insulation and fins. Thermal boundary layer and turbulence. Empirical relations for convection. Heat transfer for various geometries. Boiling and condensation heat transfer. Heat exchanger design.

Prerequisite

CHME 202 AND CHME 213, GENG 300 Concurrent

CHME 312
Chemical Engineering Thermodynamics II
Credits: 3

Non-ideal behavior in systems of variable composition. Calculation of thermodynamic energy functions. Residual properties. Partial properties. Thermodynamic property tables and diagrams. Fugacity and fugacity coefficients. Heat effects of mixing. Excess properties and activity coefficients. Introduction to Vapor-liquid equilibria. Phase equilibria at low- to moderate-pressures. Dew point, bubble point and flash calculations. Chemical reaction equilibria. Equilibrium constants and dependence on temperature. Calculation of equilibrium conversions for single and multi reactions

Prerequisite
CHME 212, CHEM 341 Concurrent

CHME 313
Mass Transfer I
Credits: 3

Molecular mass transfer. Estimation & measurement of diffusion coefficient. Analogies among mass, heat, & momentum transfer. Turbulence effects. Correlations for mass-transfer coefficients in laminar & turbulent flow. Interface mass transfer, Continuous two-phase transport. Design of absorption and stripping columns. Adsorption. Drying.

Prerequisite
CHME 311 Concurrent AND CHME 312 Concurrent

CHME 314
Chemical Reaction Engineering
Credits: 3

The rate of reaction, interpretation of kinetic data, batch reactors, continuous flow reactors, design equations for batch and flow reactors, reactors in series, the reaction rate constant, the reaction order, elementary, non-elementary, reversible, irreversible and multiple reactions, reactor sizing, volume change with reactions, isothermal and non-isothermal reactor design, pressure drop in reactors, unsteady state operation of reactors.

Prerequisite
CHME 202 AND CHME 312

CHME 315
Mass Transfer II
Credits: 3

Distillation, liquid-liquid extraction and leaching. Humidification. Crystallization.

Prerequisite
CHME 313
CHME 324
Chemical Engin Lab I

Credits: 1

Experiments in fluid flow and heat transfer: Frictional pressure losses in pipes & fittings, Pump performance, Convection, and Double pipe and Shell & tube heat exchangers.

Prerequisite

ENGL 203 AND CHME 213

Co-requisite

CHME 311 Heat Transfer

CHME 325**Chemical Engineering Laboratory II****Credits: 1**

Experiments in mass transfer and separation processes: drying, humidification, gas absorption, molecular diffusion in gases, batch and fractional distillation. One experiment on fixed and fluidized bed.

Prerequisite

CHME 324 AND CHME 313

CHME 361**Petroleum and Gas Technologies****Credits: 3**

Refinery feedstock and crude oil properties, refinery products, refining processes and crude distillation, refined products blending. Natural gas processing and LNG technology. Primary petrochemical feedstock such as methane and ethylene. Petrochemical processes for the production of bulk petrochemical products such as ammonia, methanol and polyethylene. Clean fuels and Gas to Liquids technology. Emphasis will be put on environmental impact assessment of such technologies.

Prerequisite

CHEM 275

CHME 399**Practical Training****Credits: 3**

Supervised eight-week training period at an approved engineering facility (consulting, contracting, industrial, government), intended to provide students with hands-on experience at the workplace. Evaluation is based on: Daily performance, supervisor's input, student's report, and a short presentation.

CHME 413**Process Modeling & Simulation****Credits: 3**

Mathematical modeling of chemical processes. Principles of formulation of fundamental and empirical models. Steady state and dynamic models. Applications using spreadsheets and commercial simulators.

Prerequisite

CHME 314 AND CHME 315 AND MATH 217

CHME 421**Plant Design I****Credits: 3**

First design course in a series of two. Introduction to process design via industrial projects. Process route selection, based on relevant and realistic constraints. Development of process flow diagrams (PFDs), utilizing Simulation software and exposure to industrial safety, and P&IDs.

Prerequisite

CHME 315

CHME 422**Plant Design II****Credits: 3**

Second design course, focused on optimization of industrial processes using advanced integration design tools; detailed design of all major process units of a manufacturing process and economic & profitability analysis. Using computer aided software (e.g. excel and ASPEN simulation).

Prerequisite

CHME 421 AND GENG 360

CHME 423**Process Control****Credits: 3**

Introduction to practical and theoretical aspects of process control, process modeling, transfer functions, dynamics of open-loop systems, Control Station, feedback control system, instruments of control system, control laws (P, PI, PD and PID), block diagrams, dynamics of closed-loop systems, Stability analysis, root-locus analysis, tuning of controllers, frequency analysis, Bode stability, cascade control, feed-forward control, other control schemes.

Prerequisite

CHME 311 AND MATH 217

CHME 426**Chemical Engineering Laboratory III****Credits: 1**

Experiments in process control, reaction kinetics and membrane separation. Batch and flow reactors used for generating rate data. Includes the use of analog and digital control equipment.

Prerequisite

CHME 423 AND CHME 314

CHME 431**Petroleum Refining Process****Credits: 3**

Origin of crude oil, introduction to exploration, drilling and production, refinery feedstock, refinery products, crude oil distillation, fluid catalytic cracking, hydrotreating, catalytic reforming, isomerization, polymerization, product blending, light end unit and other supporting processes, laboratory experiments in petroleum characterization.

Prerequisite

CHEM 211

CHME 433**Petrochemical Technology****Credits: 3**

Petrochemical industry. Raw materials. Aliphatic and aromatic petrochemicals. Petrochemicals from methane. Petrochemicals from normal paraffins. Production of olefins. Petrochemicals from aromatics. Polymerization processes. Synthetic rubber. Fibers and proteins.

Prerequisite

CHEM 211

CHME 435**Polymer Engineering****Credits: 3**

This course provides the basic building blocks of polymer science and engineering: the structure and properties of polymers; polymerization reactions; polymer solutions and molecular weight characterization; viscoelasticity and rubber elasticity; polymer processing and rheology; mechanical properties; and some special topics.

Prerequisite

CHEM 211 AND CHME 213

CHME 444**Aluminum Production Technology****Credits: 3**

The present course will give a comprehensive overview of the process of industrial aluminium production. Topics covered range from theory and principles of electrolysis, electrolyte chemistry, thermodynamic considerations, and heat balance of electrolysis cells. The important concept of current efficiency will be discussed thoroughly. The two main challenges that the world's aluminium industry will face in the years to come, energy and the environment, will be given great attention. Lecture sessions are complemented by weekly tutorials, giving students the opportunity to practice their knowledge, and to gain extensive experience in problem solving. Upon completion of the course the students will have gained a strong foundation for further studies of aluminium production and for a potential career in the aluminium industry.

Prerequisite

CHEM 101 AND CHEM 103

CHME 445**Desalination****Credits: 3**

Industrial desalination processes such as multistage flash, multiple effect distillation, reverse osmosis, and electrodialysis. Technical and economic analysis of desalination processes. Water quality and analysis.

Prerequisite

CHME 311

CHME 451**Introduction to Gas Engineering****Credits: 3**

Characterization of natural gas. Properties of reservoir fluids. Qualitative phase behavior. Vapor-liquid equilibrium calculations. Separator selection and design. Natural gas economics. Industrial utilization. Laboratory experiments in gas characterization.

Prerequisite

CHME 312 AND CHEM 211

CHME 454**Natural Gas Treatment****Credits: 3**

The course presents an overview of the natural gas industry, from wellhead to marketplace, with emphasis on gas plant operations. Physical, chemical and thermodynamic properties of natural gas. Phase behavior of natural gas. Water hydrocarbon systems. Pipelines. Major processes for gas compression, dehydration, acid gas removal and sulfur recovery. Cryogenic Processes. LNG production. Storage and transportation. Field trips to LNG plants are also involved.

Prerequisite

CHME 312

CHME 462**Pollution Control****Credits: 3**

Characteristics and composition of industrial wastes, sampling and methods of analysis of industrial wastes, and remedial measures for treatment, in-plant conservation, material, reclamation, recycling and disposal, NOX, SOX and global warming, Membrane separation, waste identification, water treatment.

Prerequisite

CHEM 102

CHME 463**Water Processes****Credits: 3**

Water resources, basic chemistry of saline water, modeling and analysis of single effect desalination combined with mechanical vapor compression and thermal vapor compression, modeling of multiple effect desalination (MED), modeling of single and multistage desalination processes. Reverse osmosis, Introduction to other membrane processes, Pre- and post-treatment operations.

Prerequisite

CHME 213

CHME 466**Special Topics in Chemical Engineering I**

Credits: 3

Selected topics from specialized areas of chemical engineering, aimed at broadening or deepening students' knowledge and skills. The specific contents of the course are published one semester in advance.

Prerequisite

CHEM 211 AND CHME 213

CHME 467
Special Topics in Chemical Engineering II
Credits: 3

Selected topics from specialized areas of chemical engineering, aimed at broadening or deepening students' knowledge and skills. The specific contents of the course are published one semester in advance.

Prerequisite

CHEM 211 AND CHME 213

CHME 470
Fund of Petroleum Engineering
Credits: 3

The course covers different disciplines in petroleum engineering of the upstream operation, wellbore flow performance, production behavior and reservoir management. The course incorporates external lecturers from industry, to talk about one of the major petroleum engineering disciplines, as well as a field trip to see the drilling operations and surface facilities. In addition, a term project is included, to cover different disciplines of Petroleum Engineering.

Prerequisite

CHME 213 AND CHME 312

CHME 486
Corrosion Engineering
Credits: 3

Study of corrosion mechanisms and techniques used in prevention and control. Electrochemistry and its application to corrosion. Materials selection for different environments

Prerequisite

CHEM 102

CHME 495
Graduation Project I
Credits: 1

An in-depth study of a project of defined chemical engineering significance, based on laboratory- or computer-oriented investigations. Students work in close accord with a faculty member on a project of mutual interest. Written reports and oral presentations are required for evaluation by the department. This course gives students the opportunity to demonstrate their ability to work under minimum supervision.

Co-requisite

CHME 421

CHME 496
Graduation Project II
Credits: 3

Continuation of CHME 495 Graduation Project I: "An in-depth study of a project of defined chemical engineering significance, based on laboratory- or computer-oriented investigations. Students work in close accord with a faculty member on a project of mutual interest. Written reports and oral presentations are required for evaluation by the department. This course gives students the opportunity to demonstrate their ability to work under minimum supervision."

Prerequisite

CHME 495

CHME 497
Independent Study
Credits: 3

This technical elective is to be offered to a small number of students because of laboratory or other resource constraints, and is aimed at enhancing students' independent learning of specialized aspects of chemical engineering.

Prerequisite

CHEM 211 AND CHME 312

CMPE 261
Digital Logic Design
Credits: 3

Introduction to digital logic circuit design, combinational and sequential circuits. TTL logic family; combinational logic design; logic minimization techniques; logic implementation techniques for ROM, RAM, EPROM, and PLDs, flip flops; sequential logic design, state diagrams, logic minimization; registers and counters; synthesis and analysis of sequential machines.

Prerequisite

CMPS 205 AND CMPE 262 Concurrent

CMPE 262
Digital Logic Design Laboratory
Credits: 1

Selected experiments examining logic devices and circuits, a final design project to accompany and complement the lecture course.

Prerequisite

CMPE 261 Concurrent

CMPE 263
Computer Architecture and Organization I
Credits: 3

Higher-level concepts in computer architecture. Data representation; classic components of a computer; performance measures for computers; CPU types, design, organization, instruction-level

description; processor programming, register transfer languages, addressing modes, assembly language; main and cache memory, caching techniques.

Prerequisite

CMPS 205 AND CMPS 151

CMPE 363
Computer Architecture and Organization II
Credits: 3

Fundamentals of computer organization. Central processing unit organization; hardwired control; arithmetic logic unit design and implementation; micro- programmed control, interrupts; instruction cycle and format, addressing modes; buses, pipelining, instruction-level parallelism; input/output system design; external storage.

Prerequisite

CMPE 263 AND CMPE 261

CMPE 364
Microprocessor Based Design
Credits: 3

Fundamentals and evolution of microprocessors. Architecture of a 16-bit microprocessor, assembly language and its development tools; data transfer; arithmetic logic, program control instructions; interrupt organization; memory interface and address decoding; input/output, programmable peripheral, serial input/output interfacing; universal synchronous and asynchronous receivers and transmitters; hardware interrupts, basic interrupt interface, programmable interrupt controllers; analog-digital converters; 32-bit programming.

Prerequisite

CMPE 363, CMPE 365 Concurrent

CMPE 365
Microprocessor Based Design Laboratory
Credits: 1

Experiments to emphasize the practice of assembly language programming, data acquisition software techniques, and hardware for data acquisition systems.

Prerequisite

CMPE 364 Concurrent

CMPE 370
Computer Engineering Practicum
Credits: 1

Introduction to hands-on broad hardware techniques and specific hardware skills useful for computer engineers. Circuit construction through soldering; personal computer hardware troubleshooting; project implementation using digital signal processing kits or advanced controller kits; embedded reverse engineering approaches; discrete component-based analog/digital circuits; programmable hardware designs.

Prerequisite

CMPE 261 and CMPE 262 and ELEC 201 and ELEC 231

CMPE 455
Data Communication and Computer Networks I
Credits: 3

Fundamental concepts of communication systems such as the Internet, local area, metropolitan and wide area networks. Layered network architecture; transmission technology; data link layer protocols, broadcast networks and their protocols, flow and error control; concepts of the network layer and routing algorithms; services and protocols of the transport layer; examples of application layer protocols.

Prerequisite

CMPS 303 AND CMPE 263, CMPE 456 Concurrent

CMPE 456
Data Communication and Computer Networks I Laboratory
Credits: 1

Practical skills and hands-on experience needed to build small-to-medium size networks. Network simulation tools, installing, configuring, troubleshooting and monitoring computer networks and their components, protocols and services.

Prerequisite

CMPE 455 Concurrent

CMPE 457
Data Communication and Computer Networks II
Credits: 3

Builds upon fundamental knowledge and concepts addressed in the "Data Communications and Computer Networks I" course. Signal modulation, coding techniques; wireless transmission; radio frequency, multiplexing, circuit and packet switching, medium access control; interior and exterior routing protocols, autonomous systems, link state routing; IPv6 address space, transmission methods from IPv4 to IPv6; network and internet security, VPN, cryptography, encryption schemes, firewalls, intrusion detection; congestion control, quality of service; protocols for network management; network socket programming.

Prerequisite

CMPE 455

CMPE 462
Computer Interfacing
Credits: 3

Review of basic components in computer interfacing with real-world applications in graphical programming environments representing complete dataflow logic. Sensors; signal conditioning circuits; analog-digital converters; actuators; serial and parallel data interfacing with personal computers.

Prerequisite

CMPE 364

CMPE 470
Modern Computer Organization
Credits: 3

Discussion of current trends and future directions in computer organization highlighting various hardware and software techniques designed to maximize parallelism and improve performance within technological constraints. Non-von Neumann architectures; performance/cost enhancement techniques; cache memory, bus architecture, memory interleaving, pipelining, super-pipelining, super-scaling, vector computing, parallel organization; discussion of current research and publications in computer organization.

Prerequisite
CMPE 363

CMPE 471
Select Topics in Computer Engineering
Credits: 3

Selected topics in the field of computer engineering addressing new trends and practical issues.

CMPE 472
Performance Evaluation
Credits: 3

Introduction to performance analysis and evaluation. Modeling and evaluation of computer systems; Markov processes and chains; single and network queues; concurrent process modeling.

Prerequisite
GENG 200

CMPE 474
Artificial Neural Networks
Credits: 3

Introduction to theory, architecture, and applications of artificial neural systems; Supervised, unsupervised, and reinforcement learning in single and multiple layer neural networks; Associative neural memory recording and retrieval dynamics; Self-organizing maps; Learning capacity and generalization; Hardware implementations.

Prerequisite
MATH 217

CMPE 475
Artificial Intelligence
Credits: 3

Fundamental concepts of artificial intelligence, logic, and knowledge representation with associated algorithms and techniques supported by logic programming applications. Motivation for logic and knowledge representation by horn clauses; logic and propositional equivalencies; predicates and quantifiers; matching, backtracking, forward and backward chaining; logic programming applications.

Prerequisite
CMPS 303

CMPE 476
Digital Signal Processing
Credits: 3

Overview of continuous and discrete signal processing with hands-on algorithmic implementation of various signal transforms and other operators for generalized applications. Analog to digital conversion methods; sampling theory, discrete Fourier transform, fast Fourier transform, z-transforms; signal sampling and reconstruction; digital filters, correlation, spectral estimation.

Prerequisite
ELEC 351, CMPE 478 Concurrent

CMPE 478
Digital Signal Processing Laboratory
Credits: 1

Practical implementation of digital signal processing algorithms using standard kits. Audio signal filtering; spectral analysis of signals, de-convolution of composite signals, spectral shifting of audio signals; channel equalization for communication signals.

Prerequisite
CMPE 476 Concurrent

CMPE 480
Computer Vision
Credits: 3

Introduction to the basic concepts and techniques of computer vision focusing on reconstruction of 3D models from 2D still images and video. Image formation, segmentation; camera calibration, motion and object recognition; use of image processing tools.

Prerequisite
CMPS 251

CMPE 481
Modeling and Simulation of Digital Systems
Credits: 3

Advanced concepts in digital logic design using language tools to describe digital logic systems at different levels of abstraction and simulation. Programmable logic devices; designing with field programmable gate arrays; synchronous and asynchronous sequential logic circuits.

Prerequisite
CMPE 261

CMPE 482
Multimedia Networks

Credits: 3
Analysis of main characteristics and challenges of multimedia delivery over IP networks with the analysis of main quality of service mechanisms used at each layer to allow for differentiated services with the ability to explain the main characteristics of IEEE standards for LANs and MANs. Multimedia applications; video and audio streaming; quality of service fundamentals and mechanisms; IEEE standards for wireless local, metropolitan, personal, and 3G area networks.

Prerequisite
CMPE 455

CMPE 483
Introduction to Robotics
Credits: 3

Use of robotics kits, robot assembly, familiarization with the basic concepts of sensing, actuation, and robotic intelligence. Basic robotic sensors; actuation functions; embedded robotic task-related intelligence levels; capstone project and report presentation.

Prerequisite
CMPE 261 AND CMPS 151

CMPE 485
Fundamentals of Digital Image processing
Credits: 3

Introduction to various mathematical and algorithmic concepts in digital image processing and hands-on implementation using simulated environments. Hands-on approach to image operations; filtering, de-convolution, edge detection, geometric transformations, compression, conversions.

Prerequisite
ELEC 351

CMPE 498
Design Project I
Credits: 2

Study of a specialized topic in computer engineering as a combined hardware and software project. Conduct literature survey; implement a design with both software and hardware components; public presentation of a well-referenced report containing theoretical background, design, theoretical results, conclusions, and recommendations.

Prerequisite
CMPE 370

CMPE 499
Design Project II
Credits: 3

Continuation of CMPE 498; represents the completion of the project started in CMPE 498.

Prerequisite
CMPE 498

CMPS 101
Intro to Computer Science
Credits: 3

Fundamental concepts of computer systems organization, logic, and algorithmic problem solving. Lab session: problem solving with fundamental components of a modern programming language.

CMPS 151
Programming Concepts
Credits: 3

Exposure to problem solving techniques and operations on data using the fundamental components of a programming language. Problem solving techniques and presentations; motivations to programming languages and program execution; fundamental components of a programming language including simple and structured data representation; mathematical and logical operations; input/output, control and loop structures; functions; recursion; memory referencing; and simple file processing.

Prerequisite
CMPS 152 Concurrent

CMPS 152
Programming Concepts Laboratory
Credits: 1

Practical experience with programming using fundamental components of a programming language and exploring additional features illustrated by solving problems of various types and requirements. Purpose of programming environments; coding quality and professionalism; coding solutions to problems using fundamental programming language features; explorations of additional language features; debugging, testing and program evaluation.

Prerequisite
CMPS 151 Concurrent

CMPS 200
Computer Ethics
Credits: 1

Overview of computing ethics and practice. Philosophical ethical theory and morality; codes ethics and professional practice; cyber and computer crimes; whistle blowing; privacy and freedom of expression; legal and ethical issues; intellectual property and rights; safety-critical program development; ethics and the market place.

CMPS 205
Discrete Structures for Computing
Credits: 3

Introduction to the elements of mathematics applicable to the computing field. Logic and methods of proof; logic gates and simple sequential circuits; Boolean algebra and minimization; set theory; relations and functions; sequences and sums; induction and recursion; numbering systems, combinatorics; discrete probability; graphs and trees.

CMPS 251
Object-Oriented Programming
Credits: 3

Fundamentals of object-oriented programming paradigm illustrated with an object-oriented programming language. Object-oriented design; encapsulation and information hiding; coherence, inheritance, abstraction, polymorphism, coupling; graphical user interface programming; additional features of the language.

Prerequisite

CMPS 151, CMPS 252 Concurrent

CMPS 252
Object-Oriented Program Laboratory
Credits: 1

Practical experience with object-oriented programming, covering object-oriented features illustrated by various types of problem-solving techniques. Motivations to the programming environment; coding quality and professionalism; using object-oriented features of a programming language to code solutions to various problems; exploring additional language features; debugging, testing and evaluation of programs.

Prerequisite

CMPS 251 Concurrent

CMPS 303
Data Structures
Credits: 3

Static and dynamic presentation, implementation, analysis, and applications of abstract data types (ADT) for linear and non-linear data structures and fundamental algorithms for software system development. ADTs; algorithm efficiency; searching, sorting; recursion; lists, stacks, queues, trees, graphs; hashing and file management.

Prerequisite

CMPS 251 OR CMPE 265

CMPS 311
Object-Oriented Modeling
Credits: 3

Modeling techniques and skills used in the stages of an object-oriented life cycle development process and hands-on modeling experience using a common modeling language. An overview of object-oriented development processes; motivations to object-oriented modeling methods and notations; class, state, and interaction modeling; system conception; domain and application analysis; system and class design; implementation modeling and design patterns; object-oriented languages code generation and reverse engineering.

Prerequisite

CMPS 251

CMPS 321
Information Systems

Credits: 3

Fundamentals, features, and characteristics of various types of information systems, theories, and methodologies. Types of information systems; capturing, representation, organization, and transformation of information; impact of computer-based information systems on business organizations; decision-support systems, knowledge-based systems; organization and management of information systems; information security, privacy, integrity; protection of information in organizations, future trends.

Prerequisite

CMPS 251

CMPS 323
Design & Analysis of Algorithms
Credits: 3

Analysis, design, and efficiency of algorithms illustrated by a comprehensive exposure to fundamental algorithms and various adopted techniques to solve different types of problems. Analysis of sorting, searching, and other algorithms; designing algorithms using techniques for problem-solving such as greedy methods, divide-and-conquer, backtracking, dynamic programming, and branch-and-bound techniques; complexity of algorithms.

CMPS 345
Automata & Formal Language
Credits: 3

Theoretical models of computation, their capabilities, and limitations. The study of formal languages (regular and context-free languages); computational models for generating or recognizing these languages (finite-state automata, context free grammars, push-down automata, and Turing machines); introduction to decidability; halting problem, NP-completeness, and reducibility.

Prerequisite

CMPS 205

CMPS 351
Fund of Database Systems
Credits: 3

Fundamentals of database design, modeling, architectures, and query notations and languages with a focus on relational databases. Motivations to the concepts of database systems including components, types and architectures, data modeling (diagrams, models, and schemas); relational data model, mapping conceptual schema to a relational schema; relational algebra, relational calculus, SQL; normalization.

Prerequisite

CMPS 251, CMPS 352 Concurrent

CMPS 352
Fundamentals of Database Systems Laboratory

Credits: 1

Practical experience on database system development for different types of requirements. Familiarity of a DBMS architecture and features; practical modeling, design, analysis, and implementation of database systems with various requirements; querying and reporting; embedding SQL in programming applications.

Prerequisite

CMPS 351 Concurrent

CMPS 356
Software Development of Enterprise Applications
Credits: 3

Introduction to issues, architectures, and technologies for designing and developing multi-tiered enterprise applications. Emphasis on object-relational mapping, multithreading, user interface development, application integration patterns, and approaches, internet technology standards such as markup languages, web services, and application security; hands-on project using state-of-the-art software architectures, open source application frameworks, middleware, and development tools to design, develop, test, and secure an enterprise application.

Prerequisite

CMPS 351

CMPS 372
Computer Architecture
Credits: 3

Review of the Von Neumann Architecture; Cache memory; I/O communication and buses; Pipelining; Risc Processors; Instruction level parallelism and Superscalar processors; Parallel processors. Lab Session: Use of a Hardware Description language in circuits design.

Prerequisite

CMPS 322

CMPS 373
Computer Graphics
Credits: 3

Fundamental concepts of computer graphics illustrated with programming applications using a graphics package or tool. Graphics systems types, architectures and graphical objects; applications of computer graphics; graphics programmer's interface; designing and rendering 2D and 3D graphical objects (geometric transformations, viewing, shading, discrete techniques, buffers and mappings).

Prerequisite

CMPS 303

CMPS 393
Modeling & Simulation

Credits: 3

Fundamentals of studying systems by modeling and simulation focusing on developing discrete-event simulations. Reasons for simulation, basic simulation modeling; systems modeling; developing discrete-event simulations; queuing models; random number generators, generating random varieties; analysis of simulation data; verification and validation of simulation models

CMPS 405
Operating Systems
Credits: 3

Fundamental concepts of operating system design and implementation. Overview of operating system components; concurrency; mutual exclusion and synchronization; implementation of processes; deadlock; scheduling algorithms; memory management; input/output and file systems; protection and security.

Prerequisite

CMPS 303 AND CMPE 263, CMPS 406 Concurrent

CMPS 406
Operating Systems Laboratory
Credits: 1

Practical experience with an operating system's components, associated services, and implementations. Operating system structure, components, services, shell commands; process management, inter-process communications; problem solving with concurrency, mutual exclusion, synchronization; implementations of CPU scheduling algorithms, memory placement algorithms; protection and security.

Prerequisite

CMPS 405 Concurrent

CMPS 411
Software Engineering
Credits: 3

Fundamental principles of classical and modern software engineering theory and practice. Taxonomy of software systems; software project management, process models; requirements engineering, design, architectures, user interface design; software development methods; verification, validation, testing; software management (people, cost, quality, process improvement, configuration); emerging technologies.

Prerequisite

CMPS 303

CMPS 433
Multimedia Systems
Credits: 3

Comprehensive study of various types of multimedia objects and their characteristics, presentation formats, and associated algorithms. Illustration by development and manipulation of multimedia objects using supported tools; taxonomy of multimedia objects; authoring programs, text, images, 2D and 3D graphics, audio, video; data

compression; multimedia content design, human-computer interaction; and multimedia application development.

Prerequisite
CMPS 303

CMPS 445
Compiler Construction
Credits: 3

Theoretical and technical aspects needed to construct compilers and interpreters illustrated by a comprehensive study of the design and implementation for a mini language. Fundamentals of compilers and interpreters; syntactic and lexical analysis; handling user-defined types and type checking; context analysis; code generation and optimization; memory management and run-time organization.

Prerequisite
CMPS 303

CMPS 451
Database Management Systems
Credits: 3

Management of operations of internal components and advanced features of database systems and a study of various database types. Transaction management, concurrency control; security; optimization; object-oriented and distributed databases; data warehousing and mining; current developments in database technology; integration of databases to internet environments.

Prerequisite
CMPS 351

CMPS 454
Wireless Network & Applications
Credits: 3

Fundamentals of radio transmission including an overview of wireless networks, cellular networks, wireless LANs, Bluetooth, satellite systems, WiMAX, and LTE. Multiplexing, circuit and packet switching; fundamentals of evolution, medium access control, network architecture, protocols; mobile applications, handset platforms, service delivery platforms.

Prerequisite
CMPE 455

CMPS 465
Parallel & Distributed Systems
Credits: 3

Principal concepts of parallel and distributed systems. Shared and distributed memory architectures; parallel and distributed programming paradigms; inter-process communication and message passing; distributed memory and file systems; process and data migration; load balancing; fault tolerance; security and protection.

Prerequisite
CMPS 405

CMPS 466
Information Retrieval
Credits: 3

Fundamental aspects of classical information retrieval techniques, strategies, and future trends. Web information storage and presentation schemes; web-based and online retrieval systems; search strategies; indexing, evaluation, ranking of search results; search engines, web crawling, meta-searchers; centralized and distributed architectures; semi-structured data models; merging technology; query languages for semi-structured data.

Prerequisite
CMPS 303

CMPS 485
Computer Security
Credits: 3

Comprehensive study of information security fundamentals. Information assurance, risks, vulnerabilities; access control, protection methods; encryption, authentication; host-based, network-based, and physical security; legal and ethical implications.

Prerequisite
CMPE 455

CMPS 493
Senior Project I
Credits: 1

The first of a two-course sequence incorporating conceptual knowledge and practical skills learned throughout the computer science program and applying them through teamwork for a substantial project. Team members experience different roles and gain an increasing range of diverse technical skills in all phases of the project development; course focus on the early stages of project work.

CMPS 497
Special Topics in Computing
Credits: 3

Selected topics in computing concerning content not normally covered in the formal curriculum. Topics vary

CMPS 499
Senior Project II
Credits: 3

The second of a two-course sequence incorporating conceptual knowledge and practical skills learned throughout the computer science program and applying them through teamwork for a substantial project. Team members experience different roles and gain an increasing range of diverse technical skills in all phases of the project development; course focus on the later stages of project work.

Prerequisite
CMPS 493

CVEN 210
Properties & Testing of Materials
Credits: 3

Composition and properties of Portland Cements, special cements, gypsum, lime, and asphaltic materials. Properties and testing of aggregates and concrete. Concrete mix design. Use of stones, blocks and bricks. Ferrous and nonferrous metals. Wood. The laboratory component includes: tests on Portland cement, sieve analysis and grading of aggregate, specific gravity and absorption of coarse aggregate, Los Angeles abrasion test, slump test, measurement of air content, concrete mix, crushing of concrete cubes, split-tension test, rebound hammer and PUNDIT

Prerequisite
CHEM 101 AND CHEM 103

CVEN 211
Engineering Mechanics
Credits: 3

Fundamental concepts and principles of mechanics, vectors, and force systems. Centroids and centers of gravity, Moments of inertia. Concepts of free-body-diagram, principles of equilibrium of particles and rigid bodies in two and three dimensions. External forces and concept of stress. Stresses and strains, Axial loading and axial deformation, Hooks law, Statically indeterminate members, Stresses due to temperature. Torsion. Pure bending. Transverse loading and shear stresses in beams and thin walled members. Multiaxial loading. Transformation of stresses and strains. Principal stresses and strains. Axially compressed members and buckling of columns.

Prerequisite
MATH 102

CVEN 212
Fluid Mechanics
Credits: 3

Elementary mechanics of fluids with emphasis on hydrostatics, control volume analysis of flowing fluids using kinematics, continuity, energy, and momentum principals; similitude, pipe flow.

Prerequisite
PHYS 191 AND PHYS 192 AND (CVEN 211 OR CVEN 213)

CVEN 213
Statics
Credits: 3

Fundamental concepts and principles of mechanics, vectors, and force vectors and resultant. Free-body diagram of forces and equilibrium of particles and rigid bodies in two and three dimensions. Moment of a force about a point and about an axis. Equilibrium of rigid body. Analysis of trusses and frames. Shear forces diagrams and bending

moment diagrams. Centroids and centers of gravity. Moment of inertia of an area.

Prerequisite
MATH 102

CVEN 214
Strength of Materials
Credits: 3

External forces and concept of stress. Stresses and strains, Axial loading and axial deformation, Hook's law, Statically indeterminate members, Stresses due to temperature. Torsion. Internal forces in beams, pure bending. Transverse loading and shear stresses in beams and thin-walled pressure vessels, beam deflection. Multiaxial loading. Transformation of stresses and strains. Principal stresses and strains. Axially compressed members and buckling of columns. Lab session and experiments.

Prerequisite
CVEN 213

CVEN 220
Analysis of Structures
Credits: 3

Structural Engineering. Calculation of reactions for statically determinate beams, frames, trusses, and composite structures. Force calculation in trusses. Shear and moment diagrams for beams and frames. Deflection calculations. Influence lines for determinate structures. Arches and cables. Introduction to indeterminate structures.

Prerequisite
CVEN 213 OR CVEN 211

CVEN 230
Geotechnical Engineering
Credits: 3

Soil Composition, soil-water system, classification of soil, permeability and seepage, stress distribution in soil, compressibility of soil, settlement analysis for shallow foundations, shear strength of soil. The laboratory component includes: visual inspection, sieve and hydrometer analyses, Atterberg limits, constant and falling head permeability, compaction, field density, one-dimensional consolidation, direct shear, triaxial, and unconfined compression testing.

Prerequisite
CVEN 213 OR CVEN 211

CVEN 270
Surveying for Construction
Credits: 3

Introduction, surveying measurements, Vertical Distance Measurements: different types of levels, leveling procedure and computations, profiles and cross sections. Horizontal Distance Measurements (EDM): Taping, Electronic Distance Measurements. Angular Measurements,

Theodolites and total stations. Traverse Computations and adjustment - determination of areas and volumes. Setting out of construction works. Basic computer-aided surveying.

Prerequisite
MATH 101

CVEN 320
Design of Reinforced Concrete Members
Credits: 3

Introduction to limit-state design of reinforced concrete structures. Loads and load combinations acting on reinforced concrete structures. Analysis and design of beams(regular and irregular), one-way and two-way solid slabs on beams(using direct design method).Design of stair systems. Bond and development length of reinforcement. Deflections and cracks. Design and analysis of columns subject to axial load and bending.

Prerequisite
CVEN 220 AND (CVEN 214 OR CVEN 211)

CVEN 321
Analysis of Indeterminate Structures
Credits: 3

Analysis of indeterminate structures by the force method, slope deflection, and moment distribution. Deflection of indeterminate structures. Introduction to matrix analysis of structures: trusses, beams, and frames.

Prerequisite
CVEN 220

CVEN 330
Foundation Engineering I
Credits: 3

Subsurface investigation (planning, boreholes, open and test pits, soil sampling, rock coring, visual inspection, SPT, CPT, vane shear test, plate load test, field permeability test, geophysical test methods, exploration report), soil bearing capacity for shallow foundations, lateral earth pressure, stability of retaining walls, introduction to deep foundations, computer application.

Prerequisite
CVEN 230 AND (CVEN 214 OR CVEN 211)

CVEN 340
Analysis and Design of Hydraulic Systems
Credits: 3

Applications of fluid mechanics to engineering and natural systems, including closed-conduits and pipe networks, open channel flow, turbo machinery, and hydrology.

Prerequisite
CVEN 212
CVEN 342
Water Resources and Management

Credits :3
An introduction to basic concepts and issues of water resources management, emphasizing on water law and rights, water resource planning, institutional and organizational arrangements, sustainable water resources development. Case studies illustrate the role of political, social, economical, and environmental factors in decision making. Physical properties of groundwater and aquifers, principals and fundamental equations of porous media flow and mass transport, well hydraulics and pumping test analysis, role of groundwater in the hydrologic cycle.

Prerequisite
GEOG 442

CVEN 350
Environmental Engineering
Credits: 3

Introduction to water pollution, air pollution, soil contamination, noise, hazardous and solid waste, and their control. Environmental impact statements and global pollution issues. Introduction to groundwater engineering. Waste water management and sanitary engineering.

Prerequisite
CVEN 212 AND CHEM 101 AND CHEM 103

CVEN 352
Waste Management
Credits :3
Physical, biological and chemical water quality parameterization and measurements, wastewatergeneration and collection, biological wastewater treatment and reuse, industrial wastewater treatment, solid waste management, remediation of contaminated soil, groundwater remediation, hazardous waste.

Prerequisite
GEOG 442

CVEN 360
Highway Engineering
Credits: 3
Introduction to highway engineering. Highway classification. Geometric design of highways; horizontal and vertical alignment design. Highway drainage. Intersection design of both at-grade and interchanges. Traffic characteristics. Highway materials. Introduction to flexible pavement design. Highway maintenance and rehabilitation.

Prerequisite
CVEN 270

CVEN 380
Construction Engineering
Credits: 3
Topics covered in this course are: introduction to the construction industry, management processes, time & cost processes, project budgeting, management of construction equipment, safety of

construction sites, legal aspects in construction and construction claims. Introduction to computer applications in construction engineering.

Prerequisite
CVEN 320

CVEN 381
Contracts, Specifications, and Local Regulations
Credits: 3

Law of contracts; formation principles. Performance of breach of contract obligation. Termination of agreement; pre-qualification. Contracts for construction and engineering services. Specifications. Professional liability; insurance and bonds. Water rights. Environmental law. Arbitration of disputes. Local regulations.

Prerequisite
CVEN 380 Concurrent

CVEN 399
Practical Training
Credits: 3
Supervised 8-week training period at any approved engineering concern (consulting, contracting, industrial, government), intended to provide students with hands-on experience in the workplace. Evaluation is based on daily performance, supervisors' input, student's report, and a short presentation

CVEN 401
Civil Engineering Design Project I
Credits: 1
Analytical, design, experimental, or field work carried out in accordance with a pre-approval project plan under the supervision of faculty member(s).

CVEN 402
Civil Engin Des Project II
Credits: 2
This Course is a continuation of course 504401

Prerequisite
CVEN 401

CVEN 420
Design of Steel Structures
Credits: 3
Introduction to different types of steel structures. Loads and load combinations acting on steel structures. Analysis and design concepts, LEFD design concepts. Properties of steel, Common steel sections. Structural systems and general layout. Design of tension members. Steel connections. Design of axially loaded compression members and columns, column base plates. Design of steel flexural members, local bucking of beams, lateral torsion-flexure buckling, crippling of webs, floor beams, purlins. Analysis and design of beam-columns, cross section strength, overall member strength. Design of plate girders. Design of composite members

Prerequisite
CVEN 220, (CVEN 214 OR CVEN 211)

CVEN 421
Computer Aided Analysis and Design
Credits: 3

Components and operation of microcomputers. Elementary programming using FORTRAN, BASIC, and MathCAD. Use of commercial software in the analysis and design (STAAD3, PCA, SAP90,. ...). Development and presentation of design projects using Computer-aided design/Drawing package.

Prerequisite
CVEN 321

CVEN 422
Design of Reinforced Concrete Structures
Credits: 3
Analysis and design of: irregular beams, deep beams, and continuous beams. Analysis and design of two-way floor systems (solid slabs on beam and flat slabs). Analysis and design of irregular (circular, triangular and trapezoidal) slabs and cantilever slabs. Analysis and design of framed structures. Analysis and design of uniaxial and biaxial long columns. Torsional analysis and design of reinforced concrete members. Analysis and design of reinforced concrete foundations: isolated footings, wall footings, combined footing, and strap footings. Analysis and design of retaining walls.

Prerequisite
CVEN 320

CVEN 423
Selected Topics in Structural Design
Credits: 3
Analysis and design of prestressed structures. Introduction to structural dynamics. Analysis and design of shear walls. Analysis of plates and shells.

Prerequisite
CVEN 320

CVEN 424
Structural Matrix Analysis
Credits: 3
Matrix Analysis of Plane Framed Structures: force method and displacement method. Formulation of stiffness and flexibility matrices. Introduction to the finite element method.

Prerequisite
CVEN 321
CVEN 430
Foundation Engineering II

Credits: 3

Analysis and design of deep foundations (piers, caissons, piles), stability of open cuts, stability and design of sheet-pile walls (cantilever, free and fixed earth support types, ties, wales), design of secant-pile walls, computer applications.

Prerequisite

CVEN 330

CVEN 431**Selected Topics in Geotechnical Engineering****Credits: 3**

Stability of slopes, design of dewatering systems, characteristics of desert problematic soils (swelling soil, dune sand, salt-bearing soil “Sabkha”, liquefiable sand), soil improvement methods (mechanical, chemical), description and use of geosynthetics, stability and design of reinforced-earth walls, design of liner systems for liquid containments and solid waste landfills, computer applications.

Prerequisite

CVEN 230, (CVEN 214 OR CVEN 211)

CVEN 442**Selected Topics in Water Resources****Credits: 3**

An introduction to basic concepts and issues of water resources management, emphasizing on water law and rights, water resources planning, institutional and organizational arrangements, sustainable water resources development. Case studies illustrate the role of political, social, economic, and environmental factors in decision making. Physical properties of groundwater and aquifers, principals and fundamental equations of porous media flow and mass transport, well hydraulics and pumping test analysis, role of groundwater in the hydrologic cycle.

Prerequisite

CVEN 340

CVEN 453**Selected Topics in Env Eng****Credits: 3**

Air Pollution Control, wastewater treatment, industrial wastewater treatment, solid waste management, remediation of contaminated soil, groundwater remediation, hazardous waste, water quality measurements, air quality measurements.

Prerequisite

CVEN 350

CVEN 460**Pavement Materials and Des****Credits: 3**

Properties, uses and tests of asphalt materials, Aggregate types and classification. Traffic characterization. Pavement types and infrastructure.

Asphalt concrete mix design methods. Introduction to super pave systems. Flexible and rigid pavement analysis. Structural design of flexible and rigid pavements. Pavement evaluation; Serviceability concept, structural capacity and surface distresses.

Prerequisite

CVEN 360 AND CVEN 230

CVEN 461**Traffic Engineering****Credits: 3**

Introduction to Traffic engineering. Characteristics of road users, vehicles, and roadways. Traffic studies: Speed, travel time and delay, Traffic volumes, traffic accidents, and parking study. Traffic stream characteristics, Capacity and Level of service (LOS) analysis for freeways and multilane highways. Accident studies and statistics. Design aspects of parking facilities. Basic intersection signalization. Traffic signal design and timing.

Prerequisite

CVEN 360

CVEN 462**Select Topics in Transport Engineering****Credits: 3**

Highway planning, Mass transit plans design and operation (bus and rail), Analysis and design of signalized intersections based on HCM2000, Traffic signal coordination, Introduction to pavement management systems, Introduction to airport engineering, New developments in transportation engineering.

Prerequisite

CVEN 360

CVEN 481**Project Planning & Scheduling****Credits: 3**

Introduction to Project Management Body of Knowledge (PMBOK), network methods of project planning & scheduling, such as AON, PERT, bar-charting, line-of-balance, and VPM techniques. Project compression analysis and control. Computer applications in project management. The Laboratory component of this course covers modern project management tools and techniques on the personal computer.

Prerequisite

CVEN 380

CVEN 482**Select Topics in Const Engin & Mgmt****Credits: 3**

Selection made from the following topics: risk management, value engineering, total quality management; concurrent engineering; material management, and procurement of construction projects, project budgeting.

Prerequisite

CVEN 380

DAWA 110**Quranic Studies****Credits: 3**

1- Enable the students to handle Quranic phrases and its linguistic style.
2- Introducing the student to the history of the Quran and its exegesis.
3- Acquainting student with the scientific proofs of the authenticity and the historicity of the Quran.
4- Enable the student to understand the thematic unity of the surahs by relating verses of the surah on particular topics.

DAWA 111**Islamic Culture****Credits: 3**

Aims at introducing students to the foundations, manifestations and structures of Islamic Culture and to enlightening him about the challenges facing this culture.

DAWA 113**Philosophy of Sirah****Credits: 3**

1- Highlighting the personality of the Prophet (peace be upon him) in the various spheres of life.
2- Implanting love of the Prophet (peace be upon him) in the hearts of the students.
3- Expounding the Prophetic methodology in dealing with others.
4- Enabling the student to relate the Sirah of the Prophet (peace be upon him) with the requirements of the modern age.
5- Enabling the student to relate events and analyze and produce ideas.

DAWA 114**Modern Techniques of Dawa****Credits: 3**

1- Educating the student on the information and skills required for a successful life.
2- Entrenching virtues in the student.
3- Developing communications skills.
4- Encouraging the student to participate in Dawa activities in the society.
5- Introducing the student to various Dawa institutions.
6- Acquainting the student with skills for dialogue, discussions and objective reasoning.
7- Enabling the student on analyzing modern means of Dawa.

DAWA 117**Ethics****Credits: 3**

- Educating the student on the centrality of ethics in the making of a human, social, cultural and civilizational makeup.
- Introducing the student to the role played by ethics in preserving humanity and nature and in the right development of human beings emotionally, socially, academically and culturally as well in achievement of justice and a civil society.

- Acquaint the student with essential moral qualities, its importance and benefits in life and its practical results.
- Engraining in the student moral etiquettes through the exposition of the essence of morality and the ways and means to nurture it.
- Acquainting the student to the characteristics of Islamic ethical values by objectively and academically comparing it with various ethical philosophies

DAWA 202**Introduction to general Philopsophy****Credits: 3**

1- Introduce the student to the essential issues of philosophy.
2- Introducing the student to the most important schools of philosophy.
3- Introducing the student to the contribution of philosophy in the human civilization.
4- Enable the student to objectively interact and deal with philosophical thought.

DAWA 203**Principles & Methodology of Dawa****Credits: 3**

1- Develop an intellectually and behaviorally sound personality which eschews extremist tendencies.
2- Prepare a successful preacher/scholar who can contribute positively in reforming the society.
3- Define the characteristics, methodologies, approaches and means of prophet preaching.
4- Prepare a preacher/scholar abreast of modern facilities and capable of responding to with modern requirements.
5- Introduce the preacher/scholar to his duties towards his society and humanity at large.
6- Educate the student on the psychology of his audience.
7- Educate the student on dialogue and communication skills for Dawa work.
8- Assisting the student in achieving model roles from the life pattern of the Prophet (peace be upon him).

DAWA 204**Research Methodology****Credits: 3**

The objectives of the course are to provide students with:
• An introduction to research methodology and independent research skills.
• Key empirical and analytical skills that will facilitate disciplinary and interdisciplinary research in various fields.
• Improved academic writing skills, the ability to give and receive constructive feedback and to act constructively upon it.
• Effective ways of using library resources for research works

DAWA 205**School of Islamic Thought****Credits: 3**

There are three realms in which these objectives vividly manifest themselves:
1- In the field of knowledge – the student would learn:

- the origin of the schools of Islamic thought and their spread
- the impact of the political and social situation in conditioning the development of the thought pattern of these schools, and in turn the impact of these schools on intellectual and social life.
- Views and concept of each school.
- Characteristics of each school and its methodologies.
- The guiding conceptual principles which guided the leading figures of a school.
- The civilizational impact of these schools of Islamic thought upon the nurturing of human civilization.

All these points will have to be studied with understanding, criticism, analysis, and implementation to enable the student to appreciate the methodologies and teachings of these schools of Islamic thought.

- 2- In the field of skill, al-hiss al-haraki – to develop and nurture the students intellectual, cultural and academic understanding with respect to:
 - Discussion, comparison, and criticism of the views being studied.
 - Entrench philosophical concepts of various schools of Islamic thought in the students to enable him to develop his mental abilities and intellectual acumen.
- 3- In the field of creativity:

DAWA 206
International Organization & Human Rights
Credits: 3

- 1- Acquainting the student with the International Organisations and human rights issues.
- 2- Introducing the student to the most important International Organisations
- 3- Introducing the student to the issue of human rights and different views around it and the issues related to it.
- 4- Enable the student to understand the role of these organizations and interact with them.

DAWA 207
Islamc Intitutions
Credits: 3

- 1- Introducing the students to the institutions of Islam which regulate their society politically, economically and socially.
- 2- Introducing the student to the merits of Islamic Shariah and its comprehensive nature in all matters of life.
- 3- Nurturing the students understanding with respect to the issues that help in organizing ones life meaningfully.
- 4- Explaining the characteristics of Islamic institutions with respect to their divine nature, their adaptability, development, comprehensiveness, practicability, middle-coursed nature, fairness, moderation and the ability to safeguard ones freedom and respect for human rights.

DAWA 214
Textual Study Of The Quran
Credits: 3

- Educate the student on the best way to partake of the Qur’an and understand its methodology.

- Introduce the student to the method and style of benefiting from the Qur’an objectively to resolve modern issues and crises by presenting instances of these and the Quranic solutions to them in our everyday life.
- Fully acquaint the student with the Quranic approach to interacting with the ‘other’.

Prerequisite
 DAWA 110

DAWA 301
Contemporary of Fiqh
Credits: 3

Teach students the permissible and the prohibited matters in social and economic contexts and remove any doubts concerning these aspects.

DAWA 302
World Religions (Comparative Studies)
Credits: 3

1. Introducing students to the science of history of comparative religion.
2. Introduce the student to the different methodologies of comparative religion.
3. Enable the student to carry out comparative religious studies.
4. Deeping the understanding of the student of other religious traditions
5. inculcating positive approach towards the “other”
6. Enabling student to understand and appreciate the commonalities and differences between religions.

DAWA 303
Comparative Mysticism
Credits: 3

- 1- Importance of the study of comparative mysticism.
 - 2- Introduction to the commonalities of human spiritual experience.
 - 3- Introduction to the characteristics of mystical experience.
 - 4- Highlighting the human, intellectual, psychological and ethical dimensions of the mystical experience.
 - 5- Acquainting the student with the mystical language and its characteristics and points of impact.
 - 6- Elaborating the role of tasawwuf in the forward march of civilization.
 - 7- Highlighting the role of tasawwuf in resolving the problems of modern man.
- In all this the teacher would pursue a comparative study of the essential religious experiences of world religions.

DAWA 305
Modern Philosophy
Credits: 3

- 1- Introducing the student to the most important schools of modern western philosophy.
- 2- Introducing the student to the contribution of modern philosophy in the European civilization.
- 3- Enable the student to objectively interact and deal with modern western thought, benefit from its positive aspects and forsake its

- negative aspects.
- 4- Enable the student to evaluate modern philosophy in the light of Islamic beliefs

DAWA 306
History of Religion
Credits: 3

Introducing the student to the major religions of the world with respect to their origin, development, sacred scriptures and their modern situation with a solid background on the theological, juristic and major contemporary trends.

DAWA 401
Area Studies
Credits: 3

- Brief the student on the geographical setting of various areas world, their history, civilization, politics, society, economy and religion.
- Introduce the student to the most important movements, institutions, religions and philosophies and personalities.
- Encourage the student to keep close track of all developments in this areas.
- Enrich the student with the culture of these places.
- Acquaint the student with the strategic importance of various places in different respects.

DAWA 402
World Religious Thought
Credits: 3

- Acquaint the student with the modern religious map of the world and introduce him to the most essential issues engaging man in this regard.
- Introduce the background against which all these changes are taking place to the student.
- Acquaint the student with the critical and comparative methodologies involved in these studies.
- Engage the student in understanding and appreciating the points of view of other religions in this regard.
- Provide the student the necessary material and motive to make a positive contribution towards this dialogical thrust while representing his own religious view succinctly.

DAWA 403
Graduation Project (Capstone)
Credits: 3

The student will have to carry out a research project as a necessary part of graduation, on a topic or a theme of his choices after the approval of the department and under the supervision of faculty. He will be allowed to start the project from the third year if he wishes so. No degree will be conferred on him until and unless he successfully completes the project to the satisfaction of the department.

DAWA 404
Sociology of Religion

- Credits: 3**
- 1- Introducing the student to the social dimension of religion and its academic importance through the sociology of religion.
 - 2- Introducing the student to the origins, schools, theories, methodologies and leading figures of this discipline and enabling him to critically analyze it.
 - 3- Acquaint him with the meaning of social change and its various theories and the role played by religion in it.
 - 4- Educate the student on the perspective of the scholars or sociology on the nature of religious and political institutions in the modern societies and encourage him to develop his own critical opinion on the subject.
 - 5- Introducing the student to the efforts made by Muslim scholars in this field and comparing it with the modern western endeavors in the field.
 - 6- Develop in the student a clear and concise Islamic view of religion and society and encourage him to understand and appreciate the modern views of civil society and human rights.
 - 7- Educate the student on critically analyzing theories of the origin of religions presented by scholars of sociology of religion and the alternative given by Islam in a clear and lucid manner.

DAWA 405
Independent Studies
Credits: 3

ECON 111
Principles of Microeconomics
Credits: 3

This course focuses on basic microeconomic concepts such as supply and demand, market equilibrium, the concept of elasticity, consumer choice, utility, production and costs, the theory of perfect competition, monopoly and monopolistic competition

Prerequisite
 ENGL 004 OR ENGL F073 OR ENGL F022 OR ENGL 202 OR TOEFL Internet-based Test 061 OR TOEFL_Inst Testing Prog 500 OR Int Eng Lang Test Syst-IELTS 5.5 OR TOEFL Computer-based Test 173) AND (MATH 002 OR MATH 004 OR MATH 119 OR MATH F014 OR Scholastic Aptitude Test-SAT 500 OR Mathematics Placement Test 180 OR American College Testing-ACT 21)

ECON 112
Principles of Macroeconomics
Credits: 3

This course focuses on basic macroeconomic concepts such as the production possibility set, the circular flow of income, the national accounts, the components of aggregate spending, a simple model of income determination and international linkages.

Prerequisite
 (ENGL 004 OR ENGL F073 OR TOEFL Internet-based Test 061 OR

TOEFL_Inst Testing Prog 500 OR Int Eng Lang Test Syst-IELTS 5.5 OR TOEFL Computer-based Test 173 OR ENGL 202) AND (MATH 002 OR MATH 004 OR MATH 119 OR Scholastic Aptitude Test-SAT 500 OR Mathematics Placement Test 180 OR American College Testing-ACT 21)

ECON 211
Intermediate Microeconomics
Credits: 3

Theory of choice and its applications, income and substitution effects of a change in price and the compensated demand curve, production and cost with many variable inputs, theory and models of oligopoly, input markets and the allocation of resources.

Prerequisite
ECON 111 AND ECON 112

ECON 212
Intermediate Macroeconomics
Credits: 3

The behavioral foundations of consumption: the absolute-income hypothesis, the relative income hypothesis, the permanent income hypothesis and the life-cycle hypothesis. Other topics covered include behavior of investment: the desired capital stock, the interaction between the multiplier and the accelerator and trade cycles, IS/LM model, labor markets, and balance of payments analysis.

Prerequisite
ECON 111 AND ECON 112

ECON 214
Monetary Policy
Credits: 3

This course covers the evolution of money. The monetary systems, the financial system, interest rates, commercial banks functions, and their role in the creation of money. The central bank: its role in setting monetary policy and money supply. Money demand, money and inflation, and the role of money in economic activity.

Prerequisite
ECON 111 AND ECON 112

ECON 311
Econometrics
Credits: 3

This course examines properties of the least-squares estimators, specification, estimation and hypothesis testing of the simple and multiple regression models, use of dummy variables and violations of classical assumptions: heteroscedasticity, autocorrelation and multicollinearity.

Prerequisite
ECON 111 AND ECON 112 AND STAT 222

ECON 452
Industrial Economics

Credits: 3
Essential economics of various sources of energy; emphasis is given to the demand for oil, supply of oil, fluctuations in oil prices, forecasting oil prices and the role of OPEC. The course also covers other sources of energy, particularly coal, natural gas and nuclear power.

Prerequisite
ECON 111 AND ECON 112

ECON 453
International Economics
Credits: 3

This course examines the theory of comparative advantage and the gains from trade, tariffs and other trade restrictions, protection policies, the GAAT, mechanics of international payments, and international monetary reform.

Prerequisite
ECON 111 AND ECON 112

ECON 472
Managerial Economics
Credits: 3

Use of theory of the firm to integrate and link economic theory, decision sciences and the functional areas of business; application of demand, production and cost analyses, market structure and pricing practices, regulation, risk analysis and capital budgeting.

Prerequisite
ECON 111 AND ECON 112

EDEC 001
English I
Credits: 2

This is a foundation course for improving students' competencies in English.

EDEC 002
ICT 1
Credits: 1

This is a foundation course for improving students' competencies in the use of technology.

EDEC 003
English II
Credits: 2

This is an intermediate course for improving students' competencies in English.

EDEC 004
ICT II
Credits: 1

This is the course following ICT I for improving students' competencies in application of technology.

EDEC 021
Young Children's Development & Learning
Credits: 2

This module provides a study of the growth and development of children from prenatal stage through early childhood. The physical, cognitive, social, emotional, and language aspects of development are discussed, with attention to both typical as well as atypical development in each area. The influences of culture, family, and the environment on young children's development are also discussed.

EDEC 031
Methods of Teaching Children
Credits: 2

This module provides knowledge on learning and teaching terms at Kindergarten stage and the most important strategies and used methods for applying activities. It also helps acquire skills on designing and using educational media. In addition, it helps forming positive attitudes towards parental partnership through home activities and non-curricular activities.

EDEC 032
Learning Environment for Young Children
Credits: 2

This module provides a broad overview of the factors that ensure developmentally appropriate learning centers. A primary focus will be on the development of thoughtfully designed educational environments and activities that promote children's engagement in creative as well as teacher-led guided play and learning through inquiry. Issues of health and safety are also discussed.

EDEC 041
Special Education
Credits: 2

This course addresses the characteristics and features of children with special needs, identifying the methods of early intervention, integrating and discussing the issues of children with special needs. The course also deals with a focus on increasing awareness and understanding the individual needs of the child, and providing the student assistant with observation techniques and a selection of educational activities to support children with special needs.

EDEC 043
Literacy & Numeracy
Credits: 3

EDEC 052
Final Field Experience and Seminar
Credits: 5

Students will work closely with qualified Early Years Teachers, College of Education faculty, and Education Institute Coordinators in observing, recording, planning, designing and evaluating activities which enhance the development and learning of young children. The field training involves 5 hours/day, 4 days per week for four weeks. Also students will

reflect on field experience related issues in a seminar format 3 hours/day, one day per week for four weeks.

EDEC 410
Play & the Theory of Movement
Credits: 2

Theory and research in the field of play and movement for young children are the focus of this course; characteristics of play at various ages and the role of play in development are covered. Course experiences are oriented toward increasing student awareness of the meaning and play to children, the importance of movement, and how to stimulate and enhance enriching play behavior.

Prerequisite
EDUC 315

EDEC 411
Health & Safety of Young Child
Credits: 2

Participants in this course learn about the basic nutritional needs of children, good health practices, and accident prevention in the home and classroom. It will also examine prenatal factors of nutrition, health, and safety that may affect the education and well being of the young child.

EDEC 412
Comm. Outreach & Resources
Credits: 2

This course focuses on a study of approaches to family, community, societal, cultural, and ideological support systems in children's growth, learning, and development. It includes an emphasis on how these factors are related in the permissive-restrictive dimensions of child rearing and socialization in broad perspectives across environmental contexts, an examination of resources and systems to address the special needs of families with children who are "at risk" or have disabilities, and review of technological tools used to locate and compile information on community resources. This course includes field hours.

EDEC 413
Integrated math & Science for Young Children
Credits: 3

This course is designed to help the student gain knowledge and competencies necessary to become an effective teacher and leader in the areas of early childhood mathematics and science. It develops the theoretical bases for mathematics and science learning and teaching; illustrates and applies models for integrating elementary mathematics and science teaching; provides practical experience in curriculum, instruction and assessment. This course addresses specific State of Qatar National Curriculum Standards and requires an extensive field-based component.

Prerequisite
EDUC 312

EDEC 452
Teaching Reading & Writing to Young Children
Credits: 3

This course will apply the theories of literacy acquisition to classroom settings. The course will investigate ways to help students learn to read and to write, how to assess and remediate learning, and how to address special issues related to the skills of reading and writing. This course includes an extensive field-based component.

Prerequisite
EDUC 312 AND EDUC 313

EDEC 453
Teaching Arabic Language to Young Children
Credits: 3

Participants in this course will study goals, methods, and materials appropriate for teaching young children the Arabic language, with special emphasis on the Curriculum Standards for the State of Qatar, Arabic. This course includes an extensive field-based component.

Prerequisite
EDUC 312 AND EDUC 313

EDEC 454
Integrated Social Studies to Young Children
Credits: 3

This course will investigate how to apply theories of educational philosophy and psychology to teach the content and the values of social studies. There will be special emphasis on Arabic culture, Islamic values, and traditional ways of life in Qatar.

Prerequisite
EDUC 312

EDEC 456
ESL and Young Children
Credits: 3

This course deals with theory and best practice in teaching, listening, speaking, reading and writing that are aligned with the State of Qatar National Curriculum Standards for grades KG to Three. It also introduces instructional strategies that foster language development in elementary school that are consistent with current theories of child second language acquisition. Language assessment, integrating technology and materials, planning lessons and curricula, and classroom organization and management will also be also explored. This course includes an extensive field-based component.

Prerequisite
EDUC 311 AND EDUC 313

EDEC 481
Student Teaching

Credits: 9
This course will provide ongoing mentoring and reflection during a 10-week Student Teaching experience and the four weeks preparation for that Student Teaching. Topics for study will emerge from interns' authentic concerns and interests, from the university supervisor's classroom observations, and from mentor teacher suggestions. Participants enrolled in this course will assume the responsibilities of a classroom teacher in a school setting. This course requires a minimum of 360 field hours.

Prerequisite
EDUC 310, EDUC 315, EDUC 312, EDUC 316, EDUC 317, EDUC 318, EDUC 314, EDUC 313 Concurrent, EDUC 311

EDPR 410
Reading & Writing in all Disciplines
Credits: 3

This course will focus on the theories and research that underpin the incorporation of reading and writing in every discipline and on methods for incorporating rich reading and writing experiences in each subject. Participants in the class will explore the theory and practice of literacy development of adolescents and how those theories may be applied in the classroom.

Prerequisite
EDUC 311 AND EDUC 313

EDPR 446
Teaching Primary Level Arabic
Credits: 3

Participants in this course will study goals, methods, and materials appropriate for teaching primary students in the Arabic language, with special emphasis on the Curriculum Standards for the State of Qatar, Arabic. This course includes an extensive field-based component.

Prerequisite
EDUC 313

EDPR 447
Teaching Primary Level Islamic Studies
Credits: 3

Participants in this course will study goals, methods, and materials appropriate for teaching primary students in Islamic Studies. This course includes an extensive field-based component.

Prerequisite
EDUC 312

EDPR 448
Teaching Primary level Social Studies
Credits: 3

This course concentrates on the teaching strategies of social studies, its approaches, and its methods in general education classes for the primary level. The course includes a number of topics including

the nature of social studies in relation to its objectives, structure, concepts, definitions and the mutual relations among its branches and educational functions. The course also examines the knowledge and skills related to the curricula of social studies in Qatar which is connected to teaching, planning, learning resources, as well as evaluation methods. This course includes an extensive field-based component.

Prerequisite
EDUC 312

EDPR 450
Teaching Primary Level Science
Credits: 3

Participants in this course will study goals, methods, and materials available for teaching topics such as scientific inquiry, matter and energy, biological systems, space and earth science, ecology, forces, and physical systems in the primary school classroom. Issues related to problem solving and technology will also be examined. The course will focus and the State of Qatar National Curriculum Standards in Science and will have a field-based component in a primary school setting.

Prerequisite
EDUC 312

EDPR 451
Teaching Primary Level Math
Credits: 3

Participants in this course will study goals, methods, and materials available for teaching topics such as numeration, geometry, basic operations, fractions, decimals, percent, measurement, and probability in the primary school classroom. Issues related to problem solving and technology will also be examined. The course will focus and the State of Qatar National Curriculum Standards in Mathematics and will have a field-based component in a primary school setting.

Prerequisite
EDUC 312

EDPR 452
Methods in Inquiry & Research
Credits: 2

This course focuses on the candidates' acquisition of research and inquiry skills to support data collection, analysis, and reflection (action research). The application of qualitative and qualitative research methodologies will be examined. In addition, candidates will learn how to teach and support higher level thinking and inquiry skills in primary students and how to teach students to design and conduct experiments in science and mathematics.

Prerequisite
EDUC 312
EDPR 453
Teaching Primary Level English

Credits: 3
This course deals with the techniques, methods and strategies for teaching beginning EFL/ESL students. It deals with the effective teaching of English language skills, with special emphasis on the curriculum standards of the state of Qatar, English for grades from 4-6. Participants in this course will be exposed to the major concepts, theories and research related to the nature and acquisition of a second language. The course will also cover scaffolding techniques, material selection, and evaluation and assessment techniques appropriate to Qatar standards and ESL/EFL classrooms. This course includes field-based experiences in a primary school setting.

Prerequisite
EDUC 311

EDPR 454
Teaching Primary Level English II
Credits: 3

This course expands upon candidates knowledge the concepts and strategies for teaching beginning EFL/ESL students learned in Teaching Primary Level English (ESL) I for the effective teaching of English language skills, with special emphasis on the curriculum standards of the state of Qatar, English for grades from 4-6. The course requires candidates to apply scaffolding techniques, material selection, and evaluation and assessment techniques appropriate to Qatar standards and ESL/EFL classrooms and to effectively use ICT and inquiry in instruction. This course includes field-based experiences in a primary school setting.

Prerequisite
EDPR 453

EDPR 455
Teaching Primary Level Reading
Credits: 3

This course is a comprehensive reading instruction course that is research based and includes the study of phonemic awareness, phonics, comprehension, spelling patterns, and methods of delivering a strong literature based program with emphasis on content area reading, comprehension, and ongoing assessment and diagnostic techniques.

Prerequisite
EDUC 312

EDPR 481
Student Teaching
Credits: 9

This course will provide ongoing mentoring and reflection during a 10-week Student Teaching experience and the four weeks preparation for that Student Teaching. Topics for study will emerge from interns' authentic concerns and interests, from the university supervisor's classroom observations, and from mentor teacher suggestions. Participants enrolled in this course will assume the responsibilities of a classroom teacher in a school setting. This course requires a minimum

of 360 field hours.

Prerequisite

EDUC 310 AND EDUC 315 AND EDUC 312 AND EDUC 316 AND EDUC 317 AND EDUC 318 AND EDUC 314 AND EDUC 313 AND EDUC 311

EDUC 100

Photography

Credits: 3

This course focuses on the basic concept of digital photography, which emphasis on 1) photography literacy, 2) handling of the digital camera, and 3) manipulation of digital images.

EDUC 200

Education and Social Problems

Credits: 3

This syllabus was designed to help Qatar University students be aware of the basic educational concepts and their relationships with the local and universal problems and issues directly related to the education field. These issues and problems are considered a foundational introduction to understand education issues and topics at the local, regional and universal levels.

It also aims at helping students acquire the skills of recognition, understanding, analysing, and justifying those problems logically and critically. This is in turn will contribute to increasing their analytic abilities and their awareness of the community problems and issues from different domains (culturally, socially, economically, and environmentally, etc.) and in the amount that qualifies them to accept the other. This is of course will be achieved considering the renewed conditions of the Qatari society in addition to the variables and hurried universal innovations.

This course also aims on assuring the importance of students' personal awareness of the importance and role of the educational process in participating in solving the Qatari society problems. It is to be considered that education is a society issue that requires forming an effective partnerships with institutions and many religious, environmental, health, and security parties in the society.

All these objectives are to be achieved in a distinguished, educational environment that is open to the local and international realities, an environment that is varied in its ways of presentation, research, analyses and evaluation. The role and importance of the university student in communication and dialogue can't be overlooked in developing transparency and the spirit and soul.

Consequently, this syllabus motivates students to cooperate and participate in suggesting some topics that require group work and offer solutions with peers. This in turn develops their abilities to discuss issues, to have a dialogue, to search, analyse problems and suggest proper solutions. By being involved in all of these processes, their role as effective and productive university students will be enhanced and will assure their loyalty and belongings to their Qatari society, keeps their ethics, values, morals and distinguish their identities, in addition to motivating them to keep their society's wealth and possessions.

EDUC 201

Research Methods

Credits: 3

This course is designed to help undergraduate students understand what research is, how it is conducted, and its place in academic disciplines. The focus will be on assisting students in developing practical research skills and strategies to enhance academic and professional success. Major emphasis will be on helping students understand the basic concepts of research as well as the different research paradigms and their implications for doing research. Another focus will be on assisting students with developing the ability to effectively prepare a research proposal. Other course topics include research ethics, experimental and non-experimental research, and acquiring electronic and non-electronic information resources for research purposes. Delivery methods used in this course will integrate active and experiential activities in the teaching and learning process. Student learning outcomes will be assessed using a multidimensional approach.

EDUC 203

Family Relationships

Credits: 3

This course provides students with a range of knowledge, skills, and positive attitudes towards the family and family relations. It covers the concept of families, their functions and characteristics, the functions of the individual that change with marriage and family life, and family growth in the life cycle. Content includes the family's role in child-rearing during different developmental stages. The role of family organizations in helping families address marital issues and problems is also addressed

EDUC 310

Foundations of Education in Qatar and School Reform

Credits: 3

This course has been designed to acquaint the learners with the progress of education in Qatar, including schools and the various elements that impact education and learning, such as the family and society. Learners will also become acquainted with the roles expected they may be expected to ply within the initiative of educational progress in Qatar through examining some of the issues related to the initiative and the responsibilities of teachers.

EDUC 311

Applications in Second Language Acquisition

Credits: 3

This course provides an introduction to the field of Second language acquisition and learning, an intricate process that involves the dynamic interaction of individual and social variables. It considers a wide range of theories, models, and research that have been proposed to account for this process. Participants are guided to evaluate and consider the implications of different perspectives for second language teaching in a variety of contexts.

Prerequisite

EDUC 313

EDUC 312

Curriculum and Assessment

Credits: 3

This course engages participants in examining curriculum theory and models and provides experience in designing individual lessons, units, and assessments that promote the learning of all early childhood and primary students. Participants in the course will learn to plan an effective instructional program through applying best practices, responding to diverse community interests, and planning for student mastery of State of Qatar curriculum standards. This course includes a field-based component.

EDUC 313

Developing Literacy in Children

Credits: 3

This course will provide an overview of the history, current research, and issues in language acquisition in both naturalistic contexts and classroom settings and the importance of literature in the development of children. It also includes the identification, evaluation, and use of different genres of literature in teaching children.

EDUC 314

Technology for Children

Credits: 3

This course provides an introduction to basic computer operations and technology, including fundamentals of using a computer, using basic software, accessing and saving data, basic use by children of spreadsheets, databases and word processing. Participants in this course will learn about developmentally appropriate use of technology with children and how to evaluate and select hardware and software to support the early childhood and primary programs.

EDUC 315

Methods I: Child Development

Credits: 3

This course reviews the literature on children's biological, motor, perceptual, cognitive (including intelligence), language, emotional, social, and gender development. Child development history, theory, and research strategies will be discussed, as well as the effect of family, peers, media, and schooling.

EDUC 316

Classroom Management

Credits: 3

This course will explore methods to create a positive primary classroom environment and to establish routines that lead to effective learning and safety for all students. It will examine theories and research-proven strategies to manage student behaviors to promote learning and ways to engage parents as partners to promote learning. This course includes a field-based component.

Prerequisite

EDUC 312 AND EDUC 315

EDUC 317

Inclusive Classrooms

Credits: 3

This course aims at introducing candidates to psychological, environmental, and cultural conditions that contribute to mild/moderate disabilities. It covers etiology, characteristics, development, prevention and intervention strategies, theories, and legal aspects. It emphasizes development in academic, social, career, behavioral, medical, psychological, physical, and health conditions of individuals with mild/moderate disabilities. This course includes a field-based component.

EDUC 318

Integrating Visual Arts

Credits: 3

This course teaches how to integrate the visual arts and infuse it across the curriculum. It acquaints students with the interdisciplinary approach to education. Literature supporting integration of the visual arts with other subjects will be examined. The course also has a clinical aspect in which students design and execute lessons, thematic units, and activities to demonstrate understanding of the concepts as well as ability to carry them out in the class room

ELEC 201

Electric Circuits

Credits: 3

Basic Concepts: Voltage, current, power, and energy. Independent and dependent voltage and current sources. DC Circuits Analysis: Ohms law, Kirchhoff's current and voltage laws. Series and parallel DC circuits' analysis, nodal analysis, and mesh analysis. Superposition, source transformation, and maximum power transfer theorems, Thevenin's and Norton's theorems. Capacitance and Inductance: series and parallel connections of capacitors and inductors. AC Circuits Analysis: Sinusoidal sources, rms value, phasor representation, complex impedances. Kirchhoff's laws in the phasor domain, parallel and series AC circuits. Experiments will be conducted to support the course including the use of computer software for circuit analysis.

Prerequisite

MATH 102 Concurrent AND PHYS 193 Concurrent

ELEC 202

Electric Circuits II

Credits: 3

First & Second-Order Circuits: Source free for series and parallel RC, RL, and RLC circuits. Step response of series and parallel RC, RL and RLC circuits. AC Circuits Analysis Theorems and Techniques. AC Steady state power calculation and power factor correction: Poly-phase circuits, balanced and unbalanced three-phase circuits. Magnetically-Coupled circuits and mutual inductance: Transformers. Series and Parallel Resonance: Passive filters. Fourier analysis: Response of electric circuits to non-sinusoidal signals. Average, rms, and power values for non-sinusoidal signals. Laplace transform and its application to First & Second-Order circuit analysis. Two-port networks: Different

representations of two-port networks, interconnections of two-port networks.

Prerequisite
ELEC 201

ELEC 203
Electric Circuits II Lab
Credits: 1

Selected experiments are performed, these including; Response of RL and RC circuits; Series and Parallel Response of RLC networks; Measurement of average and rms values; Sinusoidal Steady State Analysis using Circuits techniques; Three-phase circuits; Measurement of three-phase power; power factor correction, etc.

Prerequisite
ELEC 202 Concurrent

ELEC 231
Fundamentals of Electronics
Credits: 3

Semiconductor Materials and PN Junction: Forward biased, reverse biased, and I-V relationship. Diode and Zener Diode Circuits: DC analysis, models, and applications. Bipolar Junction Transistor: Transistor structure, biasing, and I-V relationship. DC analysis of transistor circuits. Basic transistor applications: Switch, digital logic, etc. Basic transistor amplifier configuration. Design and applications. Field Effect Transistor: MOSFET, DC circuit analysis. Basic MOSFET applications: switch, digital logic gates, and amplifiers.

Prerequisite
ELEC 201

ELEC 261
Digital Systems Design
Credits: 3

Number systems. Boolean Algebra. Combinational Logic Design. Logic Minimization Techniques. Sequential Logic Design. State minimization Techniques. Sequential Circuit Implementation. PLA and Memories. Introduction to Computer design.

ELEC 262
Digital System Design Lab
Credits: 1

Selected experiments examining logic devices and circuits, and including a final design project, to accompany and complements the lecture course.

Prerequisite
ELEC 261 Concurrent

ELEC 299
Electrical Engineering Seminar

Credits: 0
Selective weekly seminars given by the faculty and invited speakers from the industry. Topics include contemporary engineering issues, ethical issues, engineering skills, and various other issues that help students in their future careers.

ELEC 311
Electromagnetics
Credits: 3

Electrostatic Fields: Electric field intensity, electric flux density. Gauss's Law for electric field. Magneto static Fields: Magnetic field intensity, magnetic flux density, Gauss's Law for magnetic field. Time Varying Fields: Maxwell's equations in differential and integral forms. The boundary conditions for the electromagnetic fields across material boundaries. Solution of Maxwell's equation in time and frequency domain. Electromagnetic wave propagation in free space and in material. Waveguides: Applications of Maxwell's equations and boundary value problems to waveguide structures. Antennas: Introduction to antennas.

Prerequisite
MATH 217 AND PHYS 193 AND MATH 385

ELEC 312
Electric Machines
Credits: 3

Magnetic Circuits: Magnetic equivalent circuit, analogy with electric circuits, losses, linear and non-linear magnetic circuits calculations. Transformers: Single phase transformers, principle of operation, equivalent circuit, equivalent parameters determination, three phase transformers, connections of transformers, autotransformers, harmonics. Principles of operation of DC machines. Electromechanical Energy Conversion Devices: Principle of energy storage and conversion, force and emf production, torque production in rotating machines. Three Phase Induction Motors: Construction, theory of operation, equivalent circuit, starting of induction motor, speed control. Synchronous Machines: Construction, theory of operation, Equivalent circuit and power flow, power and torque characteristics, starting, synchronization, power factor control, speed control.

Prerequisite
ELEC 202

ELEC 313
Electric Machines Lab
Credits: 1

Transformer: Open and short-circuit tests, polarity test, loading characteristics for efficiency and regulation determination. DC machines: starting and loading tests. Induction Motor: Starting tests, no-Load and locked rotor tests, load test. Synchronous Machines: No load and short circuit tests, synchronization test. Computer package will also be used to handle tedious calculations arising in some electric machine experiments.

Prerequisite
ELEC 312 Concurrent

ELEC 321
Power Systems Analysis
Credits: 3

Power System Components. Per unit system, System modeling and Impedance diagram. Transmission Line: Parameters calculations(R, L, C), steady state operation, reactive compensation, different models representation; Short, medium and long lines, ABCD parameters, cascade connection and parallel operation of transmission lines. Power Flows: Bus admittance matrix, power flow equations, solution of power flow equations, and control of power flow. Symmetrical Fault: Calculation of short-circuit current, short- circuit capacity.

Prerequisite
ELEC 202

ELEC 333
Electronics Engineering
Credits: 3

Operational amplifiers design and applications, Differential amplifiers and multistage amplifiers, Frequency response and design of the differential amplifiers, Analysis of active filters and tuned amplifier circuits design and applications, Analysis and design of signal generators and power amplifiers.

Prerequisite
ELEC 231

ELEC 334
Electronics Engineering Lab
Credits: 1

Selected experiments examining differential and operational amplifiers circuits design and applications. Fundamentals and design concepts of electronic circuits including filters, oscillators, and power amplifiers. Use of computer simulation for analysis and design of electronic circuits.

Prerequisite
ELEC 333 Concurrent

ELEC 341
Communications Engineering
Credits: 3

An introductory course to analog and digital communication systems. Distortionless analog communication; amplitude, frequency, and phase modulation system architectures; frequency division multiplexing. Sampling, quantization, and pulse code modulation (PCM); time division multiplexing. Baseband digital communication; intersymbol interference (ISI); Nyquist's ISI criterion; eye diagrams. Passband digital communications; amplitude, phase and frequency-shift keying; signal constellations. Random processes, random signals and noise. Performance analysis of BPSK in noise.

Prerequisite
ELEC 351 AND GENG 200

ELEC 342
Communications Engineering Lab
Credits: 1

Construction and testing of analog and digital modulation circuits. Emphasis on spectral analysis, bandwidth requirements, and other practical considerations. Phase looked loops. Frequency and phase modulations. Sampling and quantization.

Prerequisite
ELEC 341 Concurrent

ELEC 351
Signals & Systems
Credits: 3

Continuous and Discrete Time Representation of Signals and Systems: Signal and system properties. Systems Modeling. Convolution and Time Domain Response of Systems. Laplace Transform: Transfer functions. Z-Transform: Transfer functions. Fourier series, and Fourier transform, frequency response.

Prerequisite
ELEC 201

ELEC 352
Control Systems
Credits: 3

Examples of automatic control system. Block diagrams reduction. State-space modeling. Open-loop and closed-loop systems, feedback systems characteristics. Time domain analysis of second-order systems and two-dominant-pole model. Performance Specifications: Stability, transient response, and steady-state errors. Root locus analysis and design. Frequency Response Analysis and Design: Nyquist stability criterion, gain and phase margins, compensation using Bode plot. Pole placement design.

Prerequisite
ELEC 351

ELEC 366
Embedded Systems
Credits :3

An introduction to microcontroller architecture, instruction sets, C language compilers, microcontroller interfacing, microcontroller peripherals, and embedded system design. Study cases of microcontroller-controlled systems. Simulation and Emulation of specific families of microcontrollers.

Prerequisite
ELEC 261 AND ELEC 262 AND GENG 106
ELEC 367
Embedded Systems Lab

Credits :3

Selected experiments and course project that complement the theory course ELEC364. Operation of microcontrollers; interfacing microcontrollers to real systems; design of embedded systems solutions using microcontrollers. Use of computer simulation for the analysis and design of microcontroller-based systems

Prerequisite

ELEC 366

ELEC 371**Sensors and Instrumentation****Credits :3**

Measurement systems: components and behavior. Measurement & error: accuracy, precision, statistical analysis, calibration. DC & AC bridges. Resistance and capacitance measurement. Common industrial sensors to measure various physical quantities (e.g. temperature, displacement, velocity and acceleration, force and pressure, and light). Signal processing techniques applied to sensors' systems. Computer acquisition: DAQ, grounding, shielding, and cabling. The course includes a Lab which provides basic background in measurements & instrumentation and conventional sensors. CAD tools are used to analyze, acquire and present data.

Prerequisite

ELEC 333

ELEC 375**Sensors and Instrumentation****Credits :3**

Part 1: Biomedicine and Electrical Engineering; Human physiology and anatomy, biosystems and modelling of physiology; Engineering and human senses; Brain studies and EEG (electrical activity and disorders); heart and ECG; eye, perception and image processing ; hand and automatic control; human body as a communication system (auditory system, speaker and speech analysis); Part 2: Biomedical processes and systems; Filtering for removal of artefacts; Biomedical Event detection, characterization and automatic diagnostic; Frequency characterization; Pattern classification and diagnostic decision; Lab experiments.

Prerequisite

ELEC 351 AND ELEC 371

ELEC 399**Practical Training****Credits: 3**

Supervised 8 weeks training period at any approved engineering concern (consulting, contracting, industrial, government), intended to provide students with hands-on experience at the work place. Evaluation is based on daily performance, supervisors' input, student's report, and a short presentation.

ELEC 415**Power Electronics and Drives****Credits: 3**

Power Semiconductor Devices, AC/DC converters, Choppers, Inverters, Cycloconverters. Elements of Electric Drives; DC motor drives including conventional, brushless and modern permanent magnet motors; AC motor drives including induction and synchronous motors.

Prerequisite

ELEC 312 AND ELEC 333

ELEC 416**Selected Topics in Electric Machines and Drives****Credits: 3**

Selected topics in the field of electric machines and drives that deals with new trends and practical issues.

Prerequisite

ELEC 312

ELEC 422**Advanced Power System Analysis****Credits: 3**

Network Calculations: Node elimination, direct determination of bus impedance matrix. Symmetrical components and Sequence networks, Unsymmetrical faults, Power Systems Stability: steady state stability, transient stability, voltage stability. Reactive power and voltage control, HV Protection.

Prerequisite

ELEC 321

ELEC 423**Electric Power Distribution Systems****Credits: 3**

Load characteristics. Distribution transformers. Underground cables. Primary and secondary distribution systems. Power losses and Voltage regulation. Voltage dip due to motor starting, LV distribution protection. Reactive power compensation, Distribution generation. Electricity tariffs. Introduction to power quality.

Prerequisite

ELEC 321

ELEC 424**Operation of Power Systems****Credits: 3**

Electric Load Forecasting; Techniques used for forecasting, short term load forecasting, long-term load forecasting. Economic dispatch and unit commitment, least error squares algorithm, State estimation, Power system control, load frequency control and Automatic generation control.

Prerequisite

ELEC 321

ELEC 425**Selected Topics in Power Systems****Credits: 3**

Selected topics that deal with new trends and issues in Power System and High Voltage Engineering.

Prerequisite

ELEC 321

ELEC 438**Selected Topics in Electronics****Credits: 3**

Selected topics in the field of Electronics that deals with new trends theoretical and practical issues.

Prerequisite

ELEC 333

ELEC 444**Digital Communications****Credits: 3**

Theory and techniques of modern digital communication systems. Information sources and source coding. Digital transmission through AWGN channels. Band limited channels. Channel capacity and error correcting codes. Multiple access techniques and spread spectrum communications. Introduction to fading channels.

Prerequisite

ELEC 341 AND GENG 200

ELEC 446**Selected Topics in Communications Engineering****Credits: 3**

Selected topic in the field of Communications Engineering that deals with new trends and practical issues.

Prerequisite

ELEC 341

ELEC 447**Wireless Communications****Credits: 3**

Introduction, basic wireless communications concepts, math review. The wireless channel: Propagation models, channel classifications. Digital communications for wireless channels, OFDM concepts. Coding: Source/channel coding, interleaving. Spread spectrum communications, CDMA concepts. Diversity systems: Receiver/transmitter diversity, MIMO concepts.

Prerequisite

ELEC 341

ELEC 453**Advanced Control Systems****Credits: 3**

State-space representation, and solution of linear state equation. Controllability, observability, state feedback pole placement design, entire eigen-structure assignment for regulators design, state observer design, and linear optimal control design. Properties of nonlinear systems, Lyapunov stability, and nonlinear control system design. Intelligent control: fuzzy sets and systems, fuzzy control systems design.

Prerequisite

ELEC 352

ELEC 456**Digital Signal Processing****Credits: 3**

Overview of continuous and discrete signal processing. Discrete Fourier transform. Fast Fourier transform. Signal sampling and reconstruction. Digital filters. Correlation and spectral estimations

Prerequisite

ELEC 351

ELEC 457**Selected Topics in Control and or Signal Processing****Credits: 3**

Selected topics in the field of Control and signal processing that deals with new trends and practical issues.

Prerequisite

ELEC 352

ELEC 469**Computer Networks****Credits: 3**

Network classifications, architecture and topologies. Layered reference models. Functional description of layers. Switching and routing. Network protocols. Network control: traffic management and congestion. Fundamentals of network performance analysis. Examples of networks such as the Internet, ATM.

Prerequisite

ELEC 263 AND GENG 106 AND GENG 200

ELEC 471**Selected Topics in Computer Engineering****Credits: 3**

Selected topics in the field of Computer Engineering that deals with new trends and practical issues.

Prerequisite

ELEC 364

ELEC 472**Wireless Networks & App**

Credits: 3

Overview of Mobile Applications, Mobile Business (m-Business), and the Wireless Internet. Wireless Technologies, Wireless transmission, Wireless Networks, Satellite Systems, Wireless LAN, Bluetooth, and Wireless Application Protocol (WAP). Mobile Programming Languages & tools of development including: C# .NET, ASP .NET, Mobile.NET, Integrated Development Environment (IDE) Visual Studio .NET, Extensible Markup Language (XML), Web Matrix. Application Development for Wireless Devices.

Prerequisite

ELEC 469

ELEC 481**Power Electronics and Renewable Energy****Credits :3**

Introduction to power electronics, and renewable energy sources and their impact on environment. Power Semiconductor Devices. DC/DC Converters principle and design. Inverters concept of operation, design, and applications. Rectification of utility input: concepts and control. Renewable energy sources: Solar energy, Wind energy systems, and fuel cells. Renewable energy source modeling and interfacing. Renewable energy sources in grid-connected and island modes. Several laboratory experiments and computer-based exercises are conducted to enhance and consolidate the understanding of power electronics & renewable energy principles and applications.

Prerequisite

ELEC 333 AND ELEC 312

ELEC 482**Selected Topics in Power Electronics****Credits :3**

Selected topics in the field of power electronics that deals with new trends and applications shedding the light on the practical issues related to specific application. Several selected laboratory experiments, computer based exercises, and digital simulations labs are conducted to enhance and consolidate the understanding of advanced power electronics principles and applications.

Prerequisite

ELEC 333 AND ELEC 312

ELEC 483**Electric Drives****Credits :3**

Introduction electric drive systems. Dynamics of electric drive systems. Joint speed torque characteristics of electric motors and mechanical loads. Speed-torque characteristics of electric motors. Modeling of electric drives systems. Speed control of DC motors. Design of feedback control system for electric drives. Speed control of induction motor: Basic principles for speed control, voltage/frequency control, slip energy recovery, and current source speed control. Braking of electric motors (dc and induction motors). Several laboratory experiments and

computer-based exercises are conducted to enhance and consolidate the understanding of electric drives principles and applications.

Prerequisite

ELEC 352 AND ELEC 312

ELEC 484**Industrial Control****Credits :3**

This course aims to introduce the basic concept of industrial automation and modeling and control of industrial process. The course covers modeling of industrial processes through physical principles, and also identification of them using time and frequency domain techniques. Tuning of industrial controllers like PID is elaborated. Next, hydraulic and pneumatic system in industrial automation is introduced and their logic design is elaborated. Finally, Programmable logic controllers (PLC) are introduced and their hardware and software are explained.

Prerequisite

ELEC 352

ELEC 485**Introduction to Robotics****Credits :3**

The purpose of this course is to introduce the basics of mathematical modeling, design, planning, and control of robot systems. In this course, student will learn relevant results from rigid body transformation and geometry, forward and inverse kinematics, velocities and Jacobians of linkages, dynamics, trajectory planning and control, robot design, and actuation and sensing devices.

Prerequisite

ELEC 352 OR MECH 361

ELEC 486**Advanced Biomedical Systems Engineering****Credits :3**

Review of bio-medical applications; system theory approach to modelling; non-invasive determination of blood pressure; physiology of oxygen transport; physiology of cardiac output, ECG monitoring and detection of abnormalities; screening for cervical cancer and breast cancer; system and algorithm implementation; data types; digital signal processors; Medical monitoring and System theory; innovation in the medical industry; applications and lab experiments.

Prerequisite

ELEC 375

ELEC 487**Selected Topics in Biomedical Engineering****Credits :3**

Selection of special topics in the field of Biomedical Engineering covering a broad or specialized treatment of topics including but not limited to Biomedical Engineering Design, Biomedical electronics,

biomedical imaging.

Prerequisite

ELEC 375

ELEC 488**Medical Imaging Systems****Credits :3**

Part 1) Magnetic Resonance Imaging (MRI): MRI signal, magnet technologies, RF coils and circuits, simulation experiments. Part 2) Ultrasound: generation and interaction with tissues, piezoelectric transducer design and software simulation, ultrasound systems. Part 3) X-ray: X-ray tube, X-ray attenuation, Computed Tomography scanners. Part 4) Nuclear Medicine: Basic radioactivity, detector design and simulation experiments, gamma-camera, PET and SPECT. Part 5) medical image processing: theory and lab experiments. Part 6) automatic medical image interpretation and diagnosis: including design and lab component.

Prerequisite

ELEC 375

ELEC 495**Independent Study****Credits: 3**

To study and conduct a special assignment, or to participate in an internal or external research project.

ELEC 498**Senior Design Project I****Credits: 1**

The main Objective of the project is to train the student on how to tackle a specialized topic in the electrical engineering field. The topics are normally chosen by the department faculty members. The student is required to demonstrate his ability to: conduct a literature survey; perform the relevant calculations and implement his design. A well-referenced report constituting a theoretical background, design, theoretical results, conclusions and recommendations has to be submitted by the end of the project.

ELEC 499**Senior Design Project II****Credits: 2**

Continuation of ELEC 498.

Prerequisite

ELEC 498

ENGL 001**Found English I****Credits: 6**

Basic/Low Intermediate level integrated skills. Reading - reading for main ideas, scanning for details, making predictions, relating text to personal experience. Writing - composing a paragraph, using transition

words, using correct punctuation. Listening - listening for gist, listening for details, interpreting speaker's attitude, relating listening to personal experience, taking notes on details using an outline/ chart, Speaking - expressing opinions, role- playing, asking questions on various topics, giving short presentations. Vocabulary - word definitions, synonyms, antonyms, prefixes, appropriate usage. Grammar - adjectives, present and past tenses, gerunds and infinitives, adverbs, count and non-count nouns, modals. Multimedia programs - Focus on Grammar Basic, Planet English 1, Tense Buster, Story Board, NorthStar Companion Website.

ENGL 002**Found English II****Credits: 6**

Intermediate level integrated skills. Reading - identifying main ideas, reading for details, locating information in a text, relating information to life experience, comparing and contrasting information. Writing - organizing, using transition words, summarizing, writing an opinion essay. Listening - listening for main ideas and details, interpreting speaker's attitude and emotions, relating listening to personal experience, listening and taking notes. Speaking -offering advice / making suggestions, expressing personal preferences, defending opinions, conducting an interview, giving presentations on research findings. Vocabulary - word forms, synonyms/ antonyms, prefixes and suffixes, idioms. Grammar - present and past tenses, superlatives, equatives and comparatives, infinitives, relative pronouns, noun clauses, modals, present perfect tense. Multimedia programs - Focus on Grammar Intermediate, Planet English 2, Tense Buster, Story Board, NorthStar Companion Website.

ENGL 003**Found English III****Credits: 6**

High-Intermediate level integrated skills. Reading - summarizing information, analyzing purpose of text, identifying point of view, comparing/ contrasting two texts, identifying chronology. Writing - writing narrative, descriptive, cause/effect essays, summarizing, editing. Listening - synthesizing information from two listening texts, taking notes using an outline/chart, relating listening to personal experience, interpreting a speakers tone, intent, and attitude, posing questions; providing evidence to support answers. Speaking - expressing/ defending opinions, taking part in debates, oral presentations. Vocabulary - word forms, collocations, prefixes, idiomatic/ figurative expressions. Grammar - passive voice; gerunds and infinitives; conditionals; adjective clauses; advisability in the past/past modals; tag questions; reported speech. Multimedia programs - Focus on Grammar High-Intermediate, Planet English 3, Tense Buster, Story Board, NorthStar Companion Website.

ENGL 004**Found English IV****Credits: 6**

Advanced level integrated skills. Reading - Comparing /contrasting a common theme in divergent genres, synthesizing information, predicting content, identifying main ideas, scanning for details. Writing

-developing thesis statements, summarizing, writing descriptive, compare/contrast and argumentative essays. Listening - taking notes using a graphic organizer, interpreting speaker's emotions, summarizing main points, relating listening to personal experience. Speaking - expressing/defending opinions, responding to prompts, oral presentations.

Vocabulary -synonyms, antonyms, idioms, word forms, suffixes, metaphors. Grammar - wish statement expressing unreality, noun clauses, adjective clauses, adverb clauses, discourse connectors, direct and indirect speech, passive voice. Multimedia programs - Focus on Grammar High-Intermediate, Planet English 3, Tense Buster, Story Board, NorthStar Companion Website.

ENGL 099
Language Skills I
Credits: 3

The course is designed to develop the students listening comprehension, pronunciation and speaking skills. It aims at increasing the student's fluency, accuracy and confidence in dealing with listening and speaking materials and situations.

ENGL 100
Language Skills II
Credits: 3

The course is a continuation of language skills (1) and provides practice in listening comprehension and speaking skills at a higher level.

ENGL 110
English I
Credits: 4

The course is designed to introduce students to the process of reading and oral communication. It provides the students with a wide range of reading and oral communication skills/strategies that help them become efficient readers and speakers of English. The course focuses on reading comprehension and vocabulary development in context, listening comprehension, pronunciation and speaking skills. Course material and textbooks will be selected to reflect the pedagogical content of the course.

ENGL 111
English II
Credits: 4

This course is a continuation of English (1) and focuses on developing the same skills at a more advanced level. The emphasis remains on students' practical use of English. Some attention will be given to differences between written and spoken English (with the aim of eliminating errors resulting from confusing the two modes) and to conventions of punctuation.

Prerequisite
ENGL 110 OR ENGL 120

ENGL 112
Grammar I

Credits: 2

This course introduces students to basic syntactic categories, or parts of speech. It pays considerable attention to devices for expressing time, aspect and voice and to development of the students' understanding of how these are used appropriately in context. Continuous attention will be paid to subject-verb agreement throughout the series of grammar courses.

ENGL 113
Grammar II
Credits: 2

This course continues Grammar (1) examining in addition modality, negation, the use of determiners and major syntactic and collocational properties of phrasal verbs. The students are also encouraged to practice question formation.

Prerequisite
ENGL 112 OR ENGL 124

ENGL 114
Writing I
Credits: 2

The goal of this course is the writing of paragraphs. Students will work on sentences and the combination of sentences, paying additional attention to punctuation and spelling. They will also work on the discovery or creation of ideas and in organizing them into paragraphs showing clear topics, developmental points and conclusions.

ENGL 115
Writing II
Credits: 2

Building on the paragraph-writing skills of Writing (1), this course will concentrate on short essays of three paragraphs. The students will develop their abilities further to construct more complex sentences and to combine them using suitable transitions. The course will move toward more formal outlining or organizing ideas into clearly stated themes, or purpose, supporting statements and conclusionary remarks.

Prerequisite
ENGL 114 OR ENGL 127

ENGL 150
Essay Writing I
Credits: 3

This course provides guided experience in writing academic essays at the university level. Emphasis is placed on writing effective introductions and concluding paragraphs, developing a clearly defined thesis statement and crafting strong supporting paragraphs. The course will help the students to learn how to research, evaluate, use and cite sources and learn a variety of techniques for crafting their own writing through two principal activities: the process of their own writing and analysis of the writing of others. Students will receive instruction on summarizing, using transition signals/paragraphs, paraphrasing, using different types of quotes and correcting common sentence errors. All

material is based on the writing standards established by the Modern Language Association (MLA).

ENGL 151
Adv Reading Comprehension
Credits: 3

This course introduces students to a wide variety of authentic texts from different sources including newspaper and magazine articles and extracts from the works of modern writers. Texts will also vary in length and density. Tasks are designed to include different skills reflecting the different kinds of responses to texts needed by students such as summarizing the main argument of the text, taking detailed notes, criticizing texts, comparing texts written in different registers examining the different features that make texts cohesive and coherent and responding to exam-style comprehension questions.

ENGL 152
Sentence Analysis
Credits: 3

This course is designed to provide students with an understanding of the way in which words and sentences are constructed. It will cover the fundamental issues of sentence analysis, such as: word classes; clauses and units within the clause; free and bound clauses; and the distinction between form and function. Different ways of representing analysis will be covered, but the emphasis will be on traditional grammar and on functional analysis down to word level. Students will be expected to produce different analyses of superficially identical sentences, in order to explain ambiguities.

ENGL 153
Essay Writing II
Credits: 3

This course continues the work started in Essay Writing I. It deals in more detail with the different types of essays, some of which are of immediate relevance to the students' work in other courses such as the analytical and argumentative essay types, and others introduce the student to critical thinking and develop their analytical skills. This course will enable students to learn how to research, outline and write essays and also it enables them to judge essays written by others.

Prerequisite
ENGL 150 OR ENGL 203

ENGL 155
Introduction to Language
Credits: 3

This is an introduction to the general study of language. The course deals with the origin, nature and function of language as a uniquely human phenomenon. That is, what is common to all human speakers no matter what specific language they speak. Topics such as the structure of language, its role in society, and how it is learned are surveyed. Linguistic phenomena and their links to other disciplines such as artificial intelligence, psychology, society, culture, and brain, among others, are discussed.

ENGL 156
Introduction to Literature I
Credits: 3

This two-part course introduces students to some of the most vital debates in English Studies through a study of an English literary tradition that is constantly being rewritten and challenged. By concentrating on literature from the late sixteenth century up to 1960, students will learn about the rich canonical tradition and how each generation of writers has responded to it. Students will consider some explicit rewritings of classic texts (for example, a literary reworking of Hamlet or of the narrative of the Fall in the Bible), in order to raise issues about what the canon excludes or occludes. The study of selected plays, short stories and novels in addition to the poetry will broaden students' sense of a literary tradition, and introduce them to the practice of close analytical reading of these genres too. The course will help students to learn key theoretical approaches and instil some of the essential study skills they need for their undergraduate program. By the end of this course, students will have read some of the most celebrated texts in the English language, as well as learned about exciting innovations in contemporary literary theory and practical criticism.

ENGL 157
Introduction to Linguistics
Credits: 3

The course introduces students to the basic concepts in phonology, morphology, syntax, and semantics, as well as to some of the other subfields of linguistics, such as psycholinguistics, sociolinguistics and historical linguistics. Data and examples from numerous languages, particularly English and Arabic, are used to illustrate these concepts. The course helps students approach language in a scientific way.

ENGL 158
Introduction to Literature II
Credits: 3

This two-part course introduces students to some of the most vital debates in English Studies through a study of an English literary tradition that is constantly being rewritten and challenged, especially in the multicultural, postmodern era of the late twentieth century and beyond. By concentrating on literature from the eighteenth century to the present, students will learn about the rich canonical tradition and how each generation of writers has responded to it. Students will consider some explicit rewritings of classic texts, in order to raise issues about what the canon excludes or occludes. The study of selected plays, short stories and novels in addition to the poetry will broaden students' sense of a literary tradition, and introduce them to the practice of close analytical reading of these genres too. The course will help students to learn key theoretical approaches and instil some of the essential study skills they need for their undergraduate programme. By the end of this course, students will have read some of the most celebrated texts in the English language, as well as learned about exciting innovations in contemporary literary theory and practical criticism.

Prerequisite
ENGL 156 OR ENGL 248

ENGL 200

English Language I for Arts, Sharia and Education

Credits: 3

This course is designed to enable students who have completed secondary school English to consolidate basic spoken and written communication skills. The course primarily employs a communicative, task-based approach. Students are encouraged to become independent language learners and apply critical thinking skills towards a variety of motivating themes. Course activities include listening to authentic dialogues, table/data completion, acquiring vocabulary, group discussions, and paragraph and/or text writing.

ENGL 201

English Language II for Arts, Sharia and Education

Credits: 3

This course is designed to enable students who have completed English 200 to use English effectively for communicative purposes. It offers the opportunity for students to further develop their language skills: listening, speaking, reading, and writing in a systematic way and in context. Students in this course are encouraged to apply critical thinking skills and become independent language learners. The course also gives practice in grammar, vocabulary, pronunciation, note-taking, group discussion, conducting interviews, oral presentation and further reading.

Prerequisite

ENGL 200

ENGL 202

English Language I Post Foundation

Credits: 3

This course is designed to help students improve their academic writing ability, and to ensure that they are prepared for the more advanced writing and research skills introduced in English 2. Emphasis is placed on understanding information from authentic texts. Academic vocabulary is taught through inference and context. A collaborative community environment is encouraged, whereby students learn to provide and accept relevant, focused feedback to and from their peers. Throughout the semester, students create and develop an e-portfolio.

Prerequisite

ENGL 004 OR IBT 061OR T02 500 OR IELTS 5.5OR CBT 173 OR ENGL F073 OR ENGL F072 OR ENGL F020 OR ENGL F021 OR ENGL F022

ENGL 203

English Language II Post Foundation

Credits: 3

English 203 is an advanced academic writing course which provides an opportunity for students to learn and practice the skills needed for a guided university-level academic paper related to their field of study. The course emphasizes the development of academic writing skills as well as the ability to read and think critically. Students will learn to use the library and appropriate online resources to find and evaluate sources to inform, develop and support their ideas in term paper

writing.

Prerequisite

ENGL 202 OR ENGL F073 OR ENGL F069

ENGL 234

Language and Gender

Credits :3

This course focuses on how the social lives of women and men in a society interact with the ways language(s) is structured, learned and used; how people talk to the opposite sex in face-to-face interaction; and how we read and write. Topics covered include gender differences in linguistic forms, nonverbal communication and conversational patterns. It will also include how gender affects boys and girls as they learn to talk. These issues are considered in terms of theoretical and historical perspectives. References will be made to studies in linguistics and particularly sociolinguistics, anthropology, sociology, psychology and women studies.

ENGL 208

Literary Criticism

Credits: 3

This course aims to introduce beginning students of literature to the development of the concept of literary criticism, the history of theorizing about literature and the different views on the role of literature and its relation to life and society. Since the time of ancient Greek philosophers and writers have been trying to understand literature, and justify its existence. The course aims to chart the long history of these attempts from the time of Plato to the present, and the subsequent rise of literary theory. Along with studying the main schools of criticism/ critical approaches to literature, the course will integrate some practical or applied criticism on selected texts. The first part of the course is a review of the classical Greek and Latin origins of issues concerning literature and criticism, as well as of the traditional pre-modern approaches. The second part focuses on major 20th century literary theories, including formalism, New Criticism, psychoanalytic criticism, Marxism, feminism, New Historicism, deconstruction, post-structuralism, and cultural studies, among others.

Prerequisite

ENGL 158

ENGL 209

Language and Society

Credits: 3

The aim of this course is to give students a basic understanding of the role language plays in the fabric of society at both macro and micro levels, particularly the unifying the separatist functions. The nature of the course calls for encompassing themes from social psychology, communication, semiotics, pragmatics, and language planning. This eclectic approach is meant to provide students with an overall view of language as a social process and a social product. It is also meant to making students aware of the link between the formal and the functional dimensions in the study of language. The students are

exposed to the problems and issues related to language diversity with reference to the Qatari society.

ENGL 213

Language and Culture

Credits: 3

The aim of this course is to introduce language as a catalyst in the formulation, maintenance and transmission of culture. The importance of this course stems from the ever diminishing role of local cultures in view of a sweeping process of globalization. Language attrition is approached as a back door to cultural attrition. The course adopts an interdisciplinary approach and draws on backgrounds as diverse as linguistic theory, language teaching methodology, media studies and post-colonial literatures in English. The course stresses the role of language maintenance as a means of transmitting artifacts of culture in the case of indigenous minorities. Reference is made to the call for adopting English as an international lingua franca. Also, the role of education, media, and language policies are studied as means of culture maintenance. Case studies of different language communities are presented. Special reference is made to the Arab world in general and the Qatari society in particular.

ENGL 214

Oral Communication And Presentation For Engineering Majors

Credits: 2

The course will focus on the development of more elaborate essays of five paragraphs or more. Students will continue to develop the skills begun in Writing (2) and will be introduced to the conventions of incorporating references into their essays.

Prerequisite

ENGL 115 OR ENGL 227

ENGL 216

Phonetics and Phonology

Credits: 3

This course introduces students to general phonetics and phonology from a theoretical perspective. Students will be introduced to the theory of phoneme and the articulatory features of speech sounds from phonetic and phonological perspectives. The students will touch on the topic of acoustic phonetics. Topics such as phonological alternations (allophonic variation), phonological rules and rule ordering are dealt with. A discussion of the major theoretical frameworks in the field will cover theories such as feature geometry and underspecification, in addition to the basic elements of optimality theory.

Prerequisite

ENGL 157

ENGL 220

American Literature

Credits :3

This course introduces students to both the contexts and the texts that have come to shape American literature from the eighteenth- to the twentieth century. We will explore differing versions of American identity as they have developed through time and across the genres of prose narrative, poetry, and drama. From Walt Whitman's proud assertion of an American selfhood in "Song of Myself" (1855) to Sylvia Plath's struggle with what it means to be an American woman, this course will engage with major themes in American literature. These will include slavery and its inheritance, the creation of national identity, gender in America, the idea of the frontier and American gothic.

Prerequisite

ENGL 158

ENGL 225

Adv Grammar Practice

Credits: 2

This course is intended to provide students with a wide range of terms used to describe the way the English language is structured. It concentrates on areas which help students to speak and write more accurately, revise previous grammatical items and look into new ones at both the formal and functional levels. The course seeks to build up the reading and communicative competence of students.

Prerequisite

ENGL 125

ENGL 226

History of the English Language

Credits :3

The course is designed to introduce student to a history of the English language, focusing on its origins and development in the areas of sound (vowels and consonants), spelling, form and syntax. It will cover Old English, Middle English and Modern English. The course will also familiarize students with methods used by linguists to recognize, describe and analyze language change.

Prerequisite

ENGL 157

ENGL 230

Professional Writing

Credits :3

This course teaches key rhetorical concepts that help students shape their professional writing ethically, appropriately for audiences, and in a variety of professional contexts. Students will learn to plan, organize, and deliver effective business communications, including formal letters, memos, proposals, reports, presentations, and resumes. Students are encouraged to focus coursework and projects on prospective careers. Through both collaborative and individual projects, students will engage with practical and theoretical problems of communicating in the complex professional environments of the global, 21st century workplace.

Prerequisite

ENGL 153

ENGL 233 Language and Computers Credits: 3

This course aims at familiarizing the students with the basic relationship between linguistics, computing, and cognitive sciences. Students are introduced to the concepts on natural language processing (NLP), particularly the computational models pertaining to the structure and function of language, its use and its acquisition. Students will also have the chance to study the logic behind many of the computer applications they use including speech recognition and natural language generation. Problems of lexical and syntactic ambiguity are studied in depth and the difficulty they pose in NLP will be highlighted. Other applications such as spelling and grammar checkers spam handling, text –to – speech and speech-to text, parsing, machine translation, etc. will be approached from a functional angle. The course does not require any background in programming although knowledge of one or more programming languages is helpful. The course is suitable for linguistics students aim to enrich their background in computing, as well as computer science students trying to understand NLP in more depth. The course may also interest students beyond these two fields, particularly those who dwell on issues like computer-assisted language learning (CALL), and Artificial Intelligence (AI).

ENGL 301 Syntax Credits: 3

This course introduces students to the study of the theory of the syntax of human language and the methods of syntactic analysis. We begin with considering fundamental theoretical linguistic notions about the form of human language and general syntactic concepts and move towards identifying and classifying syntactic units: words, phrases and clauses. The course will also treat the concept of structure, how it is formed, assigned, represented and tested. We will follow this by examining major syntactic processes. Lectures, discussions, group presentations and exercises will be our main learning vehicles in this course.

Prerequisite

ENGL 157 OR ENGL 373

ENGL 302 Comparative Literature Credits: 3

Comparative literature is the critical study of literature dealing with two or more literatures, different in their cultural, linguistic or national origin. It is concerned with both similarities and differences between literary texts, and aims to enrich our understanding of each through the comparison and parallel analysis of both. In the past decades, a range of new developments in critical theory have changed patterns of reading and approaches to literature: gender studies, translation theory,

deconstruction and orientalism, all have had a profound impact on the field of comparative literature. This course introduces the students to the theory and practice of comparative literature, as well as to the recent developments in this field resulting from the new advances in critical theory. In addition to enhancing their command of new development in critical theory, this course will enable the student to transfer the skills they learnt in English and American literature to other literatures, and particularly their own literature, Arabic. It enables the students to better understand the literature they studied, in this case English and American literature, by bringing it into contact with their own literature, Arabic.

Prerequisite

ENGL 158

ENGL 303 Sociolinguistics Credits: 3

This course introduces students to the study of language in its social context, focusing on uses and users of language. Topics include: social class, ethnic group, gender, language attitudes, bilingualism, language contact and dialects.

Prerequisite

ENGL 157

ENGL 304 Shakespeare Credits: 3

This course will introduce plays and a narrative poem from Shakespeare’s career as chief dramatist for The Lord Chamberlain’s Men and, later, The King’s Men. Class discussions will involve close analysis of Shakespeare’s language, his culture, and the various moral, political, and aesthetic issues raised in the plays and poetry. The class will favor a thematic over chronological order of reading so that students can build on a progressive examination of king and kinship, gender, love, friendship and reciprocal obligation; also, in relation to these issues, the class will examine domestic and political tyranny, revenge and moral redemption.

Prerequisite

ENGL 158

ENGL 305 First Language Acquisition Credits: 3

This course focuses on issues related to first language acquisition. It starts by discussing some fundamental considerations of the nature of language and language acquisition. Then ideas and research that have provided the framework for First Language Acquisition will be represented. Other aspects of in this field will be surveyed and discussed in order to contribute further to our understanding of language acquisition processes. Examples will be taken from Arabic as a first language (varieties mainly Qatari Arabic) as well as from English as

a First language.

Prerequisite

ENGL 157

ENGL 306 Medieval Literature Credits: 3

This course introduces undergraduate students to the main canonical works of the medieval period (approx. 12th – 15th century) as well as the necessary historical background information—the religious & socio-cultural scene—to contextualize such works. It will focus on the poetic genre, the Arthurian legend, and Chaucer, with only quick survey reference to other genres like Morality drama (e.g. Everyman) and travel literature (e.g. Mandeville’s Travels). Selected texts for close study will be in modern translation.

Prerequisite

ENGL 158

ENGL 307 Psycholinguistics Credits: 3

This course introduces students to the study of language and mind. It covers the main areas of this subfield of linguistics: language processing, innateness and issues regarding the nature of mind as a theoretical construct and as a way of talking (i.e., a Wittgensteinian language game). In the area of language processing, the course deals with the ways that various kinds of evidence are marshaled in support of different mental models of how linguistic data is represented and processed. These include models of how linguistic data is analyzed and synthesized in the process of listening and speaking, the various aspects and stages of this processing (phonological, syntactic, lexical). The course also touches on the related questions of how language and brain function are related. We consider evidence bearing on questions of brain localization of language function, including evidence of lateralization, brain disorder, etc.

Prerequisite

ENGL 157

ENGL 308 Renaissance to Restoration Credits: 3

This course will focus on the literature of change in the seventeenth century, from the brilliant and edgy theatre of the likes of Ben Jonson and Thomas Middleton to the prose writings of revolutionaries like John Milton and monarchist libertines like Aphra Behn. The first half of this course will take us through to the 1630s, when the Stuart monarchy was at the height of its power, and many of the most ‘classic’ of English writers thrived: Sir Francis Bacon, John Donne, Ben Jonson. The second half will focus on the period of revolution and Restoration, and will include glances at religious controversy, political pamphleteering, and the making of modern London. The figure of John Milton, whose works

span the Caroline 1630s, the revolutionary years, and the Restoration, will loom large throughout. Our readings will mainly be focused on themes designed to provide us with ingress into the literature, culture and historical vitality of the period—‘truth’, ‘love’, ‘the country house’ ‘revolution and class’, ‘engendering the city’. We will be reading cross-sections from works by many authors to explore these themes from as many angles as possible. We will explore the similarities, the lines of consensus, of shared languages and beliefs, between the different writers, but we will also be keen to observe and analyze differences.

Prerequisite

ENGL 158

ENGL 309 Second Language Acquisition Credits: 3

The purpose of this course is to outline and discuss the theoretical and empirical background concerning aspects of Second Language Acquisition (SLA). Some fundamental considerations of the nature of language and language learning will be discussed first. Then ideas and research that have provided the framework for SLA will be represented. Other aspects of SLA will be surveyed and discussed in order to contribute further to our understanding of foreign language acquisition processes.

Prerequisite

ENGL 157

ENGL 314 Augustan to Romantic Credits: 3

This course provides a survey of British literature during what has come to be known as “the long eighteenth century.” Beginning with the Restoration of Charles II to the throne of England in 1660 and ending with the ascension of Queen Victoria in 1837, this period witnessed the beginnings of Enlightenment consciousness, the rapid expansion of the British Empire, and the revolutions that gave birth to the modern political order. In the context of scientific progress, the ethical imperatives of empire, and revolutionary upheaval, writers of the period produced powerful works of literature across a range of genres and styles. Emphasizing the transition from satirical expression to introspective reflection, we will examine selected poetry, drama, and prose from the age in order to understand the historical and cultural development from “Augustan Neoclassicism” to “Romanticism.”

Prerequisite

ENGL 158

ENGL 319 Semantics Credits: 3

The aim of this course is to examine the nature and scope of semantics. Attention will be given to such topics as Context, Reference, Semantics and Grammar, Utterance Meaning, Semantics and Logic. Set texts will

be mostly in the form of a discussion of general principle applied to some data, followed by a number of exercises. Each point is followed by relevant exercises almost instantly. Every point will be illustrated with examples from both English and Arabic.

Prerequisite
ENGL 157

ENGL 324
Victorian Literature
Credits: 3

This course presents the literary production of the Victorian era. First, the general cultural and intellectual background of Victorianism will be introduced to understand the rapid social and political changes of the times—such as the industrial revolution, urbanization, political reform, the rise of the middle class, material and scientific progress, mass production, the transformation to modernity, among other changes. The resulting issues and themes are reflected in the canonical works of the age and will be studied accordingly. Major representative Victorian poets & critics (such as Arnold, Tennyson, Browning), as well as novelists (such as Dickens, Bronte, Hardy), will be studied. Overall, the course exposes students to the body of literature (especially poetry & novel) in its literary-historical context of the second half of the 19th century.

Prerequisite
ENGL 158

ENGL 326
Poetry
Credits: 3

This course has two objectives: to familiarize students with critical terms required for the analysis of poetry and to introduce them to poetry written in English from the Medieval through the Romantic period. The course includes discussions of the genres of poetry, such as folk and literary ballad, lyrical verse, ode, etc. The landscape we will explore is the troublesome one of the relevance, impact, and importance of poetry in a troubled modern world. We will read both poetry and prose by several substantial modern writers, each of whom confronted the question of how and why poetry is critically relevant in our society. This subject will also be studied at the junction of Poetry, Literature and Visual Arts. Various art-forms such as paintings, sculptures will also be utilized so as to provide a challenging approach to poetry. Finally, the course has as its aim to offer an innovative analysis of poetry as well as an overview of current philosophical approaches.

Prerequisite
ENGL 158

ENGL 327
Discourse Analysis
Credits: 3

Discourse Analysis is the study of language use in actual situations of social interaction. This can be in spoken, face-to-face interaction or through the written medium (talk and text). Unlike approaches to

linguistic analysis that emphasize structural components of language use, the focus in discourse analysis is on how social interaction is done in and through the use of particular language features. Thus, discourse analysis focuses on how people do things with language. This can range from telling stories to holding a conversation to carrying out forms of interaction specific to particular kinds of social encounters (like courtroom proceedings, doctor-patient consultation, classroom interaction, talk show radio chat, etc.). In this sense, the structural features of language are important to the analysis of discourse, but their importance is related to how they contribute to the carrying out of particular kinds of interaction. More specifically, discourse analysis approaches language use as a way of accomplishing particular sorts of social institutions. In this sense, then, discourse analysis is the study of social interaction and social structure (issues closely related to the academic discipline of sociology). The structural features of language use that are important here typically involve aspects of language not ordinarily described in grammatical, morphological or phonological analysis. These include things like narrative structure, turn-taking rules in face-to-face conversation, forms of talk characteristic of gossip or other kinds of everyday chat, etc.

Prerequisite
ENGL 157 OR ENGL 373

ENGL 328
Drama
Credits: 3

This course is designed to introduce students to the genre of drama and its basic characteristics, beginning with the model of Greek tragedy and a study of Aristotle's Poetics. It will also introduce them to the evolution and development of English drama through its most significant phases. The students will study how plays reflect their respective ages from Greek to medieval to Renaissance and finally to the Elizabethan theatre, especially with respect to the overarching theme of man vs. fate/destiny, as well as man vs. society. Representative plays will be closely read and analyzed in terms of basic dramatic techniques, elements, characterization, and themes.

Prerequisite
ENGL 158

ENGL 330
The Short Story
Credits: 3

This course is designed to introduce students to the genre of the short story and its various types. The texts are selected from the works of well-known American & English writers and vary in length, theme, and technique. Close reading and in-depth analysis of the stories will be applied to enhance the students' knowledge, experience, and skill in critiquing a fictional prose text. The literary elements of short fiction, a brief history of the short story, and writing analytical essays—are all components of the course. Students are required and expected to read fully the original texts of approximately 18 to 20 stories and apply critical thinking in study and discussions. The selection should include a

variety of short story genres, types, themes, styles, and techniques.

Prerequisite
ENGL 157 OR ENGL 373

ENGL 332
The Novel
Credits: 3

This course introduces students to the English novel as a literary genre, exploring not only the various elements that make up the novel (plot, characterization, time, voice or narrative perspective, narrative techniques, theme, etc.) but also its development in historical, cultural, and thematic contexts. Students also explore timeless moral and ethical questions probed by great novelists. After an introduction to the English novel and its development, the course concentrates on the epoch of great English novels, particularly in the nineteenth and twentieth century, and provides the students with close reading of selected novels. In exploring the stories of these books through the eyes of the storytellers, we will learn more about both the stories themselves and the narrators' biases, vision, 'world view', agendas, or simply the lens through which they perceive the world.

Prerequisite
ENGL 157 OR ENGL 373

ENGL 334
Twentieth Century Literature
Credits :3

This course is designed to introduce students to modernist poetry and prose. Modernism's challenge to literary form will be related to its historical, intellectual and ideological contexts. Combining approaches to the experimental form of both poetry and prose, the course will encourage students to relate the aesthetic concerns of modernist writers to aesthetic trends in the period more generally. Writers from the Modernists canon such as Woolf, Joyce, Pound and Eliot will be studied, as well as lesser-known but equally influential figures such as H.D. The course takes an international perspective, reflecting modernism's own transatlantic cosmopolitanism. Key concepts such as gender and politics will also be studied as they relate to and influence modernist writing. Beginning with the differing genres of nineteenth-century poetry, the course allows students to trace the revolutions in poetic expression throughout the twentieth century and how they reflect the changing ideologies of the time.

Prerequisite
ENGL 158

ENGL 370
American Literature
Credits: 3

This course aims to introduce students both to major themes and ideas in American literature and to significant American authors. Issues to be dealt with will include slavery, the idea of the frontier and the development of a national identity. Example s of 19th and 20th century

poetry and fiction will be taken from such authors as Dickinson, Twain, Hawthorne, Poe, Fitzgerald, Whitman, and Melville.

ENGL 400
Women's Literature
Credits: 3

This course is twofold in its approach. It offers a survey of key women's writings from the medieval period until the twentieth century in search of a female literary tradition, and it also involves the discussion and study of particular feminist themes. These include issues such as women's self-image and finding a voice; negotiating definitions of female identity; challenging patriarchy & traditional culture; the role of gender in the production of literature; distinct literary characteristics of women's writings; the emergence of feminist criticism...etc.). The selected readings range from creative works (such as novel, autobiography, & poetry) to influential foundational tracts.

Prerequisite
ENGL 158

ENGL 401
Speech Sciences
Credits: 3

This is a comprehensive course which teaches the core material of the three areas of speech science: Speech Production, Hearing, and Speech Perception. The course opens with a unit on basic research skills and techniques, and basic statistics. It then proceeds to the unit on Speech Production, which addresses the anatomy and physiology of speech, physiological phonetics, gestural timing; and acoustic phonetics, including source-filter analysis, analysis based on spectrograms and other acoustic displays, and models of speech production. The Hearing unit addresses the anatomy and physiology of the peripheral hearing system, central processing and psychophysics. The Speech Perception unit addresses acoustics cues, experiments based on synthetic speech, categorical vs. continuous perception, and the speech-mode controversy. The class will be lab-based, with students trained with the state-of-the art hardware and software. This course provides students with the necessary expertise and experience to work in a speech lab, or to proceed to graduate studies in the speech sciences, including speech-language pathology and audiology.

Prerequisite
ENGL 203

ENGL 402
Text and Film
Credits: 3

This module offers a core course for the interdisciplinary study of literature and film. It examines their relations in the context of word and image debates, interart discourse, theories of adaptation, theoretical trends in the humanities, and the problem of turning texts into moving images. The course will offer the students a theoretical introduction to questions of representation and issues of iconology, before dealing with the novel / film debate and theories of adaptation.

Then it will focus on three films: one taken from a short story, another from a novel, and a third from a play, in order to study the different strategies of adaptation and narrative transformation, and choices open to filmmaking.

Prerequisite

ENGL 158

ENGL 403 Field Methods

Credits: 3

This course gives students first-hand experience and training in linguistic fieldwork, including field recording and data archiving, data preprocessing, and linguistic analysis of raw data. The language of study will be a non-Western language for which little documentation is available. Student work in this course will thus be an important contribution toward the description of the language. The course opens with a unit on basic research skills and techniques, and basic statistics. Students will then participate in guided elicitation sessions in class with a language consultant who is a native speaker of the language of study. Phonological, morphological, syntactic, or semantic structures will be elicited and analyzed by the students in a group project. Students will write up the results of their project as a linguistic research paper which they will submit at the end of the course.

Prerequisite

ENGL 157

ENGL 404 Modernism

Credits: 3

This course is designed to introduce students to modernist poetry and prose. Modernism's challenge to literary form will be related to its historical context and formal analysis. The course takes an international perspective, reflecting modernism's own transatlantic cosmopolitanism. Beginning with the differing genres of nineteenth-century poetry, the course allows students to trace the revolutions in poetic expression throughout the twentieth century and how they reflect the changing ideologies of the time.

Prerequisite

ENGL 157 OR ENGL 373

ENGL 406 Post-Modernism

Credits: 3

This course will introduce students to postmodernism and its critics, focusing on novels and films. The students will learn about postmodernist concepts and techniques deployed in novels and films, and demonstrate their destabilizing rhetorical and visual effects. In this course, we'll investigate the following questions: How do we read the prefix, "post-" as a temporal and cultural phenomenon and how do we link postmodernity to previous literary movements and concepts. Is possible to define a postmodern novel or film? How

does a high modernist text by writers such as Joyce, Woolf, Proust and Kafka converge with or diverge from a postmodern one? This course will address these questions and more while highlighting that the postmodern novel fragments and decentralizes the narrative. The course will include a discussion of a number of literary concepts such as intertextuality, metafiction, self-reflexivity, parody, pastiche and collage. We will also explore how postmodern concepts and techniques can be traced in other disciplines such as architecture, visual arts, film, and technological innovations.

Prerequisite

ENGL 158

ENGL 408 Post-Colonial Literature

Credits: 3

This course introduces the students to one of the most vibrant and highly rewarding approaches of modern critical theory. It will acquaint them with the wealth of material that has been generated in this field in the last fifty years or so, chart with them its unique trajectory, and introduce them to its contribution to the study of major texts. It starts with a clear definition of the field and an historical account of its development, and culminates in training them in the application of this method of analysis to selected works of colonial and postcolonial literature. It will also introduce the students to the shift from history to geography which in turn brought the question of power, hegemony and representation into focus. The author studied will include, Franz Fanon, Edward Said, Joseph Conrad, Chinua Achebe, Helene Cixous, al-Tayyib Salih, and Bahaa Taher It also includes in the range of its inquiry the comparison of different types of art, such as the investigation of the relationship between film and literature, and among the film investigated: A Passage to India, Gandhi, Saraouina, and Jacques Derrida.

Prerequisite

ENGL 158

ENGL 423 Seminar in Linguistics

Credits: 3

This course provides students with the opportunity to read and discuss primary research articles in detail, on a topic not covered in the program's regularly scheduled linguistics courses. The specific topic will be selected by the instructor, who will provide a reading list of seminal articles on the topic. The students will read the articles and discuss them in regularly scheduled seminar classes, then write a precise reaction paragraph to each article. Student evaluation will be based on the quality of their reaction paragraphs and their level of participation in the seminar meeting discussions. This course develops the student's skills in analytical and critical thinking, and independent thought.

Prerequisite

ENGL 157

ENGL 424 Modern Drama

Credits: 3

This course analyzes major modern plays from the late 19th and the 20th centuries featuring works by Samuel Beckett, Henrik Ibsen, Anton Chekov and George Bernard Shaw. Selected texts from Continental, English and European drama are studied not only for their aesthetic traits but also for the ways they illustrate cultural crises and break new ground. The most significant of these crises is the breakdown of traditions that defined individuals and their relationships to society and culture. Modern drama illustrates individual disillusionment with ideals and historical meaning. We will therefore consider what drama in particular has to offer now and in the future. The plays will be both studied as distinguished writing and as scripts for performance as several of them have been reconceived for the big or small screen (other plays will be studied in relation to films bearing similar thematic characteristics). Finally, the course has as its aim to offer an innovative analysis of modern drama as well as an overview of current philosophical approaches.

Prerequisite

ENGL 158

ENGL 425 Topics in Linguistics

Credits: 3

The aim of this course is to introduce students to special and/or new-trends issues in the study of language at both formal and functional levels. This is meant to keep up with new developments in the field of linguistics without having to change or modify the study plan. It is also meant to provide the students with the chance to pursue a topic relevant to their academic interests that is not offered as a regular course in the program. The course adopts an in-depth approach in which the background and the development of an issue is presented and discussed in a format similar to that of other courses in the program. Although this course is offered under the rubric of 'Topics in Linguistics', a specific topic is tagged on to it every time it is offered. The instructor provides a rationale for the selection of a given topic, and its relevance to the program and to the students' potential interests is particularly highlighted. A basket of proposed topics is annually reviewed by the Department. When a topic is approved for inclusion in the course offerings, the instructor is required to present a fully-fledged course description as it is the case with other courses in the program.

Prerequisite

ENGL 157 OR ENGL 373

ENGL 426 Children's Literature

Credits: 3

This course will introduce students to the wide variety of literature for children, including poetry, plays, picture-books and prose. We will look at the origins of children's literature in fairy tales, folk lore and the oral rhythms of nursery rhyme and song. Students will study the differing approaches to the psychology, literacy and individual development found in writing for children.

Prerequisite

ENGL 157 OR ENGL 373

ENGL 428 Topics in Literature

Credits: 3

The aim of this course is to introduce students to special and/or new-trends in the study of literature at both theoretical, and applied and thematic levels. This is meant to keep up with new developments in the field of literature without having to change or modify the study plan. It is also meant to provide the students with the chance to pursue a topic relevant to their academic interests that is not offered as a regular course in the program, and enable the teacher to explore themes and topics of their research interest. The course adopts an in-depth approach in which the background and the development of an issue is presented and discussed in a format similar to that of other courses in the program. Although this course is offered under the rubric of 'Topics in Literature', a specific topic is tagged on to it every time it is offered. The instructor provides a rationale for the selection of a given topic, and its relevance to the program and to the students' potential interests is particularly highlighted. A basket of proposed topics is annually reviewed by the Department. When a topic is approved for inclusion in the course offerings, the instructor is required to present a fully-fledged course description as it is the case with other courses in the program.

Prerequisite

ENGL 158

ENGL 448 Independent Study

Credits: 3

Studies arranged with an instructor to enable the student to make up for an insufficient number of credit hours required for graduation.

ENGL 449 Modern Poetry

Credits: 3

This course is a study of nineteenth- and twentieth-century poetry, with special attention to tracing the rise and development of Modernism. Poems drawn from English, Irish, and American literature are used to introduce important authors and to illustrate Modernism.

Prerequisite

ENGL 375 OR ENGL 318

FEDU 204 Islamic Education

Credits: 2

This course introduces basic foundation and principle of Islamic education. Areas studied include sources and institutions of Islamic Education, forms, programs, limitations, effectiveness, the main famous educators, and educational issues such as science and religion, generalization and specialization, playing and activity, punishment and

behave, systematization and un- systematization.

FEDU 211
Education and Society
Credits: 3

This course introduces the student teacher to the dimensions of educational process. Topics covered include different teachers roles. School as a social organization, Social investment, attitudes of performance, developing, professional development, partnership and quality in all aspects of education.

FEDU 314
Education and Societal Problems
Credits: 3

This course provides the student with knowledge and skills, and practice experiences through experiential learning to increase there organizational loyalty. Areas studied include social issues & studies methods of preparing the good citizen character. This is to be done through work effectively in teams including contributions to improve students practical and personal future.

FEDU 400
Management of the Learning Environment
Credits: 3

This Course is intended to provide the student with knowledge, skills, and disposition attributes related to management, learning environment. It would also provide him with basic concepts, dimension of learning management, the new trends and strategies in learning management. Problems of learning management and how to deal with it.

Prerequisite
FEDU 211

FEDU 409
School Administration
Credits: 3

This course focuses on the concepts of school administration including educational, cultural and management foundation. Among the topics to be covered are the tasks, administration, and the system of school management in Qatar, as well as roles and responsibilities of the school administrative staff. Other topics covered include issues such as analysis and comparing between school administrative systems (Gulf, Arab, foreign).

FINA 201
Principles of Finance
Credits: 3

This course emphasizes the financing and investment decisions of the financial manager. Topics include financial analysis, planning and control, working capital management, time value of money, risk and return, valuation of bonds and stocks, capital budgeting, and cost of capital.

Prerequisite
(MAGT 101 OR MAGT 112 OR INTA 100) AND (MATH 119 OR MATH

101)

FINA 301
Corporate Finance
Credits: 3

This course provides an in-depth analysis of financial decisions involving investment in capital assets and the selection of internal and external sources of long-term funds. Topics include capital budgeting techniques, risk analysis, capital structure, dividend policies, mergers and acquisitions.

Prerequisite
FINA 201

FINA 302
Investments
Credits: 3

This course examines alternative investment instruments and environments. This course provides an introduction to risk and return; asset pricing models; portfolio choice; analysis and valuation of bonds, stocks, options, and futures; and, the workings of exchanges and regulations.

Prerequisite
FINA 201 AND (STAT 220 OR STAT 155)

FINA 303
Financial Markets and Institutions
Credits: 3

This course examines the operations, mechanics and structure of the financial system. Topics include commercial banking, non-bank financial institutions, money and capital markets, and the impact of Monetary Theory on financial institutions. An introduction to the international financial system is also provided.

Prerequisite
FINA 201

FINA 304
International Finance
Credits: 3

This course surveys techniques of investment analysis and portfolio management within an international context. Topics include International monetary environment and institutions, determinants of foreign exchange rates and risk management, valuation and portfolio analysis of international stocks and bonds, and foreign investment analysis

Prerequisite
FINA 302 OR MAGT 306 OR (FINA 201 AND MAGT 304)

FINA 401
Portfolio Management

Credits: 3
This course covers various topics related to portfolio management. Topics include diversification and portfolio theory, capital market theory, security selection and bond selection; portfolio management: revision of equity portfolio and fixed-income portfolio, risk management with derivative securities, performance evaluation, and portfolio manager's duties and responsibilities; integrating derivative assets and portfolio manage.

Prerequisite
FINA 302

FINA 402
Personal Finance
Credits: 3

This course provides an overview of fundamental concepts of personal finance. Topics include types of investment securities, retirement and real estate planning, insurance planning, budgeting, credit, home ownership, and savings.

Prerequisite
FINA 201

FINA 403
Insurance and Risk Management
Credits: 3

This course addresses and examines the basic risk theory and elementary risk management principles and techniques. Topics include life insurance and annuity products, property/liability insurance, life/ health insurance, and selected social insurance programs, insurers and their operations, guidelines for efficient purchase and use of insurance products. Special attention is given to the attitudes of consumers towards life and general insurance in GCC countries and the role of insurance companies as non-banking financial institutions.

Prerequisite
FINA 201 AND STAT 222

FINA 404
Islamic Banking and Finance
Credits: 3

This course introduces the concept of economic behavior of a society that adheres to the Islamic doctrine; economic properties of an Islamic economy, general equilibrium and macroeconomic policies in Islamic economies, Islamic banks and finance and the role of the stock exchange in an Islamic economy. Other topics include basic differences between Islamic banks and conventional banks; financial instruments of Islamic banks; profit/loss sharing method of finance is compared with fixed interest charges. The relationship between Islamic financial institutions and the Central Bank is analyzed.

Prerequisite
FINA 201 AND (STAT 220 OR STAT 155)
FINA 405
Financial Derivatives

Credits: 3
This course focuses on options and futures markets, investment and risk management strategies using these derivative products, and pricing of options and futures contracts. Additional coverage includes basic swap agreements and exotic options.

Prerequisite
FINA 302

FIQH 303
Fiqh of Zakat and Awqaf
Credits: 3

The course covers the legal provisions of Zakat, its legitimacy, general conditions, the kinds of wealth in which Zakat is prescribed, and rules of zakat in goods, jewellery, minerals, stocks, bonds, and banks, and the rules of the Waqf and its role in Takaful and Islamic insurance.

FIQH 304
Islamic Ruling and Implications
Credits: 3

This course deals with the Islamic ruling in terms of definition, divisions, the act, the subject, and examines modes of interpreting the texts, such as the general word (al-amm), the specific word (al-kass), indeterminate word(mutlaq), particular word (muqayyad), explicit meaning (mantuq) implied meaning (mafhum), plain meaning of the text (Ibarat al-Nass), connotation of the text (Isharat al-Nass), implication of the text (Dalalat al-Nass) Iqtida and abrogation.

FIQH 305
Introduction to Islamic Fiqh
Credits: 3

This course is designed as an introduction to Islamic jurisprudence, demonstrating its characteristics, importance, various historical stages, sources, schools of thought, and various fiqh terminologies. It also examines the most important theories of jurisprudence, and the challenges faced by Islamic jurisprudence in the present era, as well as how to develop and promote it.

FIQH 403
Fiqh of Inheritance & Bequest
Credits: 3

This course is designed to study the Islamic system of Inheritance, its causes and impediments, and elaborates on the inheritors (Waratha), Residuary (Al-Asaba), Exclusion (Al-Hajb), return (al-Rad), Devolution (munasaka), Denominator (Al-Takharuj) Increase (Al-Awl) and inheritance of the pregnant, missing persons and prisoners. It investigates the meaning of the Will, its elements, conditions, terms and the act of leaving more than one will and compulsory wills.

FREN 100
French Language-Beginners

Credits: 2

This is a practical course covering a variety of communication skills with a view to helping the student understand how the French language functions.

**FREN 101
French Language I****Credits: 3**

This course is designed for students who wish to begin learning French. It will help them become familiar with the foundation of the French language, and the develop the four basic language skills of reading, writing, listening and speaking.

**FREN 110
French I****Credits: 2**

This is an activity-based course taking students from beginner to pre-intermediate level. It progresses at a pace that is easy for the students to follow with an emphasis on language skills and structure.

**FREN 111
French II****Credits: 2**

This course is a continuation of French (1) and focuses on developing the same language skills at a more advanced level. The emphasis remains on students' practical use of French and oral drills in the language lab.

Prerequisite

FREN 110 Concurrent OR FREN 221 Concurrent

**FREN 200
Pre-Intermediate French****Credits: 2**

This course is a continuation of the French Language beginners' course. It concentrates on communicative skills with a view to helping the students to experience basic language situations and reinforce their knowledge of French. The course will develop the students ability to deal with various texts as units in both the listening, speaking and reading components of the course.

**FREN 201
French Language II****Credits: 3**

Students will continue to develop their knowledge and understanding of French through the four skills: listening, speaking, reading and writing, This course will enable students to communicate in the language at a basic level in a variety of everyday situations.

Prerequisite

FREN 101

**FREN 210
French III****Credits: 2**

This is an intermediate to upper intermediate course concentrating on listening comprehension, reading skills and grammatical structure. The students will learn the various forms of the verb and will be introduced to some basic writing skills. Work in the lab will focus on the nasal vowels and phonetic transcription.

Prerequisite

FREN 111 OR FREN 222

**FREN 211
French IV****Credits: 2**

This is a continuation of French III and focuses on developing the same language skills at a more advanced level.

Prerequisite

FREN 210

**FREN 221
Intro to Modern French I****Credits: 2**

These are introductory courses. Students are required to master simple sentence construction through grammar exercises and work in the language laboratory (phonetics: oral vowels and grammar). The courses also aim to introduce students to the use of dictionaries (French/French) and other reference books.

**FREN 222
Intro to Modern French II****Credits: 2**

These are introductory courses. Students are required to master simple sentence construction through grammar exercises and work in the language laboratory (phonetics: oral vowels and grammar). The courses also aim to introduce students to the use of dictionaries (French/French) and other reference books.

Prerequisite

FREN 221

**FREN 301
French Language III****Credits: 3**

At the end of this course students will be able to deal with most situations and be able to describe past and future experiences and events. The student will have sufficient vocabulary to express himself/herself on essay topics and give their opinion. They will be able to deal with everyday life situation. The class will be spent mostly on answering questions, and on reinforcement practice afforded by the exercises in the book.

**FREN 310
French V****Credits: 2**

This is an upper-intermediate to advance level with emphasis on reading contemporary texts. The students will be introduced to the use of the modals and negation. Attention will also be paid to problems relating to the pronunciation of consonants by Arab speakers of French.

Prerequisite

FREN 211

**FREN 311
French VI****Credits: 2**

This course is a continuation of French V and focuses on the same skills at a more advanced level.

Prerequisite

FREN 310

**FREN 321
Intermediate French I-Part A****Credits: 2**

This course is a continuation of the Introduction to French I and Introduction to French II courses.. It concentrates on oral listening and a study of everyday language through the approach of press articles (texts dealing with various topics). Concerning written skills the students will be asked to write descriptive paragraphs, to substantiate the main concepts of a text and identify logical tags, they finally should be able to make a resume. In the field of grammar different verbal forms will be taught. Work in the laboratory: phonetics: the nasal vowels; transcription. Grammar: structural exercises in connection with the lexical and syntactic elements of the two courses.

Prerequisite

FREN 222

**FREN 322
Intermediate French I-Part B****Credits: 2**

This course is a continuation of the Introduction to French I and Introduction to French II courses. It concentrates on oral listening and a study of everyday language through the approach of press articles (texts dealing with various topics). Concerning written skills the students will be asked to write descriptive paragraphs, to substantiate the main concepts of a text and identify logical tags, they finally should be able to make a resume. In the field of grammar different verbal forms will be taught. Work in the laboratory: phonetics: the nasal vowels; transcription. Grammar: structural exercises in connection with the lexical and syntactic elements of the two courses.

Prerequisite

FREN 321

**FREN 421
Intermediate French II-Part A****Credits: 2**

These courses are concerned with written texts. Students will gradually move from article to contemporary text which will be tackled in depth. In the field of grammar the course concentrates on the use of the modals and the negotiation of arguments (argumentation). Language Laboratory: Phonetics: the problem of consonants for Arabic speakers.

Prerequisite

FREN 322

These courses are concerned with written texts. Students will gradually move from article to contemporary text which will be tackled in depth. In the field of grammar the course concentrates on the use of the modals and the negotiation of arguments (argumentation). Language Laboratory: Phonetics: the problem of consonants for Arabic speakers.

**FREN 422
Intermediate French II-Part B****Credits: 2**

These courses are concerned with written texts. Students will gradually move from article to contemporary text which will be tackled in depth. In the field of grammar the course concentrates on the use of the modals and the negotiation of arguments (argumentation). Language Laboratory: Phonetics: the problem of consonants for Arabic speakers.

Prerequisite

FREN 421

**GENG 106
Computer Programming****Credits: 3**

This course introduces the student to computer concepts, control structures, functions, arrays: single and multi-dimensional, and string processing found in C++. The course also examines input/output statements including data file I/O, arithmetic, logical and comparison operators, along with an introduction to classes.

**GENG 107
Engineering Skills and Ethics****Credits: 3**

Introduction to engineering and engineering disciplines, engineering ethics, communication skills, study skills and problem solving skills, introduction to design.

**GENG 111
Engineering Graphics****Credits: 3**

This course discusses the fundamental concepts of engineering graphics. It also provides an introduction to computer graphics using CAD software. The following topics are covered: Drawing conventions such as standards, line types and dimensioning; drawing of inclined and curved surfaces; deducting the orthographic views from a pictorial; drawing full and half sections; deducting an orthographic view from given two views; pictorial sketching (isometric and oblique).

GENG 200
Probability and Statistics for Engineers
Credits: 3

Classification of Data. Graphical representation. Arithmetical description. Probability theory, probability of an event and composite events. Addition rule and multiplication rule, independent events. Counting techniques. Random variables and probability distributions. Expected values. Continuous and discrete random variables. Normal distribution. Binomial distribution. Poisson distribution. Joint and marginal probability distributions. Independence of random variables. Covariance and correlation. Random sampling. Unbiased estimates. Statistical intervals and test of hypothesis for a single sample.

Prerequisite
MATH 102

GENG 210
Statics & Dynamics
Credits: 3

Principles of mechanics. Concepts of free-body diagram, principles of equilibrium of particles and rigid bodies. Fundamental concepts of kinematics and kinetics. Plane motion of rigid bodies. Rectilinear and curvilinear motion of particles. Newton's 2nd law. Dynamics of system of particles. Energy and momentum methods

Prerequisite
MATH 101 AND PHYS 191 Concurrent

GENG 221
Engineering Mechanics I-Statics
Credits: 3

Fundamental concepts and principles of mechanics, vectors, and force systems. Centroids and centers of gravity, Moments of inertia. Concepts of free-body- diagram, principles of equilibrium of particles and rigid bodies in two and three dimensions

Prerequisite
MATH 101

GENG 222
Engineering Mechanics II-Dynamics
Credits: 3

Fundamental concepts of kinematics and kinetics with application of particles and plane motion of rigid bodies. Rectilinear and curvilinear motion of particles. Newton's second law, impulse and momentum methods, impact. Dynamics of systems of particles. Kinematics of rigid bodies. Plane motion of rigid bodies: Forces and accelerations

Prerequisite
GENG 221 AND PHYS 191 AND PHYS 191

GENG 231
Materials Science

Credits: 3
A study of relationships between the structure and the properties of materials. Atomic structure, bonding, crystalline and molecular structure and imperfections. Mechanical properties of metals, alloys, polymers, and composites. Electrical properties of materials, semiconductors and ceramics. Creep, fatigue, fracture and corrosion in metals. Laboratory experiments.

Prerequisite
MATH 101 AND CHEM 101

GENG 300
Numerical Methods
Credits: 3

The numerical methods course involves solving engineering problems drawn from all fields of engineering. The numerical methods include: error analysis, roots of nonlinear algebraic equations, solution of linear and transcendental simultaneous equations, matrix and vector manipulation, curve fitting and interpolation, numerical integration and differentiation, solution of ordinary and partial differential equations.

Prerequisite
(GENG 106 OR CMPS 151) AND (MATH 211 OR (MATH 102 AND MATH 231))

GENG 360
Engineering Economics
Credits: 3

Principles of Engineering Economy. Equivalence and compound interest formula. Single payment model. Uniform payment model. Gradient payment model. Decision criteria for single and multiple alternatives: Present worth, annual worth, future worth, internal rate of return, and benefit cost ratio. Before and after tax analysis.

Prerequisite
MATH 102

GEOG 103
Geography of Islamic World
Credits: 3

GEOG 110
General Geography
Credits: 3
This course will study the principles of general geography: Geographical thinking, branch definition and geographical interests and methodologies; Real facts about the planet Earth - universal and mathematical facts about planet Earth, also its climate and biological environment; humanities and economical geography such as population, type of populations, political group, natural resources and various economic activities.

GEOG 204
General Economic Geography

Credits: 3
The course covers the study of the economical aspects and their characteristics as following:- Definition of economic geography, its relations and links with other geographic branches, and evaluating the research methodology outcomes. - Studying the economic resources, its meaning and status, its spatial and era perspectives, dividing and classifying the resources. - Analyzing the physical resources and the characteristics of the economic production which are seen in: the distribution of water and land, the geological formation, the distribution of rocks and metals, the surface features and weather factors, the natural plants, animal, and water resources. - Understanding the human resources such as: population and their distribution, the economic and living levels, technological progress, the governmental strategies and policies, the social features as the traditions, beliefs, and customs, and finally the resources management strategy. - Explaining some economic activities and the phases of its progress such as: forest, fishing, agriculture, manufacturing, services, and transportation. - A practical study on the economy status of the Gulf countries and the possibility of achieving an absolute economic relationship between them.

GEOG 242
Weather & Climate
Credits: 3

The present syllabus deals with the study of climatology in a geographical perspective. Such science is focused on presenting a geographical analysis of the human environment, and its contribution in building the main background for numerous humanity sciences. Consequently, it will be possible to precisely explain the diverse human phenomenon on the globe. Atmosphere cover: origin, components, layers, pollution sources and the future. Main climate elements: Solar and ground radiation, temperature, air pressure, wind, evaporation, condensation, rainfall, air masses, air depression, tropical cyclones. Climate classifications and regions Climate in the State of Qatar.

GEOG 243
Intro to Remote Sensing
Credits: 3

The course covers the following topics: Concept of remote sensing. Its history (stages of progress and use of remote sensing). Principles of remote sensing (its components, electromagnetic energy, the interaction of energy with the atmosphere). The mediums of remote sensing which include photographic (non-color films, infrared films, standard color films, and infrared color films) and non- photographic medium. Aerial photography (simple instruments, processing non-color,color, and infrared films). Remote sensing satellites: Multi-Spectral Scanner (MSS), Thermal Scanners (TS), Thematic Mapper (TM). Microwaves sensors (including radar and radiometer). Mathematics of aerial photography: measuring elevation from paired/overlapped photographs, relief displacement, aerial photograph interpretation.

Prerequisite
GEOG 240 OR GEOG 239
GEOG 344
Political Geography

Credits: 3
Political geography definitions; comparison with political, economic, and geopolitical sciences; research methods in political geography, issues in neo- political geography; the notion of the "state" in political geography, state (physical & human) components; the notion of "space" for the state; capitals; local and international policies; political boundaries: the establishment of boundaries and developments since the rise of nation-state, marine boundaries, regional boundaries, boundaries and relations with human phenomena, case studies in political boundaries; the notion of political blocs and its relation with supra- nationalism. Notice: all case studies and practices should consider Arab and middle east examples.

GEOG 346
Introduction to GIS
Credits: 3

This course is divided into two parts: theory and practical parts. Theory section: covers the following topics: Concept of Geographic Information Systems (GIS): definition of GIS, technologies related to this system, fields of GIS application. Components of GIS which include five components: hardware (computers, units of data storage, entry and output), software, users (including management, professional and various users), data (their sources), and the GIS applications. GIS basic functions: data entry, management of data, data processing and analysis, and data output. Types of geographic data and their organization: main two types of data (raster and vector data), design and implementation of geodatabases. Methods for planning and implementing a successful GIS project using one of the available GIS systems in the department. Practical section: Training students on the preparation of a complete GIS workstation, develop student's ability to analyze and compare different GIS systems available in the department to recognize their strengths and weaknesses. Hands-on experience on various methods of geodatabase design to hold geographic data of a project. Train students on mechanisms of data sharing and data conversions (due to the fact that most GIS data are held in different formats). Conduct all stages of a GIS project with local scenarios using one of the available GIS software packages.

GEOG 360
Planning Theories & Technology
Credits: 3

This course introduces the main planning theories, their evolution, as well as the quantitative and qualitative methods which the planner employs to collect data from primary sources.

GEOG 361
Urban Legislation & Cities Adm
Credits: 3

Urban legislation and their relation with urban master plans and their implementation as well the obstacles which face those plans. The nature of urban planning establishments and their role. The creation of urban planning committee and the implementation of urban planning projects. The study of the local government structure and their

relation to urban planning, as well as their connection with central and regional planning bodies. Municipal administrations and their role in city administration. Qatar legislation on urban planning & regulations, housing and environment.

GEOG 362
Economic Feasibility for Urban Planning
Credits: 3

This course is concerned with evaluating economic feasibility studies and introducing students to the general principles guiding such studies. Topics include: 1- Review of the phases of economic feasibility studies and the identification of project components and pricing. 2- Identifying the risks and uncertainties associated with project implementation. 3- Applying the knowledge to analyzing current urban development projects and determining the impact of the most important factor (land, labor, ...etc.) on their feasibility.

GEOG 363
Field Training
Credits: 3

The field training aims to help the student acquire practical skills in the field. Scheduled to take place between the 6th and 7th semester at one of the governmental or planning agencies, a special training program is tailored in coordination with the university instructor and the agency supervisor. Evaluation is based on a report submitted by the student at the end of the semester detailing the training chores and the benefits, as well as the supervisor's report.

Prerequisite
GEOG 459 OR GEOG 461

GEOG 366
Urban Ecology
Credits: 3

The definition of pollution and urban ecology and their elements. The pollution components of urban ecology and its consequent influence on cities. The components of urban ecology pollution and their effects on urban land use. Studying the use of facilities and recreation areas and their effects on city environment. The influence of urban ecology pollution on urban environment legislations. Doha city as a case study for urban ecology.

GEOG 367
Landscaping
Credits: 3

This course emphasizes the aesthetic values of planning, balancing land-uses with green areas and civic spaces, and measures taken to upgrade urban environments. Topics include:
1- Studying methods to achieve the balance between mass and void, as well as between horizontal and vertical expansion.
2- Design of green areas and maximizing their impact in mitigating pollution.
3- Studying the elements of green spaces and plant typologies.
4- Practical application of the gained knowledge in a real project in

Doha.

GEOG 401
Geography of Qatar & the Arabian Gulf
Credits: 3

This course deals with the following topics:
- Defining the Gulf area, its civilization and historical background, economic and political contemporary position, and the natural and human aspects which distinguish the geographical parts of the eastern Arabian Peninsula.
- Studying the physical geography of the Arabian Gulf and Qatar; by covering the geological formation, the geomorphology of the surface and coasts, the natural biogeography environment, and water resources.
- Presenting the human geography of Arabian Gulf and Qatar by analyzing the population and their historical and demographical characteristics, workforce, immigration, the distinctive transition of workforce, the civilization and political links, and looking at the Gulf cities and its growth in the post petroleum era.
- Discussing the economic geography aspects and the changes which occurred in the region within the last 30 years and the strategies adopted by the Gulf States in oil production, manufacturing, and agricultural development.
- Practical studies on Qatar; its location, population, urbanization, economy perspectives, industrial and commercial future.

GEOG 441
Geography of Qatar
Credits: 2

This course aims at providing the students with insight into the effective factors in the geography of Qatar, methods of investigation and analysis. Additional goal is to highlight the mutual relationship among the natural, human and economic elements that affects the geography of Qatar and how these various elements interplayed to create unique features of Qatar's geography
The course includes the following topics:
- Natural elements which comprises the study of climate, soil, natural habitat and water resources.
- Human elements which include the study of population.
- Economic elements which focus on the agricultural, gas and oil production ; industrial development; trade; transportation and tourism; analytical study of the future perspective of the industrial development and gas production with some focus on the population crisis and the role of the GCC.

GEOG 442
Environment & Pollution
Credits: 3

This course aims at studying the global environmental systems and the imbalance these systems are facing. The course includes three parts:
- The first part: introduction to the environmental systems of the earth and the mutual relationship between the environmental components and the living species.
- The second part: studying the negative effects of human activities and

the environmental imbalance.

- The third part: focuses on different types of the environmental pollution, air pollution and its consequences such as acid rain and the deterioration in the ozone ; radiation pollution, noises pollution and marine pollution.

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- 1) Introduction to the environmental systems of the earth and the mutual relationship between the environmental components and the living species.
- 2) Studying the negative effects of human activities and the environmental imbalance.
- 3) Focuses on different types of the environmental pollution, air pollution and its consequences such as acid rain and the deterioration in the ozone ; radiation pollution, noises pollution and marine pollution.

GEOG 448
Hydrogeography
Credits: 3

This course deals with hydrology in a holistic view. Water resources remain of great worldwide concern due to the necessity of water in our daily life. That is why this course will handle this issue in its diverse dimensions and aspects: Hydrology: purpose, branches, development, character of water, typology, general hydrological cycle. Continental water: rivers, lakes, swamps, and groundwater. Seas and oceans and Water usage. Non-conventional drinking water resources: desalination, recycled water, water import, bottled water, cloud seeding, collateral fog, icebergs. Water scarceness: causes and ways to enface it. Means to control water demand: juridical tools, technical tools, economic tools, social tools, decision making and management. Water pollution and filtering ways. Water jurisdiction. Styles and approaches of drinking water management Sustainable development of drinking water. Water resources in the State of Qatar

GEOL 101
Principles of General Geology
Credits: 3

Introduction to geology and earth sciences, evaluation of the geologic thinking and the contribution of Arab & Muslim scientists, position of the Earth in the universe and its relation to other planets, and origin and evolution of Earth. Earth's layers and their main characteristics, components of the Earth's crust; crystal minerals and rocks, and geologic structures. Internal and external processes and plate tectonics theory, introduction to historical geology, and synopsis on the geology of Qatar and its natural resources.

GEOL 211
Principles of Paleontology
Credits: 3

Definition, stratigraphic methods in historical geology, paleontologic methods; definition of fossils and modes of fossilization, paleontological studies of protozoa (foraminifera-radiolaria), sponges, coelentrata, graptolites, and general life of the Paleozoic, life of Mesozoic, and Cenozoic.

Prerequisite
GEOL 101

GEOL 303
Sediment & Sedimentation
Credits: 3

Introduction, sedimentary cycles, clastic rocks, carbonate rocks, evaporites, sedimentary rocks, siliceous sediments, phosphates, depositional environments: continental, mixed and marine, sedimentary basins, sedimentology and tectonics, economic mineral deposits.

Prerequisite
GEOL 101

GEOL 321
Structural Geology & Geotectonics
Credits: 3

Evolution of Earth through geologic time, internal structure of the Earth, continental drift theory, isostasy, convection currents, paleomagnetism, sea floor topography, plate tectonics, ocean-floor spreading, asthenosphere, hot spots, major plate boundaries, economic implications.

Prerequisite
GEOL 101

GEOL 322
Survey and Field Geology
Credits: 3

Introduction and main concepts of field work, field observations, collection of samples and data, principles of plane surveying using different methods, techniques & instruments for measurement of distances, horizontal and vertical angles, use of compass, clinometers and hand level for geological surveying and mapping, identification of geologic structures in the field.

Prerequisite
GEOL 101

GEOL 332
Geophysics
Credits: 3

Physical properties of rocks, seismic method (introduction), mechanical properties, equipment, reflection method, refraction method, data analysis and interpretation, gravity method, earths' gravity field, equipment and field survey.

Prerequisite
GEOL 101

GEOL 401
Geochemistry

Credits: 3

Introduction, earth spheres, meteorites, distribution of elements, earth structure, geochemistry of igneous rocks, metamorphic rocks, sedimentary rocks, hydrosphere-environmental geochemistry.

Prerequisite

GEOL 101

GEOL 403**Economic Geology****Credits: 3**

Introduction, classification, ores of igneous rocks, ores of metamorphic rocks, ores of sedimentary rocks, metallogenic provinces, exploration techniques, mineral wealth.

Prerequisite

GEOL 101

GEOL 411**Geology of the Arabian Peninsula and Qatar****Credits: 3**

General Geology of Saudi Arabia, Qatar and Oman, Geology of the Cambrian rocks in Western Arabia, structural elements of the Arabian Peninsula, stratigraphic nomenclature of the Arabian Peninsula and Qatar (Paleozoic from Recent), mineral and petroleum resources.

Prerequisite

GEOL 101

GEOL 421**Photogeology and Remote Sensing****Credits: 3**

Introduction to the principles, equipment, materials and methods for aerial image acquisition, electromagnetic spectrum and basic spectral properties of Earth features and atmospheric interaction, airphoto geometry and mapping.

Prerequisite

GEOL 101

GEOL 432**Geology of Petroleum****Credits: 3**

Introduction, historical background, relation of petroleum geology to other sciences, physical & chemical properties of petroleum, generation and migration of oil, the reservoir, traps and seals, reserve estimation.

Prerequisite

GEOL 101

GEOL 434**Hydrogeology****Credits: 3**

Introduction to hydrogeology, evaporation and precipitation, runoff and streamflow, soil moisture and groundwater, principles of groundwater flow. Geology of groundwater occurrence, geology of groundwater flow to wells, regional ground water flow, water chemistry, water quality and groundwater contamination, groundwater development and management.

Prerequisite

GEOL 101

HIST 103**An Introduction to History****Credits :3**

This history gateway course traces the key themes of history. The course explores the concept and meaning of history. It enables students to develop critical and analytical thinking skills through examination of primary and secondary sources, as well as research and writing processes, which includes different modes of historical writing such as arguments, along with class presentations and discussions. This course covers history of the world before 300 AD.

HIST 111**History of the Muslim World I (600-1187)****Credits :3**

This course surveys the emergence and growth of the Islamic community, from the time of the Prophet Muhammad to the end of the twelfth century. Topics covered include the rise and spread of Islam, the Islamic empire under the Umayyad and Abbasid Caliphs and the emergence of regional Islamic states from Afghanistan and Eastern Iran, to North Africa and Spain. The course concludes with Muslim recapturing of Jerusalem in 1187. The course emphasizes the structure of social and political institutions.

HIST 121**History of Qatar****Credits :3**

This course outlines major political, social, and economic developments in Qatar from the midnineteenth to late twentieth century. It begins with a discussion of the physical environment and human settlement in the Gulf, and then proceeds to examine European incursion and its impact on the region; Ottoman and British rivalries; the rise of the local political leadership; the establishment of the British protectorate; the emergence of Qatar as an independent state; and the development of oil and its impact.

HIST 131**World History Since 1299****Credits :3**

This course examines key transition in world history since 1300 CE. Topics covered include intensified hemispheric interactions, emergence of the First Global Age (1450 1770), creation of a world market, the age of revolutions, and emerging modern patterns in world history such as modernization and colonization. The course emphasizes

the formation and development of the world's major societies, and systematically explores cross cultural interactions and exchanges that have been some of the most effective agents of change since 1300 CE.

HIST 204**Historiography****Credits :3**

This introductory course examines the study of the philosophy, methods, and practice of history as a field of scholarly inquiry. Students will learn how to think critically, to take in historical facts and interpretations, and make a general conclusion from them through the examination of primary and secondary sources.

Prerequisite

HIST 103

HIST 212**History of the Muslim World II (1187-1516)****Credits :3**

This course is a continuation of History of the Muslim World I. It surveys medieval and early modern Islamic history, starting with the decline of the Arab Caliphate to Ottoman expansion in the Arab East. The course explores themes of political expansion, military slavery, and Islamic thought. The course emphasizes interactions between Muslim societies and others through trade, war, and diplomacy.

Prerequisite

HIST 111

HIST 213**Modern Arab History 1516-1919****Credits :3**

This course traces the social, cultural, economic, and political changes that contributed to shaping the foundation of today's modern Arab societies. It examines the changing fortunes of the political elite, merchants, shopkeepers, peasants, tribal populations, religious scholars, women, as well as ethnic and religious minorities during the reign of the Ottoman Empire. Students will learn how to examine and interpret primary sources relevant to the period covered.

HIST 217**Islamic civilization****Credits :3**

This course focuses on the concept of civilization, the rise and historical circumstances that helped in establishing the Islamic civilization, its interrelation with the other civilizations, and its contributions to the world culture and heritage. The course deals with the foundation of the Islamic state, its administrative, financial, judicial and social institutions. In addition, it is devoted to examine the social, economic, and intellectual activities of Muslims and their impact on other civilizations up to the 16th century.

HIST 222**The Gulf in Modern period****Credits :3**

This course is designed to provide the students with the necessary information that would help them understand the historical developments in Gulf countries during the past five centuries, as well as acquaint them with main sources of Gulf history. The course will focus on the political history of the Gulf and the conditions that led to the emergence of Gulf countries.

HIST 231**Europe and the World since 1500 CE****Credits :3**

This course examines European social, economic, political, and cultural development since the 1500s, and its impact on the early modern and modern world history. Topics covered include the intellectual contribution of the Renaissance, Reformation, and Enlightenment, the arts, social and political thought, the Industrial Revolution, Romanticism and Realism, nationalism, feminism, imperialism and colonialism, World War I and II, and the Cold War era.

HIST 314**Europe and the World since 1500 CE****Credits :3**

This course examines Islamic world's agriculture (indigenous and imported), food and industrial crops, irrigation and trade. It discusses Islamic economic growth and its impact on rural areas; metallurgy and other industries; trade and marine routes; companies and monopolies; the relationship between Muslim communities and other trading communities; the Islamic city and countryside; prevalent customs and traditions; and the role of women. Course assignments such as essays, reaction and research papers will contribute to improving students' critical and analytical thinking.

HIST 318**History of Al-Andulus****Credits :3**

This course deals with the history of Andalusia from the sixth to the fifteenth century. It examines many topics, such as the Late Roman period, Islamic conquest, Islamic states in Andalusia, society and culture, and the Reconquista movement up to the fall of Andalusia in 1492. The course will shed light on the relations between the Muslims states in north Africa (Maghreb) and the Islamic state in Andalusia from the Muslim conquest until the end of Islamic power in Andalusia.

HIST 319**History of the Crusades (The Franks Invasion)****Credits :3**

An intensive study of the wars between Western Europe and Islam that took place in the Holy Land from the late eleventh to the late fifteenth century. Special emphasis is placed on the analysis of the crusading ideal, the motivations of the crusaders, the changes in crusaders' ideology, Muslim response to Christian military attacks, Muslim awakening and role in liberation of their lands. Lastly, the course concludes by discussing the results and cultural influences of the Crusades on Europe.

HIST 320
History of Islamic sects and movements
Credits :3

This course aims at studying social, economic, intellectual and political developments that had accompanied the establishment of the state of Islam. It also focuses on the division of the Umma as a result of the first period of Fitna between 30–40 A.H. The course also sheds light on the crystallization of the nation of state (Ahla al Jama'a); the emergence of sects; political and religious oppositional parties' opinions towards economic, social and political issues; and the state's position towards these opinions.

HIST 322
Iran and its neighbours
Credits :3

In this course, the students will study Iran's relationship with its neighbours during the modern period, beginning with the early Persian dynasties; their subsequent domination of Central Asia; conflict with the local and regional powers; and the impact of superpowers such as Russia, the Ottoman Empire, Britain, and Portugal. The students will also study Arab presence in the eastern parts of the Gulf and its influences on Iran.

HIST 323
Gulf -South Asian Relations in the modern and contemporary history
Credits :3

This course is designed to help the students understand the nature of the relationship between the Gulf and South Asia, particularly India, and the economic and social dimensions of this relationship. The students will explore the early contacts beginning with the sixteenth century; commercial exchange; the economic activities associated with pearl trade; Gulf presence in India; and the impact of European colonialism on the relationship between the two regions.

HIST 323
Gulf -South Asian Relations in the modern and contemporary history
Credits :3

This course is designed to help the students understand the nature of the relationship between the Gulf and South Asia, particularly India, and the economic and social dimensions of this relationship. The students will explore the early contacts beginning with the sixteenth century; commercial exchange; the economic activities associated with pearl trade; Gulf presence in India; and the impact of European colonialism on the relationship between the two regions.

HIST 324
Economic History of the Gulf
Credits :3

This course is designed to provide the students with the necessary information that will help them understand the main themes and dynamics in the political economy of the Gulf at domestic, regional and

global levels; with special attention to the impact of oil, the question of rentierism, different development models, labour markets, regional integration, the Gulf's changing place in the global economy and the question of reform.

HIST 331
Ancient Greece and Rome, 1200 BCE to 500 CE
Credits :3

This course examines various developments of ancient Greece; the Roman Republic and Empire. Topics covered include the rise of Greek city states; the Peloponnesian and Persian wars; Alexander the Great; Rome's expansion through the Punic Wars; and issues of commerce, justice, citizenship, taxation, and cultural conflict. The course concludes with a brief examination of the decline and collapse of the western half of the Roman Empire.

HIST 332
Medieval Europe, 500 to 1400 CE
Credits :3

This course presents an overview of western European history, from the fall of the Roman Empire through to the Hundred Years' War. Emphasis is placed on the decline of the Roman Empire; the rise of feudalism and manorialism; the rise of the Papacy; the Commercial Revolution; and the origins of nation states. Course assignments include essay exams, reaction papers, as well as class presentations that emphasize critical thinking, writing and communication skills.

HIST 333
Renaissance and Reformation, 1400 to 1648
Credits :3

This course examines the intellectual and cultural developments in Italy and Northern Europe; the origins of the Protestant Reformation and its impact; the Counter Reformation; European interaction with Africa, Asia and the Americas; the decline of feudalism and the rise of the nation state; Religious wars; and the Peace of Westphalia. Course assignments include research paper, reaction papers, as well as class and group presentations that emphasize critical thinking, writing and communication skills.

HIST 334
Renaissance Arabian Gulf in Antiquity
Credits :3

During the past five decades, archaeological evidence from the Arabian Gulf region was accumulated as a result of intensified foreign exploration and excavation, which is still ongoing in many areas of the Gulf. Therefore this course provides background knowledge of archaeology in the Arabian Gulf from Prehistory to the Islamic period. This course will explore the role played by Arabian Gulf societies in trade between Mesopotamia and the East, particularly during the Bronze Age.

HIST 336
Women and Gender in the Ancient Near East

Credits :3
This course will investigate the history of gender roles, images, and experiences in the social, political, economic and legal context of ancient societies such as Mesopotamia, Ancient Egypt, Persia, Levant, India, China, Ancient Yemen, Greece, Rome, Africa, Latin America and Arabia. Through a topical approach, the emphasis is placed on the variety of ancient women's experience. Reading material includes translations of primary sources; pictorial and archaeological evidence will likewise be at the center of class discussions.

HIST 337
The Age of Absolutism and Revolution, 1648 to 1815
Credits :3

This course examines the major trends in political, social, intellectual, and cultural history of Europe during the period of 1648 to 1815, including the development of absolutism in France and elsewhere in the Europe. The course deals at length with the cultural movement known as the Enlightenment; the liberal revolutions in England and France, and the consequences of those of those developments.

HIST 370
Modern Arab History since 1919
Credits :3

This course is a continuation of Arab History I. It begins with the 1919 Egyptian revolt against the British and ends with the 1967 Arab Israeli War. Topics covered include the Arabs in the interwar period, Arab nationalism and the struggle for independence, internal Arab relations, the Arabs and the Cold War, the Arab Israeli struggle for coexistence, women of the Arab world, and Arab modernization and development in the age of globalization.

Prerequisite
HIST 213 OR HIST 358

HIST 380
Making of the Modern American
Credits :3

This course examines the cultural, political, and constitutional origins of the US. It covers the series of revolutionary changes in politics and society between the mid 18th to 19th centuries that took thirteen colonies out of the British Empire, and turned them into an independent nation. Starting with the cultural and political glue that held the British Empire together, the course follows the political and ideological processes that broke apart, ending with the series of political struggles that shaped US identity

HIST 390
Modern China and Japan
Credits :3

The social, political and cultural history of twentieth century China and Japan with a focus on issues of nationalism, revolution, modernity and gender. Using a combination of primary and secondary materials relating to various walks of life, and a range of experiences from shopping to constitutional debates, students will be expected to craft

their own interpretations of this fundamental period in Japan and China's histories. Lectures will introduce important developments and provide a framework for developing strong analytical skills.

HIST 407
Capstone
Credits :3

In this course, students embark on a research project under the supervision of their instructors. To enhance their collaboration skills, more than one student may embark on one project. Although students are given the liberty to select their individual/ collective project, the approval and guidance of instructors is practiced. Specifically, the Capstone project is supposed to reflect the skills and training undertaken throughout the history program.

HIST 415
History of science in Islam
Credits :3

This course traces the development of science in Islam up to the age of Ottoman Empire. It begins with the positive attitude of Islamic traditions towards seeking knowledge and critical thinking. The impact of establishment of the paper mills and the Wisdom House in Baghdad on the translation process and emergence of Islamic scientific scholarship will also be examined. The contributions of Muslim scientists and Islamic centers of learning during the Middle Ages will be discussed.

HIST 416
History of Islamic Arts and Architecture
Credits :3

This course deals with all Islamic forms, styles and designs of art and architecture from the rise of Islam in the seventh to the thirteenth century. It begins with the impact of the ancient and neighbouring civilizations on the Islamic culture. Numismatics, pottery, ceramic, metallic crafts, glass and crystals, carpet and textiles will be studied. Additionally, urban planning and design of mosques, castles, walls and public buildings in main Muslim cities of Damascus, Baghdad, Jerusalem will be also studied.

HIST 417
Topics in Islamic History
Credits :3

This course may count twice with different topics. The following are examples of topics and are not meant to be exclusive: History of Women in Islam; Islamic Political Thought; Military History in Islam; and Travels in the Medieval World: Historical & Socioeconomic Lessons. Students' broad comprehension of the material will be examined through highly critical and analytical research projects.

HIST 421
The Gulf and the Arab World
Credits :3

This course is designed to acquaint the students with the relationship between the Gulf countries and the Arab World during the modern period, the evolution of this relationship, and its social, political, and

economic dimensions. The course will examine Gulf-Arab relations since the nineteenth century, cultural and educational exchange, Arab migrant labor in the Gulf, the policies of Gulf countries towards nationalist movements in the Arab world, and their position regarding the Arab-Israeli conflict.

HIST 425
Topics in Gulf History
Credits :3

The course may count twice with different topics. The following are examples and are not meant to be exclusive: Travellers and the Gulf in Modern History; Gulf -Africa Relations; The U.S and the Gulf; The Gulf and Arab -Israeli Conflict; Reform Movements in the Gulf.

HIST 427
Muslim minorities in the world
Credits :3

This course explores the developments and debates related to Muslim communities issue in different parts of the world. The great focus of this course will be mapping these communities. The course will explore the history of these minorities in the west, eastern Europe, Latin America, and south Asian countries. The course will also study the challenges that are facing these minorities, and the contributions they may have made to those societies.

HIST 431
Nationalism and its Consequences, 1815 to 1914
Credits :3

This course examines nationalism in three interrelated domains: the way it informed the emergence of modern nation-states in Europe; the major theoretical debates this historical experience generated and the ways in which nationalism was disseminated through public performance. The course focuses on nationalism in France, Germany, and Italy. Students will improve their sense of inquiry, developing sharper communication and writing skills through composition of research papers, class and group discussions, and presentations.

HIST 432
Europe Between the Two World Wars, 1914-1945
Credits :3

This course examines the social, economic, and political causes of both wars; the politics and society of the inter-war period, and the rise of totalitarianism; the impact the wars left on the European continent and their repercussions on the rest of the world.

HIST 434
Topics in European History
Credits :3

The course may count twice with different topics. The following are examples and are not meant to be exclusive: Napoleon Bonaparte; Nazi Germany; The Russian Empire; Europe and the Middle East; Women in European History; The Rise of European Fascism in the 20th Century; European-Ottoman Encounters.

HIST 436
Intellectual History of Europe in the 20th Century
Credits :3

This course explores the intellectual and cultural history of Europe in the 20th century. It examines how European intellectuals, artists, writers, and other cultural figures contributed and responded to key developments in the 20th century. Among the historical themes for consideration are psychology and the self, feminism, gender, the mass politics of socialism, fascism and totalitarianism, race, empire and decolonization.

HIST 470
Modern Latin American History
Credits :3

This course explores the emergence of independent Latin American nations from the 19th century. It examines how states are formed from colonial territories and how nations, national identities, and national communities are constructed. It also focuses on questions of democracy, and the struggle for political, social, and economic representation. Course assignments emphasize reading and interpreting primary source materials, and both oral and written work, including research and reaction papers that will improve critical thinking abilities.

IENG 210
Work Methods & Measurements
Credits: 3

Introduction to concepts of work & man-machine interface, analysis, design and measurement of work, method study, recording at different levels, process analysis and improvement, applications in design/ modification. Work measurement, Time study, work sampling, PMTS, fundamentals of incentive schemes & performance measurement.

Prerequisite
GENG 200

IENG 260
Thermodynamics
Credits: 3

Introductory examples of energy conversion systems. Basic concepts and definitions. Properties of a pure substance, ideal gases. Work and heat. The first law of thermodynamics and its application to systems and control volumes. The second law of thermodynamics and the concept of efficiency. The entropy and irreversibility. Selected applications to engineering problems including vapor-power cycles, refrigeration cycles and simple gas turbine cycles.

Prerequisite
MATH 101

IENG 310
Facility Planning and Layout
Credits: 3

Fundamentals of facilities planning and design. Facilities planning models including location selection and location allocation modeling.

Product, process and schedule design. Flow, space and activity relationships as well as personnel requirements. Material handling equipment selection and materials handling systems. Systematic layout planning and computer aided layout improvements and design. Storage and warehouse system.

Prerequisite
IENG 210

IENG 320
Statistical Quality Control
Credits: 3

Concepts and statistical methods for controlling the quality of products and services. Process control techniques, acceptance sampling methods, statistical analysis using QC tools and basics of other methods such as DOE, capability analysis used by management to control processes, costs and to improve quality.

Prerequisite
GENG 200

IENG 330
Operations Research
Credits: 3

Methods of operations research including formulation for models and derivation of solutions linear programming. Simplex algorithm. Transportation and assignment problems. Network models.

Prerequisite
MATH 102

IENG 331
Advanced Operations Research
Credits: 3

Linear programming review: simplex and revised simplex method sensitivity analysis. Advanced linear programming: Parametric linear programming. Goal programming. Scheduling and Sequencing Nonlinear Programming.

Prerequisite
IENG 330

IENG 337
Production Planning and Inventory Control
Credits: 3

Introduction to subject and related terms to the topic, fundamentals of products & processes selection & transformation requirements, approaches for forecasting, aggregate & capacity planning, inventory management for independent demand items, material requirements & resource planning, scheduling, new concepts in subjects such as lean management practices.

Prerequisite
IENG 210 AND GENG 360

IENG 350
Computer Simulation Systems
Credits: 3

Probabilistic models, system dynamics and simulation modeling, input data modeling, verification and validation of simulation models. Analysis of simulation outputs. Discrete-event simulation modeling and analysis. Problem solving using simulation modeling techniques. Queuing theory, queuing systems and application of statistical principles. Design of simulation experiments and tools for reducing the variance of simulation outputs.

Prerequisite
GENG 106 AND GENG 200

IENG 410
Ergonomics & Safety Engineering
Credits: 3

Introduction to Ergonomics & terms associated, understanding the working of body & mind, physical & mental characteristics, human senses, cognitive processes, nature of work and work capacity, impact of working environment, ergonomic considerations in design of workplace & facilities, controls and displays, office ergonomics, introduction to safety & quality of work life, hazard & failure causes, fundamentals of investigation & analysis.

Prerequisite
IENG 210 AND MECH 230

IENG 411
Maintenance Planning and Control
Credits: 3

Management of maintenance planning, execution, control, and its relationship to other functions, preventive and predictive maintenance using condition based monitoring, spare parts planning, replacement analysis, reliability engineering, maintenance procedure and costs involved, fundamentals of TPM and OEE, role of computers. Case studies and applications

Prerequisite
IENG 330

IENG 420
Quality Management
Credits: 3

Introduction to the philosophy and application of Total Quality Management in the context of organizational and cultural change dedicated to the continuous improvement of products and services. Some of the ideas and topics covered are: international quality awards quality management systems (ISO 9000), benchmarking reengineering; teaching of Deming, Juran, and Crosby; management of change and implementation of TQM.

Prerequisite
IENG 320

IENG 421
Decision Analysis
Credits: 3

This is an introductory course on the theory and applications of decision analysis. Approaches of decision-making problems under certainty and uncertainty. Emphasis on the formulation, analysis and use of decision-making techniques in engineering and systems analysis. Formulation of risk problems and probabilistic risk assessments.

Prerequisite
GENG 200

IENG 423
Design of Experiments
Credits: 3

Principles of experimental design. Randomized complete block designs. Latin square and Graeco-Latin square designs. General factorial designs. 2k Factorial designs. Response surface methodology and robust design. Planning, performing and analyzing industrial experiments.

Prerequisite
GENG 200

IENG 425
Reliability Engineering
Credits: 3

Introduction to reliability analysis. Reliability measures reliability function, expected life, hazard function of important distribution functions. Hazard models and product life. Extreme value distribution. Static reliability models. Dynamic reliability models. System effectiveness measures. Reliability allocation and optimization. Introduction to fault tree analysis and human reliability.

Prerequisite
GENG 200 AND IENG 330

IENG 441
Concurrent Engineering
Credits: 3

A systematic approach to the mechanical design of products, requiring the concurrent design of all related processes. Iterative and integrated product development methods. Design of world class products. Integrated concurrent and reverse engineering. Quality Function Deployment, Value Engineering; alignment of product requirements with process capability, Design for Manufacturability, Design for Assembly. Robust products through appropriate design of experiments.

IENG 450
Production Automation
Credits: 3

Principles of manufacturing automation and control strategies and techniques for modern industrial processes. Fundamentals of numerical control (NC) and applications of modern computer numerical control

(CNC). Programmable Logic Controllers (PLC). Robotics and automated materials handling systems. Analysis of automated production systems/ lines including; automated flow lines, transfer lines, and automated assembly lines.

Prerequisite
GENG 106 AND MECH 230

IENG 451
Expert Systems
Credits: 3

Fundamentals of artificial intelligence (AI). Basic concepts and principles of expert systems. Building expert systems, central ideas of expert system development; including knowledge representation, control structures, knowledge acquisition, and knowledge engineering. Emphasis on the use of domain specific knowledge to obtain expert performance in programs. Modern expert system programming techniques and tools.

Prerequisite
GENG 106

IENG 452
Information Systems Engineering
Credits: 3

Fundamentals of information systems, key application areas of an industrial information system - the relational database model, introduction to SQL, Query by Example- Informational architecture and logical database design - data modeling, entity-relationship model - normalization - information system analysis and design, understanding the information requirements of an enterprise - implementation (design of a user interface, design and implementation of forms and reports based on user requirements) - Web-enabled databases, basics of ERP concepts and information requirements inclusive of e-business - Introducing object- oriented design, UML diagrams, modeling using UML. A Design Project: Execution of information system design project using standard design tools.

Prerequisite
GENG 106

IENG 460
Manufacturing Systems Des
Credits: 3

Manufacturing operations, manufacturing models and performance metrics, design of manufacturing systems including cellular, manufacturing and flexible manufacturing systems. Analysis of process selection, planning, optimization and economic of manufacturing systems, group technology, transfer lines. Computer –aided manufacturing.

Prerequisite
GENG 106 AND MECH 230

IENG 478
Innovation & Entrepreneurship

Credits: 3
This course combines class room lectures with field study and exercises supplemented with guest lectures and case studies on small and medium scale industries. The course offers the basic framework for understanding the process of entrepreneurship, principles of management and related techniques in decision making, planning, marketing, and financial control. Exercises in product design and prototype development, preparation of workable project feasibility reports, practical ideas about launching their own enterprises are also covered.

Prerequisite
GENG 360

IENG 479
Special Topics
Credits: 3

Selected topics that meet student interests and reflect trends in the field of industrial and systems engineering.

IENG 481
Project Engineering
Credits: 3

Introduction to project engineering, project lifecycle and feasibility studies. System approach covering requirements such as scope, time, cost, quality, resources and communication. Project planning & control, work breakdown and network scheduling techniques such as CPM & PERT. Cost and resources considerations and organization structures. Applications of project management software. Case studies.

Prerequisite
GENG 360

IENG 484
Supply Chain Management
Credits: 3

Introduction to subject its importance and evolution, terms associated, Inbound side of chain, procurement/e-procurements & sourcing, vendor management, operational aspects in supply chain, Make or buy decisions, and resource planning, distributional aspects of supply chains, Integration aspects such as Linkage with other software solutions like ERP, strategic chain decisions with manufacturing environments, optimization, and sourcing decisions affecting overall performance. Newer practices in supply chain management.

Prerequisite
IENG 310

IENG 485
Financial Engineering & Risk Management
Credits: 3

Introduction to financial engineering with an emphasis on financial derivatives including; the future markets, the pricing of forwards and futures, forward rate agreements, interest and exchange rate futures, swaps, the options markets and option strategies. Techniques and

methods for managing financial risk including; portfolio theory, Portfolio management, the Capital Asset Pricing Model (CAPM), Monte Carlo methods, Value-at-Risk, Stress testing, extreme value theory, decision trees and utility theory.

Prerequisite
GENG 200 AND GENG 360

IENG 486
Service Operation Management
Credits: 3

Understanding Services, how the operations and management of services is different than manufacturing, role of services in economy and value chains, service strategies and competitiveness of value chain, design of services, service systems and the various considerations, managing and operating services, service considerations for select sectors such as health care, public and private non-profit organizations, global performance aspects of services.

Prerequisite
GENG 360

IENG 498
Industrial Systems Design
Credits: 3

A team-based capstone design work involving analysis and design of a system in the area of Industrial and Systems Engineering. Students follow systematic design approach; apply project planning and scheduling techniques and computational and/or experimental solutions. Emphasis on synthesis of knowledge and skills to assimilate and demonstrate a professional attitude and ethics in problem solving with assessment of environmental, cultural and social impacts; Students are required to present their findings at the end of the project in the form of a written formal report based on specific standard format, followed by a multimedia presentation of the work undertaken in the project.

INST 220
Introduction to Instructional Technology
Credits: 2

The Course focuses on the process of educational technology & its role in the development of the instructional process & training processes, through the systems approach & its effectiveness in designing the instructional programs & training programs in any field, based on the target audience characteristics. Though, the course provides some instructional design models in different levels. The course also focuses on different types of instruction (individualizes instruction, small & large group instruction). Additionally, the course concentrates on some advancements technology related to the fields of education, and libraries & information systems.

INST 221
Photography

Credits: 2

This course offers experimental learning features by providing basic knowledge and practical skills in photography and digital imaging. Topics covered include white and black photography, color photography, digital image manipulation (which is comprised of digital image principals; how to use a digital camera, correction of damaged images) as well as principals of design of images for monitor display, internet publishing and for printed documents. The course also improves students' performance in innovation and contributes their learning efforts in support of their country.

INST 222**Photography****Credits: 3**

This course offers experimental learning through provision of a basic knowledge and practical skills in photography and digital imaging. Topics covered include white and black photos, colored photos, digital image manipulation (comprised of digital image principals; how to use a digital camera, and correction of damaged images) as well as principal design of image for monitor show, internet publishing and for printed documents. The course also improves students' performance in innovation and contributes their learning efforts in support of their country.

INST 225**Educational Technology****Credits: 3**

This course was designed to help student teachers in acquiring information, skills, and renewable attitudes related to the employment of the Educational Technology in all aspects of the educational process. The course addresses many topics concerning the nature of the field of educational technology and related areas, such as information technology (IT), which implies digital information, computer educational applications, and the other kind of advancements technology such as multimedia, computers, internet, and so on, in a theoretical & practical ways.

INST 401**Instructional Technology****Credits: 3**

The course focuses on the theoretical & practical aspects that related to the employment of educational technology in the process of instruction. These topics implies the relationship between the educational technology with information technology, communication, instructional design, strategy of individualized instruction, production of instructional material, operating of instructional equipments, and some other topics.

INST 402**Computer in Education****Credits: 2**

This course provides the student with computer application skills, use of application software and the Internet in education, criteria for designing and evaluating educational multi-media software and educational web-sites, e-learning and distance learning as well as its fields.

INST 411**Advanced Technology and Instruction****Credits: 2**

The Course aims to introduce the learners to key advancements in technology as a concept, & their roles in the development of the instructional process through their effective employment. This can be done through learner-centered lectures, concerning different types of instruction, such as individualized instruction, large, & small groups instruction, with emphases on E-Learning and its aspects.

INTA 100**Freshman Seminar****Credits: 3**

This is a small seminar course designed to familiarize freshman students with the university. Through this course, students will learn how to think critically, learn how to express their ideas effectively in the classroom, how to read carefully and how to write a term paper. Specific topics covered each semester may vary.

INTA 101**Political & Social Thought****Credits: 3**

Political and Social Thought- This course examines major texts in the history of political thought and the questions they raise about the design of the political and social order. It considers the ways in which thinkers have responded to the particular political problems of their day, and the ways in which they contribute to a broader conversation about human goods and needs, justice, democracy, and the proper relationship of the individual to the state. One aim will be to understand the strengths and weaknesses of various regimes and philosophical approaches in order to gain a critical perspective on our own. Thinkers include Plato, Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Marx, and Tocqueville.

INTA 102**Intro to Political Science****Credits: 3**

This course will act as an introduction to the major concepts, theories, ideas, and fields of study relating to politics and governmental systems.

INTA 103**Intro to Inter Relations****Credits: 3**

This course introduces the main themes in international relations, including the problems of conflict and cooperation. We will focus on the defining the basic theoretical tools used to study international politics. We will then apply these theories to contemporary issues in international relations such as defining a post-Cold War paradigm, nuclear weapons, resurgent nationalism, terrorism, international trade, globalization, environmental pollution and European unification.

INTA 200**Study & Practice of Diplomacy****Credits: 3**

This course introduces a key element of international relations: the art of diplomacy. We analyze diplomacy's important role in the international system through the major theoretical lenses of International Relations and then explore empirical cases of diplomacy in the face of international crises. By the end of the course, students will be asked to create an exercise in international diplomacy of their own.

INTA 201**Comparative Political Systems****Credits: 3**

This course studies the politics of particular foreign countries and regions and the comparative study of political phenomena such as leadership or state formation on a regional level. This course will show how different political systems interact and students will be asked to anticipate how these political systems will act in the future.

INTA 202**European Civilization****Credits: 3**

This is an introduction to the history of European Civilization from the pre-industrial era. Its goal is to present students with some knowledge of the broad lines of European development from 1050 to 1750, as well as with an introduction to some outstanding current problems of interpretation. The principal topics include the later Middle Ages, Renaissance, Reformation, Scientific Revolution, and Enlightenment. Geographical emphasis will be on Western Europe, primarily England, France, Germany, Spain, and Italy.

INTA 203**Women in Islam****Credits: 3**

This course examines the women's issues related to Islam and contemporary Muslim culture including the role and rights of women in Islam. It will cover the changing roles what women have played throughout Islamic history and the shifting discourse in Muslim communities on the construction of gender identities. This class will challenge western assumptions and interpretations of other societies and provide a framework for in which to understand women in Islam from a variety of perspectives.

INTA 204**Middle East History I****Credits: 3**

This course will cover the origins of Islam and its spread across the Middle East, Spain and Northern Africa. It will focus on the Umayyad and Abbasid Caliphates, the major political and secretarian schisms in the Islamic world, the conflicts between Islam and the West, and the rising influence of the Turks and the Mongols.

INTA 205**Middle East History II****Credits: 3**

This course focuses on the history of the Middle East since 1500 to modern day. It will focus on the evolution of the Ottoman and Safavid/Qajar Empires into modern nation-states. In addition to providing students with a practical overview of the history of the Middle East, this course will examine two overarching questions: How do accumulated traditions influence historical transitions How should we understand Islamic Civilization in the age of the modern nation-states

INTA 206**Globalization****Credits :3**

Globalization is a popular term that remains poorly understood. For many it is associated with progress and development, while others see it representing rampant capitalism and Westernization. The purpose of this course is to introduce students to key issues in globalization. Through drawing on a variety of key themes, the course will cover globalization's most important political, economic, social and cultural phenomena, such as transnational social movements, international organizations, political economy and security. This seminar will attempt to answer fundamental concepts such as questions: What is globalization? Is it truly a new? Is it actually global? Does it represent a threat to national sovereignty? What are its implications for domestic policy making?.

INTA 209**Islam and the West****Credits :3**

Modern nation-states appeared first in Western Europe. The characteristics of such an institution—such as middle-class ascendancy, centralization, nationalism, urbanization, industrialization and modernization—were natural results of historical developments within Europe. Since the beginning of the nineteenth century when Europe began to colonize the world, then later in the twentieth century when the two super-powers, Russia and USA (themselves extensions of European civilization), divided the world between them, and today with Islamic fundamentalism representing a challenge to Western modernity, the patterns of development and progress in the Islamic world have been greatly influenced by the example of the West. First, through the enforced rule of Western European countries, particularly England and France, and later by choice of westernizing indigenous rulers, the Islamic world has been subjected to westernization. This course discusses the historical relationship between the West and the Islamic world, relations marked with both friendship and challenges. The importance of relations between Islam as culture and civilization and the West as a dominant culture of the modern world will be discussed and analyzed.

Prerequisite

INTA 101

INTA 301**Islamic Political Thought**

Credits: 3

The objective of this course is to familiarize the students with continuities and shifts in the major themes addressed by Islamic political thinkers from throughout the Middle East, Asia, and Africa, from the medieval through the modern periods. Themes will include the building of a just political order, and the relationship between procedural and substantive justice, as well as issues of human rights, equality, war, and democracy. Course materials will include many primary sources, as well as translations.

**INTA 302
Politics of Oil
Credits: 3**

This course examines the impact of oil politics on the Middle East. The focus is on modern history of major oil producers in the Middle East from the Iranian revolution to the recent conflict in Iraq and the involvement of the Gulf States. This course will analyze the relationship between oil, foreign intervention, nationalism, democratization and religion.

Prerequisite
INTA 102 AND INTA 103

**INTA 306
Gulf Policies
Credits: 3**

This course explores the eight political systems located in the oil-rich Arabian Gulf. The course will focus on the clash between tradition and modernity, resurgent Islam and secularism in this unique part of the world.

**INTA 308
International Political Economy
Credits: 3**

This course looks at energy and environmental issues from an economic perspective. Emphasis of this course will be on the relationship between the environment, natural resources, and economic growth. Other topics will include energy efficiency and control of pollution across countries, global warming and the role of energy in the international economy.

**INTA 313
Culture and Politics
Credits: 3**

The purpose of this class is to introduce students to the theoretical debates, critical methodologies and theorists of the field of culture and politics, with particular attention being given to the Middle East. The course will draw on a number of key cultural and political critiques that address the way we read, interpret and construct meaning, identity, knowledge and values in our societies, politics and cultures. The course is particularly interested in examining the political meanings of culture as they relate to issues such as representation, power, class, gender, media and nationhood in terms of their social and historical contexts.

Prerequisite
INTA 101

**INTA 315
Dialogue Across Societies and Civilizations
Credits :3**

This is an innovative cross-cultural course that allows students to explore the relationship between the Muslim/Arab world and the West. Through the Soliya program, Students will be grouped together with other students from the United States, Europe, the Middle East, and North Africa. Students will have the opportunity to explore the relationship between the Arab/ Muslim world and the West via online dialogue sessions. The goal of the course is to improve awareness and understanding of other societies. Students will examine their perception of ‘other,’ through this intercultural dialogue. The course is taught in conjunction with Soliya (www.soliya.net).

**INTA 345
The Arab-Israeli Conflict
Credits :3**

This course will survey the social, political, and ideological origins of the Arab-Israeli conflict. Looking specifically at the forces of Western colonialism and imperialism, Arab nationalism and Zionism, and how these forces shaped the region and the conflict. Moving beyond the causes of the conflict, this course will also look at the different attempts at peacefully resolving the conflict. This course will also explore the role of major players, such as the US, France, UK, Russia, and Iran in the conflict.

**INTA 350
Foreign Policy of the United States
Credits :3**

This course offers a survey of the foreign policy of the United States since the American Revolution. It aims to show the themes that underpin its foreign policy through adopting a case study approach on the role of the United States in its foreign affairs and includes both World Wars, the Cold War era, in addition to the role it has in the contemporary era, including the wars in Afghanistan and Iraq.

**INTA 401
International Relations Theory
Credits: 3**

This course explores the prominent theories of International Relations. Major themes include morality and politics; debates over methods and theory; foreign policy and global conflict; and the search for peace. Classes will be both lecture and discussion based. At the conclusion of the course students will demonstrate their understanding of various theories of international relations in analyzing a current problem of their choosing through the lenses of two of the theoretical perspectives discussed in class.

**INTA 403
Security Studies**
Credits: 3

Aims to develop a working knowledge of the theories and conceptual frameworks that form the intellectual basis of security studies as an academic discipline. Particular emphasis on balance of power theory, organization theory, civil-military relations, and the relationship between war and politics. The reading list includes Jervis, Schelling, Waltz, Blainey, von Clausewitz, and Huntington. Students write a seminar paper in which theoretical insights are systematically applied to a current security issue.

**INTA 404
Gender & law
Credits: 3**

General survey of law as it relates to women, including constitutional rights, inheritance laws, civil rights legislation, domestic relations, law as a profession for women, and political implications of the legal process. This course will look focus both on the history of gender and law as well as contemporary issues across the world.

**INTA 405
Gender in International Perspective
Credits: 3**

Explores gender construction and identity formation in international perspective. Case studies may be drawn from Africa, Asia, the Middle East, Latin America, and the Caribbean. Topics include theories and methodologies for examining gender relations in cross-cultural perspective, political and socio- economic status of women, gender ideologies and symbolic representations, women’s activism.

**INTA 411
Senior Seminar
Credits: 3**

This seminar focuses on bringing together and synthesizing research methods and skills and applying them to a specific topic related to International Affairs. The goals of a Senior Seminar will be to consolidate analytical skills, expand written and oral communication, and gain practice in undertaking more focused and sophisticated methods of research. This work will culminate in the production of a major research paper.

**INTA 415
History of the Middle East
Credits: 3**

History of the Middle East in the 20th Century. This course explores the 20th-century history of the Middle East, concentrating on the Fertile Crescent, Egypt, Turkey, the Arabian peninsula, and Iran. We will begin by examining the late Ottoman Empire and close with the events of 9/11 and their aftermath. Readings will include historical surveys, novels, and primary source documents.

**INTA 420
Conflict Resolution and Human Rights**
Credits :3

This course provides a solid foundation in the theoretical basis of conflict studies and human rights. The course will adopt a thematic approach where both the dynamics of conflicts and the human rights issues from national and international military or humanitarian interventions will be examined. This course will also explore conflict styles, communication and mediation skills through relevant case studies.

Prerequisite
INTA 103

**INTA 433
Europe, the Cold War and the World since 1945
Credits :3**

This course covers the period between the end of the Second World War in 1945 and the events leading to the dismemberment of the Soviet Union in 1991. It examines the development of the Cold War between the United States and the Soviet Union; the history of the Soviet Union fro Stalin to Gorbachev; the economic and political development of Western Europe, and the transformation of the role of Western European countries in the world through the process of decolonization. The course focuses on Nationalism in France, Germany, and Italy. Students will improve their sense of inquiry and develop sharper communication and writing skills through the writing of research papers, class and group discussions and presentations.

**INTA 440
Politics of Development
Credits: 3**

This course introduces students to the broad theories of development and their critiques. The focus is on the various perspectives, models and approaches to development in the Global South. The course will place a regional emphasis on Asia, Africa and Latin America. We will begin by examining the contested concept of “development” itself. We will look at the history and nature of colonialism and its legacy of poverty and inequality. In the second section we will examine mainstream approaches to development and alternative proposals. The final section of the course will explore key substantive topics and debates in the field.

**INTA 450
Ethics of & International Relations
Credits: 3**

This course is designed to challenge you to make a personal decision about the role ethics should play in international affairs. The goal is to have you create for yourself a moral code of conduct to guide you as citizen of a powerful state, as a tacit supporter of war in some circumstances, and as a human living in a flawed world. The first third of the course examines theoretical perspectives on role of ethical considerations in international affairs. The course the spends four weeks focused on the use of force, studying the first Gulf War, Somalia, Rwanda, Kosovo, terrorism and nuclear weapons. The next two weeks examine ethical issues related to human rights and distributive justice. The course concludes by acknowledging that change might disrupt the world as we know it. Order has some advantages, especially over chaos.

Is compromising the current order worth it? How one might one create change?

INTA 460
International Politics & Epidemics
Credits: 3

This course will explore the history and evolution of some of the greatest challenges to human health. We consider the origins of epidemics, broadly defined, and the factors -rooted in biology, social organization, culture and political economy - that have shaped their course. We examine the interaction between societies’ efforts to cope with disease and the implications of the latter for world history, ancient and contemporary. Texts include eyewitness accounts by participants such as scientists, healers and the sick who search for treatment or cures; the politicians, administrators and communities who try to prevent or contain disease at both the local and international level; and the artists, composers and literary figures who interpret the effects of the great pandemics. Cases chosen from different regions and continents range from early plagues and the recurrent threats of influenza, malaria and tuberculosis to nineteenth century disasters including cholera and the Irish Famine, “modern” scourges such as polio, West Nile virus and SARS, and the global challenge of AIDS.

INTA 470
Area Studies
Credits: 3

This course offers an interdisciplinary examination on a region of the world through a rotating topic focus.

ISLA 101
Studies in Islamic Creed
Credits: 3

This course would enable the student to get understand the terminologies pertaining to Aqeedah (theology) in Islam and get acquainted with both the methodology of the Quran and Sunnah in entrenching faith and conviction and the methodology of Muslim scholars in the field of Aqeedah.

ISLA 102
Quranic sciences
Credits: 3

Acquaint the students to the terminologies of various disciplines of the Quranic Sciences and introduce them to the doubts and allegations hurled on the Quran and their rebuttals.

ISLA 103
Quranic sciences
Credits: 3

Introduce the student to the aims and objectives of several surahs of the Quran. The course would also aim at analysis of texts from the Quran through the use of linguistic and grammatical principles.

ISLA 104
Sciences of Hadith

Credits: 3
This course aims at familiarizing the students with the science of hadith, its emergence, significance, essential works in the field and the various terminologies used in the field of hadith, with the ability to distinguish between them (Shaadh, Mahfuz, Mudtarib, Maqlub). It includes the role of scholars in the service of hadith and their varying methodologies and the doubts created regarding the authenticity of hadith and its rebuttal.

ISLA 105
Analytical Hadith
Credits: 3

Create a sound understanding of the methodologies of the scholars employed in the understanding of the sunnah. Also enable them to develop the skills of commenting and discussing on issues related to hadith.

ISLA 106
Fiqh of Worship
Credits: 3

This course investigates rules of water,(purities, impurities, and types of the water) and rules regarding prayer. It also deals with the rules, basis, conditions, types, and etiquettes of fasting, its Sunan (recommended acts)and Makruhah (disapproved acts), and examines the rules of i’tikaaf.

ISLA 107
Precepts of Fiqh
Credits: 3

This course examines the Maxims of Islamic law in terms of definition, emergence and evolution, and deals with Greater and Lesser Maxims and their exceptional rules theoretically and in detail, and elaborates the contemporary applications, and the most important ancient and contemporary sources in this field.

ISLA 201
Principles of Islamic jurisprudence
Credits: 3

This course examines the definition of Islamic jurisprudence, its development, importance codification, and different methodologies used by scholars of Islamic Jurisprudence in authoring books, and deals with the original and secondary sources and rules of Islamic law and legal implications of the texts, derivation of the rules (Al-ijtihad), following the opinion of the Islamic Law Schools (Taqlaad) and issuing Fatwas.

ISLA 202
Logic and research methodology
Credits: 3

Introduction (definition, emergence, relationship between logic and language). Understanding the Salient characteristics of scientific (intellectual) thought. Research Methodologies in Social Sciences and Humanities. Approaches to the study of religions and creeds.

ISLA 203
Fiqh of transactions

Credits: 3
This course clarifies the meaning of the jurisprudence of financial transactions, and talks about the sales contract in terms of its basis, conditions, types, effects and contemporary applications. It also elaborates the terms of al-salam (advanced payment sale) al-Ijara (leasing), al-wakala (Agency), al- Sharika (company), al-Musaqat, al-Muzara’a (crop sharing), al-Ju’ala (Wages) and al- Daman (warranty).

ISLA 204
Sufism and Ethics
Credits: 3

The objective of this course is to acquaint the student with an understanding of tasawwuf with its theoretical and practical aspects both as an internal and external behavior and in accordance with the Islamic Shariah. The students would also be introduced to models of this mode of practical behavior and lastly the role of tasawwuf in traditional Islamic civilization.

ISLA 205
Intellectual Foundations of Islamic Civilization
Credits: 3

This course introduces the student to the Islamic Civilization through its Intellectual foundations derived from the Quran and Sunnah. It also enables the student to analyze the forward march of Islamic Civilization and understand its leanings as well as the role of scholars in the dissemination of Islamic Thought.

ISLA 206
The objectives of the Sharia
Credits: 3

This course deals with the emergence of the purposes of the Sharia theoretically and examines the definition of the Maqasid and its types, grades, and their importance, and elaborates its role in derivation of legal opinion through Tarjih (preference of one opinion over the other) and illustrates the most important ancient and contemporary studies on al-Maqasid.

ISLA 207
Analytical Exegesis
Credits: 3

This course aims at introducing the student to the principles of Quranic recitation and the aims and objectives of the smaller surahs of the Quran. Memorization of several verses and chapters from the Quran. Deriving the Purposes of Sharia and social and ethical principles from Quranic verses.

ISLA 209
Islamic Studies in Contemporary Thought
Credits: 3

The course aims at enabling the student to understand the important milestones of contemporary thought and compare it with modern Islamic thought.

ISLA 210
Thematic Hadith

Credits: 3
Introduction to a number of comprehensive ahadith and the way to derive benefits related to the narration. Analysis of the hadith with respect to its narration and text.

ISLA 212
Islamic Penal Code
Credits: 3

This course deals with definition of crime and punishment and describes the general principles of Islamic criminal law; examines retribution in the murder or other crimes; and elaborates the punishment for adultery, slander, drinking, theft, apostasy, banditry and punitive sanctions.

ISLA 301
Contemporary Methods in I.S
Credits: 3

The importance of methodologies in Islamic Studies and the Methodological Heritage of Muslims. Methodology of Future Studies. Importance of observation. Islamic Studies in the age of globalization. The impact of modernism and post-modernism on Islamic Studies.

ISLA 302
Family law
Credits: 3

This course describes the marriage contract, its conditions, effects, unmarriageable women, engagement, the elements of choice (of wife), and the rule of al-Zawaj al-Urfi (customary marriage), Misyar and the friend marriage. It further examines the types of separation between husband and wife, Idda (period of waiting), and the consequences of separation such as its compensation, maintenance, accommodation, and descent.

ISLA 307
Islamic Constitutional and Administrative Law
Credits: 3

The course covers the importance of the State and its nature, the Imamate, sovereignty, governance, the source of sovereignty, the duties of rulers and their rights and attributes. It also studies rights and public freedom, the principle of consultation and obedience, legislation and codification in the Islamic state.

ISLA 308
Contemporary Intellectual Trends
Credits: 3

Apprise the student of the most significant contemporary trends of thought with respect to their development, methods and objectives. The student should be able to distinguish between the characteristics and personalities of these trends, critically study these trends from the Islamic perspectives and identify their pros and cons. Strengthen research skills around the intellectual trends and try to discern the general framework in which these trends are born and work.

LAWC 101
Introduction to Law

Credits: 3

This course deals with the general theory of law and the theory of rights. Therefore, the syllabus of this course will be divided into two main parts: (1) the theory of law and (2) the theory of rights. The first part will be concerned with the concept, philosophy, development, sources, classifications and scope of application and interpretation of law in general. The second part will introduce the students to the theory of rights as known in the civil law systems. This part will deal with the concept, classification, subjects and persons of rights and other relevant issues.

**LAWC 102
Human Rights
Credits: 3**

This course will discuss two broad issues about human rights. The first is the theory of human rights in national and international instruments; this part will cover the concept, development and classification of human rights (i.e. civil, political, social, economic and cultural rights). The development of these rights in both national and international regimes will be examined. The second part of this course will deal with the concept of international humanitarian law, its role in the protection of victims of war and its definition and relationship with the work of the ICRC. The main treaties are the four Geneva Conventions of 1949 and their Additional Protocols as well as the Hague Conventions.

**LAWC 111
Legal Research & Writing I
Credits: 3**

This course is a series of exercises introducing students to the way lawyers analyze and frame legal positions in litigation, conduct legal research, and present their work in writing and in oral argument. Students actively learn research and writing skills by preparing initial and final drafts of memoranda and briefs and by becoming familiar with accessing both print and electronic research materials.

Prerequisite
LAWC 101

**LAWC 112
Sciences of Crimes and Penalties
Credits: 3**

A general introduction to the study of criminal behavior from an interdisciplinary perspective. The main focus is on the classical and contemporary theories developed from the past until current time, to explain and predict criminal behavior in society and, as well as examining associated penalties. In addition, the ability of these theories to explain criminal behavior in different cultures will also be examined. Other issues in criminology, such as the role of demographics (age, race, gender, social class) in the causation of reaction to crime.

**LAWC 113
International Humanitarian Law**
Credits: 3

This course will deal with the concept of international humanitarian law, its role in the protection of victims of wars and its relationship with the work of the ICRC. The main treaties are four Geneva Conventions of 1949 and their additional Protocols, as well as the Hague Conventions. This course is to be differentiated from other related topics such as the international law of human rights.

**LAWC 202
Public Finance and Taxation
Credits: 3**

This course deals with the concept of public finance, the fiscal role of government and its evolution, the public budget and its preparation, its laws, principles and kinds. Public budget encompasses studying public expenditures: definition, evolution determinants, implications, etc. The course addresses also the main sources of revenues such as state property, fiscal charges, public loans and taxation. This is in addition to fiscal policy.

Prerequisite
LAWC 101

**LAWC 213
Sources of Obligations
Credits: 3**

This Course introduces the students thoroughly to the fundamental principles of the sources of obligations in the new Civil Code of the State of Qatar. The Sources of obligations include: (1) Contract, (2) Unilateral Will, (3) Tort liability, (4) Unjustified Enrichment and (5) Legislation.

Prerequisite
LAWC 101

**LAWC 214
Effects of Obligations
Credits: 3**

This course deals with the legal regulation of the effects of obligations and the means of their implementation whether voluntarily or under compulsion. The course also covers the grounds under which the effects of obligations may be amended, transferred, assigned or terminated.

Prerequisite
LAWC 213

**LAWC 215
Business Law
Credits: 3**
Prerequisite

FEDU 201 Concur. OR ENGL 004 Concur. OR ENGL F073 Concur. OR ENGL 202 Concur. OR IBT 061 OR T02 500 OR IELT 5.5 OR CBT 173

**LAWC 217
Commercial Law**
Credits: 3

This is an introductory course to all other advanced commercial law courses. It provides the students with the general principles of commercial law; its concept, characteristics, development and sources. It will also study the legal concept and theory of commercial transactions and that of traders in the 2006 Commercial Code of Qatar. The legal status and rules of commercial premises and the rules of unfair competition will also be highlighted. The course shall also introduce students to the most common contracts of commercial nature such as the contract of sale and the contract of commercial agency.

Prerequisite
LAWC 101

**LAWC 218
Bankruptcy Law
Credits: 3**

This course examines in details the Commercial Code regulation of bankruptcy. In particular, the course examines the declaration, administration, effects and termination of bankruptcy procedures. The course shall examine both individual and corporate bankruptcy. The course shall also examine the rules of commercial rehabilitation and preventive reorganization. The course instructor is advised to spot the light on the problems and developments of what is called cross-border bankruptcy/ insolvency.

Prerequisite
LAWC 217

**LAWC 222
Constitutional Law
Credits: 3**

This course studies constitutional law; its nature and its relationship with other branches of law, the definition of the constitution, its sources, kinds of constitutions, their origins and developments, the diminishing relative value of constitutions and the means for protecting them through censorship and its application. The course also studies the state; its legal attributes, systems of government, the concept of government and its various types with samples of current governing systems. The course will also examine the constitutional system of the State of Qatar, and in particular the separation of powers doctrine and civil and political rights and liberties.

**LAWC 223
Legal Writing II
Credits: 3**

In Legal Writing II, students will build upon the foundation provided in the earlier course Legal Writing I. Students will write memoranda based upon legal research provided to them and test their understanding and writing skills. The lab component of this course aims to equip law students with the ability to communicate using the advanced technical English language required to practice law and for academic legal study in English. Through training in speaking, reading, writing and listening,

these skills will enable students to apply their abilities in every aspect of academic study and in the practice of law in any industry.

Prerequisite
LAWC 111

**LAWC 250
Family Law
Credits: 3**

The State of Qatar has recently codified most legal aspects of family relationships in the New Family Law No. (22) of 2006. This course will examine all provisions of this law, in particular the provisions of marriage, divorce, financial provision, guardianship.

**LAWC 253
Anglo- American Legal System
Credits: 3**

This course is intended to introduce the students to the main features of the Anglo-American legal system, as one of the main legal systems of the world, in comparison with the Civil Law legal system.

Prerequisite
LAWC 101

**LAWC 299
International Sale of Goods Contract
Credits: 3**

This course will deal with legal aspects of the international sales of goods. In particular the course will cover the formation and performance of contract of international sale, finance of exports and export credit guarantees.

Prerequisite
LAWC 213

**LAWC 302
Advocacy Skills
Credits: 3**

This course will teach the practice skills used by lawyers in representing clients. It will develop lawyering skills and will address skills related to legal writing, oral advocacy, negotiations and counseling through readings, lectures and exercises.

Prerequisite
LAWC 111

**LAWC 314
Law of Civil Contracts I
Credits: 3**

The legal system of the State of Qatar follows the Latin distinction between civil and commercial contracts. This course will, therefore, follow this distinction and study the concept of nominated civil contracts and the distinction between such contracts and non-nominated contracts. The course will concentrate mainly on the two

main nominated contracts: the contract of sale and the contract of leasing. All aspects of these contracts will be examined including their definition, formation, elements, obligations arising there from and termination.

Prerequisite

LAWC 214

LAWC 315

Labor Law

Credits: 3

This course deals with general principles of labor law in the light of the legal system of the State of Qatar and international conventions. It will introduce the students to the labor laws definition, scope, evolution and sources. It will then investigate the individual labor contract; its elements, duration and effects. The course shall also spot the light on the legal regulations of the collective labor agreements, labor syndicates and the settlement of the collective labor disputes. The course will also examine the legal environment of social security.

Prerequisite

LAWC 213

LAWC 316

Law of Procedures in Civil & Commercial Matters I

Credits: 3

This is an advanced course which deals with the structure of the judiciary in the State of Qatar, the formation of the civil courts, their jurisdiction and competence, the legal proceedings of the civil and commercial cases before the courts and the rules of appeals and cassation.

Prerequisite

LAWC 214

LAWC 321

Administrative Law

Credits: 3

This course deals with the definition of administrative law, its sources, the actions taken by the public administration in implementing the laws, administrative control, the system of public utilities, administrative legal instrument; administrative decisions, and administrative contracts (public procurement), all of that will be studied in the light of the Qatari Legal System.

Prerequisite

LAWC 101

LAWC 323

Criminal Law I-General

Credits: 3

This course deals with the general theory of crime and punishment. The general theory of crime contains the definition, types and elements of crime. The course will focus on the concept of the material and mental element of crime (actus reus and mens rea). It deals with the definition

and forms of each element: commission and omission; attempt; causation; complicity; intention and recklessness. The course will also highlight of the causes of permissibility like the Legitimate Defense, the use of authority and the right of exercising some activities. The course will deal with the capacity and incapacity conditions of the person: the age of criminal responsibility, insanity, intoxication, In addition, the course addresses the general theory of punishment. It deals with the definition, purposes, kinds of punishment (substantive and subsidiary penalties) and its termination. At the end, the course will give some focus on the general theory of criminal preventive measures.

Prerequisite

LAWC 101

LAWC 324

Criminal Law II-Private

Credits: 3

This course deals with the two major classifications of crimes in the Qatari penal law. It will focus on the definition, elements and punishment of each crime. First, crimes against the public interest: such as crimes against the state (treason, espionage, conspiracy); crimes against the administration and public property (corruption, bribery) ; justice crimes (contempt of court) ; crimes against public trust (forgery or counterfeit) and crimes against the social order (corrupt public morals or outrage public decency). Second, crimes against persons and property: such as homicide, murder, manslaughter, bodily assault, abortion, kidnapping, false imprisonment, sexual crimes, blackmail, theft, robbery, fraud, computer and intellectual property crimes.

Prerequisite

LAWC 323

LAWC 329

Commercial Papers and Banking Transactions

Credits: 3

This course is divided into two main parts: (1) part one deals with the legal principles of commercial papers as negotiable instruments; their definition, characteristics and types as regulated by the Commercial Code of Qatar; namely the Bill of Exchange, Promissory Note and Cheque. (2) The second part shall examine the legal framework of the most common banking transactions from both international and national perspective.

Prerequisite

LAWC 217

LAWC 333

Law of Electronic Commerce

Credits: 3

This course will introduce the students to the main legal issues of electronic transactions in the light of both national and international law. It addresses the new legal and policy issues that arise when businesses and consumers use the Internet to conduct their commercial

transactions. These issues span a broad range of subject matters, including consumer protection, contracting, digital signatures, electronic payment systems, privacy, jurisdiction, unfair competition, torts, alternative dispute resolution, and taxation.

Prerequisite

LAWC 217

LAWC 335

Intellectual Property

Credits: 3

This course deals with national and international legal protection of intellectual property rights. The course shall introduce the students to the theory of intellectual property and applications, namely: copyrights and neighboring rights, industrial and commercial property rights and the laws that protect patent, trademarks and layout designs, the rules of the law that protect intellectual properties in Qatar and related Ministerial decisions. It also examines international agreements on industrial and intellectual property, such as the Bern Convention, the Paris Convention and the TRIPs.

LAWC 339

Public International Law

Credits: 3

This course will introduce the students to the definition, legal binding character, sources, and branches of public international law. It will also deal with different aspects of its applications in peace and war; in particular the question of international recognition of a state, the states responsibility, succession and means of international disputes settlement.

LAWC 345

International Trade Law

Credits: 3

This course examines international laws and institutions that govern foreign trade, including the World Trade Organizations (WTO), the General Agreement on Tariffs and Trade (GATT), and regional trade agreements. Focus is on customs laws, dumping, most favored nation treatment, unfair trade practices, and trade liberalization under the WTO. In addition, consideration is given to the WTO's dispute settlement system.

Prerequisite

LAWC 217

LAWC 348

Corporate Law

Credits: 3

This course deals with the commercial company law in the State of Qatar in the light of Commercial Company Act No. 5 of 2002 and its amendments. The course shall introduce the students to the concept of "company" as a contract and as a legal person. It shall then turn to detail the legal principles and rules that govern each type of companies (i.e. General Partnership, Simple Commandite Partnership, Association

in Participation, Joint Stock Company, Commandite Partnership by Shares, Limited Liability Company, Single-Person Company and Holding Company. The course will also cover the rules of merger, take over and liquidation of all types of companies.

Prerequisite

LAWC 217

LAWC 351

Administrative Judiciary

Credits: 3

This course is concerned with all types of judicial review of administrative acts and decisions and with the principle of legality; its application and scope of its observation by public administration. It also studies the sources of legality and the scope of its application in some Arab countries. On the other hand, it studies the balancing of the principle of legality by means of discretionary power, emergency powers and acts of state or government.

Prerequisite

LAWC 321

LAWC 353

Real and Personal Securities

Credits: 3

The course will examine the main principles of debt securities in the Qatari Civil Code. It covers the concept, elements, conditions and legal effects of all types of real securities such as Mortgage, Pledge, and Liens, and of personal securities such as guarantees.

Prerequisite

LAWC 214

LAWC 354

Law of Public Service

Credits: 3

This course explains the law of civil service in Qatar, by showing how the public jobs are organized, described, and filled. It also deals with the legal status of public servants or employees and their duties and rights during and after their service.

LAWC 407

Special Topics I

Credits :3

Selected topics from specialized topics of law aimed at deepening students skills and knowledge toward developing law specialties.

LAWC 408

Special Topics II

Credits :3

Selected topics from specialized topics of law aimed at deepening students skills and knowledge toward developing law specialties.

LAWC 409

Externship

Credits: 3

The externship will give students the opportunity to work for academic credits with judges, lawyers, in-house counsels and other agencies. In these places, students may do legal research and writing; they may conduct client interviews, or they may make court appearances under the supervision of an attorney. In conjunction with this uncompensated work, they engage in a supervised tutorial which allows them to reflect and learn from their experience.

Prerequisite

LAWC 302

LAWC 411**Real Rights****Credits: 3**

This course deals with the property rights: the right of ownership, the scope of this right, the instrument for its protection, types of ownership, the basis for acquiring property, the rights derived from ownership, transfer, use, benefit, restrictions on its use and its disposal, all of that will be studied according to Qatari relevant legislation.

Prerequisite

LAWC 214

LAWC 413**Private International Law****Credits: 3**

This course deals with the general theory of nationality, its definition, concept, development, types and means of acquisition, withdrawal and dropping. The course shall also cover the legal remedies for multinationals and stateless. The second part of this course deals with the legal status of foreigners residing on the State of Qatar. This course deals also with the concept, development, nature, sources and role of conflict of laws rules in private international relationships either of financial character or of personal and family status and concept and applications of public order in Private International Law. The course also examines legal rules set up to determine the competent courts (conflicts of jurisdictions) in cases involving foreigners or of international character.

Prerequisite

LAWC 213

LAWC 414**Law of Civil Contracts II****Credits: 3**

The course will concentrate on two other contracts nominated and regulated by the Civil Code, in particular the Moqawleh contract (contract to perform works for others), and the contract of agency. All aspects of these contracts will be examined including their formation, elements and the obligations arising there from.

Prerequisite

LAWC 214

LAWC 422**Law of Criminal Procedures****Credits: 3**

This course deals with the “criminal process” and the structure, functions and competences of the criminal courts and the public prosecution service according the Qatari law. It focuses on the pre-trial procedures: the arrest (with and without warrant); investigation; seizure; wiretapping; witness; interrogation; expertise; preventive detention; decisions to prosecute or not prosecute. The course will deal with the trial phase before the criminal courts, focuses on the proceedings, evidence ; grounds of the judgment; appeal The course will also highlight the rights of the defendant in Qatari the criminal justice system.

Prerequisite

LAWC 323

LAWC 433**Oil and Gas Law****Credits: 3**

This course examines the history, development and legal nature of agreements and contracts of exploration, production and sale of Oil and Gas. It focuses on the special legal distinctiveness of these legal instruments in the Arab Gulf States including the State of Qatar. The course instructor is advised to discuss with the students the terms of standard-forms of concession, exploitation, production agreement/ contract/convention or other oil related agreement in order to clarify those special features. It is advisable, however, to introduce the students to the alternative means of settlement of Oil and Gas disputes, especially arbitration and conciliation.

Prerequisite

LAWC 101

LAWC 443**International Criminal Law****Credits: 3**

This is a new advanced course dealing with the international crime, which includes the violation of international order and values. It has double nature because it belongs to both criminal and international law. This double nature effects in many rules of it. The course will examine the definition concept and scope of the international crime. The course deals with the general elements of the international crime and the causes of permissibility in this branch of law such as: the legitimate defense, restoration, the fighters rights within the war and the intervention by force for humanity. The course focuses the criminal liability and the sanction in the international criminal law. The course will also deal with some specific acts that considered as international crimes such as: the aggression war, war crimes, unlawful use of weapons, genocide, crimes against humanity, apartheid, slavery and related crimes, piracy, crimes relating to international air communication, threat and use of force against internationally protected persons, taking of civilian hostages, etc...

Prerequisite

LAWC 323

LAWC 449**Environment Laws and Regulations****Credits: 3**

This new course deals with national and international laws and regulations which protect environment from degradation and pollution and the effectiveness of these legal instruments in achieving this goal.

LAWC 450**Law of Procedures in Civil & Commercial Matters II****Credits: 3**

This course will cover both law of evidence and law of enforcement. It will therefore shed the light on the general theory of the law of evidence and the different substantive and procedural legal aspects of the methods of proof: writing, testimony, oath, declaration or confession, presumptions, expertise and inspection. On the other hand, the course will explain the general theory and practice of compulsory enforcement procedures of legal judgments, arbitral awards, commercial papers and other enforceable instruments by the judiciary (i.e. the enforcement court).

Prerequisite

LAWC 316

LAWC 451**Alternative Disputer Resolutions****Credits: 3**

This is an advance course which will examine the theory and practice of international commercial arbitration in both national and international laws. It will cover all rules the govern arbitration agreements, arbitral tribunal, arbitral proceedings and arbitral awards. A considerable weight must be given to the New York Convention, the UNCITRAL Model Law and all regional and international instruments to which the State of Qatar is a party.

Prerequisite

LAWC 217

LAWC 454**Carriage of Goods Contract****Credits: 3**

This course is intended to introduce the students to the main legal issue and rules of the contract of carriage of goods whether it is performed inland, by sea or by air. However, it is advisable to introduce the students in a way of comparison to the carriage of passengers.

Prerequisite

LAWC 213

LAWC 459**Drafting of Business Contract****Credits: 3**

This is an applied course which is intended to provide the students with the necessary legal English writing and negotiation skills that relate to

both contracts and dispute management.

Prerequisite

LAWC 217

LAWC 464**International Investment Laws****Credits: 3**

This course introduces the students to the concept, origins and roles of the law of foreign investments; national standards v. international minimum standard; International efforts to regulate foreign investment (e.g. United Nations efforts, Efforts made by the World Bank, OECD efforts and the role of the World Trade Organization; regulation of investments under bilateral and regional investment treaties (BITs) and the national case-law on the treatment of foreign investment.

Prerequisite

LAWC 217

LAWC 484**GCC Law****Credits: 3**

This course discusses the developments, institutions, and legislative issuance mechanisms of the Gulf Cooperation Council. It also explains the Council’s economic treaties and execution of regulations among GCC countries, as well as the relations among the Council, GAT and WTO, and the similarities/differences between the Council and EU. It discusses the “Collective Legal Defense Right” and other common interest issues. Students who will study this course are expected to recognize the theories, concepts, and private principles of GCC.

LAWC 499**Legal Ethics****Credits: 3**

This course is intended to cover rules and principles of legal ethics that are required to be followed by all those involved in legal profession. It begins with the legal ethics and responsibilities of judges and public prosecutors. It then concentrates on the client-lawyer relationship, proceeds through a lengthy analysis of the tension between the client-lawyer relationship and the lawyer’s obligations to the justice system and society, and concludes with discussions of economic issues (billing, advertising and solicitation, legal services and pro bono work). The course specifically addresses both bias and substance abuse in the profession, and has among its recurring themes the pressures faced by young law firm associates, the effect of a law firm’s “culture” on the ability to practice ethically, and the tension between acting morally while remaining within the bounds of legal ethics.

Prerequisite

LAWC 213

MAGT 101**Principles of Management**

Credits: 3

Concepts and principles of management theory. A review of the historical development of the theory. An analysis of managerial functions. An introduction to the functions of the firm in terms of marketing, production, finance and personnel.

Prerequisite

ENGL 004 OR ENGL 202 OR ENGL F073 OR ENGL F022 OR T02 500 OR IBT 061 OR IELT 5.5 OR CBT 173

MAGT 301**Organizational Behavior****Credits: 3**

This course examines the behavior of individuals and groups in organizations. Among the topics covered include issues such as perception, learning, attitudes, motivation, contingency variables influencing structure, leadership and workgroups.

Prerequisite

MAGT 101 OR MAGT 112

MAGT 302**Human Resource Management (HRM)****Credits: 3**

This course focuses on various aspects of the human resource function in organizations with special emphasis on the policies and practice of human resource management. Among the topics to be covered include the concept of human resource management, its importance, evolution and functions including manpower planning, job description, recruitment and selection, wages and salaries, training and management development, performance appraisal, law, information systems, and current issues.

Prerequisite

MAGT 101 OR MAGT 112

MAGT 303**Entrepreneurship and Small Business Management****Credits: 3**

This course focuses on the entrepreneurial process and the different kinds of entrepreneurial outcomes. Topics covered include opportunity identification through analysis of industry niches, skills needed in order to turn an opportunity into reality, business plans, launch decisions, and obtaining risk capital.

Prerequisite

FINA 201 AND MAKT 101 AND ECON 112 AND (ACCT 116 OR ACCT 112)

MAGT 304**Production and Operations Management****Credits: 3**

This course focuses on the production function in industrial organizations. Topics covered include various techniques utilized in decision making, production systems, and activities related to the design of systems, product design, demand forecast and corporate and tactical production planning as well as production and quality control.

Prerequisite

(MAGT 101 OR MAGT 112) AND (STAT 220 OR STAT 155)

MAGT 305**Comparative Management****Credits: 3**

This course focuses on the analysis of managerial performance in different cultures. Topics covered include the examination of the international dimensions of organizational behavior in different countries and the varying socioeconomic, political, and legal variables that interact with culture to affect local and international management.

Prerequisite

MAGT 304

MAGT 306**International Business Management****Credits: 3**

This course focuses on the management of business across national borders. Topics covered include the characteristics of international companies, theories of international trade and investment, cultural, social, economic, political and financial environments of international firms as well as the international dimension of the basic enterprise functions such as finance, production, marketing and personnel.

Prerequisite

FINA 201 AND ECON 112

MAGT 307**Internship in Business****Credits: 3**

This course focuses on business internships that add a significant real-world component to students' education. It provides the opportunity for students to earn academic credit while gaining valuable work experience under the mentorship of a business professional in different industry sectors, i.e., services and manufacturing. An individualized assignment arranged with students and different business organizations providing guided experience in their field will be given. [Students' internship experiences are assessed via a written internship report that will be evaluated by the students' organization supervisor and an assigned faculty member.

Prerequisite

MAGT 304 AND (ACCT 116 OR ACCT 112)

MAGT 401**Quantitative Methods For Decision Making****Credits: 3**

This course focuses on the use of quantitative methods in managerial decision making. Topics covered include decision theory, introduction to linear and non-linear programming techniques and their applications in business and economics, integer programming, dynamic programming, simulation, inventory analysis, queuing theory, PERT, CPM and other quantitative methods for decision making.

Prerequisite

MAGT 304 AND STAT 222

MAGT 402**Organization Theory****Credits: 3**

This course examines the different theories of organization and how they are used in managing today's organizations. Topics covered include strategic and applied approach to organization theory that emphasizes decision-making. A balance of theory, research, and practice, focusing on how students as potential future managers can use their knowledge of organization theory to be better managers and organization members to be presented.

Prerequisite

MAGT 301

MAGT 403**E-Business****Credits: 3**

This course focuses on issues beyond the extraordinary growth in e-commerce and the high level of dotcom failures to appreciate the continuing changes in the digital economy. Within this context, the e-business course aims are twofold: firstly, to appreciate the context for e-business, and secondly, to develop a framework for considering e-business initiatives and possible future developments. Topics covered include the concepts of e-business and e-commerce, internet market research, models of e-commerce, intranet and extranet, electronic payment systems, e-business strategy and implementation, e-business infrastructure, and current issues in e-business.

Prerequisite

MIST 201 AND MAGT 306

MAGT 404**Project Management****Credits: 3**

This course focuses on the various issues and techniques in managing a project. Topics covered include project life cycle, project definition, project planning, techniques of managing projects, project planning covering cost, quality and time dimensions, responsibility assignment and progress review.

Prerequisite

STAT 220 OR STAT 155 OR STAT 153

MAGT 405**Strategic Management****Credits: 3**

This course focuses on developing a corporate vision towards the integration of various organization functions by taking into account the organization's internal and external environments. It also tries to comprehend the strategic standing of the organization and proceed with strategic evaluation and implementation. Topics covered include environmental scanning, strategy formulation, strategy implementation and control, and other strategic issues.

Prerequisite

FINA 201 AND MAKT 101

MAGT 406**Total Quality Management (TQM)****Credits: 3**

This course focuses on the concepts related to quality in all aspects of enterprise operations with special emphasis on the customer. Topics covered include the examination of workers participation, teamwork and creative leadership, quality control, training, tools of total quality and obstacles facing total quality management.

Prerequisite

MAGT 304

MAKT 101**Principles of Marketing****Credits: 3**

This course focuses on the basic concepts of marketing. Topics covered include definition of marketing, evolution of marketing concept, basic issues facing marketing in the contemporary organization in addition to consumer behavior and market research and segmentation.

Prerequisite

MAGT 101 OR MAGT 112

MAKT 301**Consumer Behavior****Credits: 3**

This course focuses on examining an interdisciplinary study using behavioral science concepts to explain consumer motivation, information processing, and consumption behavior. Topics covered include information processing, involvement, affect and emotion, attitudes and attitude change, individual factors (e.g., personality), group processes (e.g., reference group and family/household influences), social influences (e.g., culture and subcultures), and consumption decision and post-decision processes. The relationship between each of these factors and marketing strategies will be a key concern and focal point.

Prerequisite

MAKT 101

MAKT 302**Marketing Management**

Credits: 3

This course focuses on the application of marketing and management principles to the marketing function. Topics covered include strategic marketing, study of the social and economic environment of marketing as well as the management of marketing mix.

Prerequisite

MAKT 101

**MAKT 303
International Marketing****Credits: 3**

This course focuses on the policies and techniques adopted by a firm to select and utilize opportunities in the international market and adapt its marketing strategies to suit the international environment.

Prerequisite

MAKT 101

**MAKT 304
Strategic Marketing****Credits: 3**

This course focuses on the strategic framework of knitting together profit goals and its impact on the marketing strategy, market and product business portfolio, market segmentation and positioning strategies.

Prerequisite

MAKT 401 OR MAKT 301 OR MAKT 302

**MAKT 309
Marketing Management****Credits: 3**

Strategic marketing. Opportunity analysis. Economic, social and technological environments of marketing. Consumer and industrial buyer behavior. Applicability and strategies of product, place, and promotion policies

**MAKT 401
Marketing Research****Credits: 3**

This course focuses on the techniques of marketing research and their applications in solving marketing problems and formulating marketing strategies. Methods and various aspects of marketing research design and ways of implementing the design to obtain high quality and accurate information also covered in this course.

Prerequisite

MAKT 101 AND STAT 220

**MAKT 402
Sales Management****Credits: 3**

This course examines the role of sales managers in line and staff planning. Topics covered include selection, organization, supervision,

compensation, motivation of the sales force, and coordination of sales with other marketing functions.

Prerequisite

MAKT 401 OR MAKT 302

**MAKT 403
E-Marketing****Credits: 3**

This course examines the changes in marketing resulting from the move to the Internet by nonprofits, businesses, and government. It highlights the effective interactive marketing practices for consumer firms and business-to-business firms.

Prerequisite

MAKT 401 AND MAKT 301

**MAKT 404
Services Marketing****Credits: 3**

This course focuses on the unique characteristics of the service environment, adapting marketing management concepts to the service business context, identifying and analyzing the various components of the extended services marketing mix, discussing key issues concerning the management and measurement of service quality and customer satisfaction. It provides the understanding of the critical role of service personnel and customers with respect to service delivery, service failure and service recovery will a. It also examines relationship marketing and the overlap between marketing, operations and human resource functions in service organizations to gain exposure to key operations management strategies/tools and human resource management issues.

Prerequisite

MAKT 301

**MAKT 405
Promotion Management****Credits: 3**

This course focuses on developing an understanding of the terminology of promotion and an understanding of the role of advertising both in the firm and in society, and an ability to integrate the different aspects of advertising into a comprehensive promotional plan.

Prerequisite

MAKT 302

**MARS 101
Intro to Marine Science****Credits: 3**

History of Oceanography - The origin of Earth, its oceans, and life in the ocean - Marine provinces (continental margin, deep ocean basin) - The origin of the ocean basin - Chemical properties of the ocean - Physical properties of the ocean (waves, currents & tides) - The Marine Environment - Biological productivity - Life in the open ocean - Life on

the ocean floor- Food web in marine environment - Factors affecting life in the ocean- Human interacts.

Practical: Basic units - Ocean depth measurements - Bottom topography - Marine sediments- Waves and currents - Tides - Chemical constituents of marine water - Taxonomic and morphological study on selected specimens which represent different groups of marine organisms.

**MARS 222
Chemical Oceanography I****Credits: 3**

Scope of chemical oceanography - Chemical composition of sea water - Major and minor constituents - Particulate matter - Dissolved gasses - Constancy of composition of sea water - Dissolved constituents and their interaction - Chemistry of air sea interaction. Practical: Sea water sampling- Filtration and storage- Determination of Chlorinity and Salinity-Dissolved oxygen determination -Major cations and anions in sea water.

Prerequisite

MARS 101

**MARS 251
Marine Biology****Credits: 3**

Marine life and biology of the major groups of marine organisms- Biotic and abiotic characteristics of various areas of sea environments, Morphological, ecological and physiological adaptations, Tropical and subtropical communities and Human impact on the sea. Practical: Studying the main groups of flora and fauna – Taxonomy of the main groups – Habitats – Hydrological factors and classification of habitats – Field trips.

Prerequisite

MARS 101

**MARS 327
Plankton and Productivity****Credits :3**

This course covers physical aspects of the Ocean Environment; Chemical composition and characteristics of seawater; Primary production, algae of Phytoplankton; Phytoplankton group; Harmful species and their distribution; Zooplankton group; Flotation mechanisms; Phytoplankton crop; Factors limiting primary production.

Prerequisite

MARS 251

**MARS 455
Marine Ecology****Credits: 3**

The Marine Ecology course is a broad survey of marine organisms and habitats. It focuses on the processes controlling marine ecosystems, communities, and populations, and demonstrates how general ecological principles apply to the ocean. Therefore, although we will

be learning some details about marine Biota, our goal will be to integrate knowledge of their biological and physical environments into an understanding of the processes that determine their distributions, abundances, and activities.

Prerequisite

MARS 251

**MARS 458
Fisheries and Aquaculture****Credits :3**

This course focuses on the population structure in fishes, their reproduction and life strategies, their food requirements and growth. The aquaculture industry; identification of the characteristics of aquatic species; proper aquatic management practices; the fundamentals of aquatic nutrition; optimum health in aquatic animals; proper water quality requirements for aquaculture; structures and equipment needed in the aquaculture industry.

Prerequisite

MARS 251

**MARS 459
Environmental Impact Assessment****Credits: 3**

Environmental Impact Assessment (EIA) is used to identify the environmental and social impacts of large-scale projects such as airport runways, hotels or coastal resorts prior to decision making. EIA can predict environmental impacts at an early stage in project planning and design, and find solutions to reduce adverse impacts, shape projects to suit the local environment and communities, and present the prediction and options to decision-makers.

Prerequisite

MARS 251

**MATH 001
Found Mathematics I****Credits: 3**

Real Numbers and Sets: Sets; Real Numbers and Their Properties; Fractions; Decimals; Multiplication and division of Real Numbers; Exponential Expression and the Order of operations; Algebraic Expressions; Properties of Real numbers (Only Review), Using Properties to Simplify Expressions. Equations and Inequalities: The Addition and Multiplication Properties of Equality; Solving General Linear Equations; More Equations; Formulas; Translating Verbal Expressions into Algebraic Expressions; Inequalities; Solving Inequalities. Factoring and Solving Quadratic Equations: Factoring: Common Factors (GCF); Factoring: Special Products and By Grouping; Factoring with a = 1; Solving Quadratic Equation by Factoring, (a=1 only); Solving Quadratic Equation using Quadratic Formula. The Cartesian Coordinate System: Graphing Lines in the Coordinate Plane; Slope of the Line (Perpendicular and parallel); Equation of lines in Slope- Intercept form; Point-Slope Form.

MATH 002
Found Mathematics II
Credits: 3

Systems of Linear equations: Solve Liner Systems ($n = 2$) by Graphing (no Substitution); The Addition Method ($n = 2$); Basic matrix-operations ; Row- Operations on Matrices; Solve Liner Systems Using Matrix-Notation. Functions: Functions and Relations; Graphs of Functions and Relations; Graphing Parabolas; Transformations of Graphs; Combining Functions; Inverse Functions. Exponential and Logarithmic Functions: Exponential Functions; Logarithmic Function; Properties of Logarithms; Solving Exponential and Simple Logarithmic Equations.

Prerequisite

MATH 001 OR MPT 130 OR ACT 19 OR SAT 460

MATH 003
Found Mathematics III
Credits: 3

Real Numbers; Mathematical Expressions: Sets; Algebra and Real Numbers; Real number line and types of interval Linear and Quadratic Equations and Inequalities: Integer Exponents; Polynomials: Basic operations; Methods of factoring polynomials; Factoring polynomials of higher degrees by knowing enough of its roots or factors; Rational expressions: basic operations and simplifying; Rational exponents and Radicals Solving Rational and Absolute Value Equations and Inequalities: Linear equations and applications; Linear Inequalities (single and double); Quadratic equations and applications; Equations reducible to linear or quadratic; Quadratic inequalities (single and double).

MATH 004
Foundation Mathematics IV
Credits: 3

Topics in Plane Geometry: Cartesian coordinate system; Symmetry; Circles; Straight lines. Functions: Relations and functions; Domain and range; Reading the graphs of functions; Graphing functions; Piecewise functions ; Operations on functions; Composition of functions; Transformations; Inverse functions. Exponential and Logarithmic Functions: Properties of exponents; Exponential functions and their graphs; Logarithmic functions and their graphs; Solving equations involving exponents and logarithms. Trigonometric Functions: Angles and their measure, and acute angle domains; Trigonometric ratios, exact values of special angles; Solving the right triangle; Circular functions; Graphing basic trigonometric functions; Graphing sine and cosine functions using transformation. Trigonometric Identities and Equations: Basic trigonometric identities; Sum, difference, and co-function identities; Double angle and half angle identities.

Prerequisite

MATH 003 OR MATH 002 OR (MPT score of 205 or higher) OR (ACT Score of 22 or higher) OR (SAT score of 520 or higher)

MATH 101
Calculus I

Credits: 3

Limits and continuity. Differentiation. Applications of derivatives. Integration. Inverse functions. Applications of the integral

Prerequisite

MATH F011 OR (ENGL F022 AND MATH F014) OR ENGL F024 OR MATH 004 OR MATH F015 OR SAT 500 OR ACT 21 OR MPT 255

MATH 102
Calculus II
Credits: 3

Transcendental functions. Techniques of integration. Sequences and infinite series. Parametric equations and polar coordinates

Prerequisite

MATH 101 OR MATH 181 OR MATH 103 OR MATH 180

MATH 103
Numbers & Basic Algebra
Credits: 3

This is the first of two courses designed for prospective elementary school teachers. The course aims to investigate in detail the mathematical principles and concepts encountered in elementary schools. It is a survey of the fundamental concepts, principles, and methods of elementary algebra and real number system. Primarily, it covers: The real number system & Arithmetical operations, Basics of Algebra, Linear Equations, Linear Inequalities, Exponents & Polynomials, Rational Expressions, Rational Expressions, Quadratic Equations & Inequalities, and Exponents & Logarithms.

MATH 104
Basic Geometry and Measures
Credits: 3

This course is a Continuation of the survey of principles of Mathematics for prospective elementary teachers presented in MATH 103. The course presents an introduction to the coordination measures and the basic properties of one, two and three-dimensional shapes. Emphasis is on: Measures, Points, Lines and Planes, Angles, Triangles, Polygons and Areas, Circles, Solids, and Trigonometry.

MATH 119
Business Mathematics I
Credits: 3

This is the first course in the two-semester sequence of introductory Math courses designed to provide CBE students with the required Math skills, techniques, and knowledge presently in use in the areas of business and finance. Topics studied include: Mathematics of Finance, Systems of Linear Equations and Matrices, Linear Programming, Sets and Probability, Additional Topics in Probability, and Computational Tools in Finance.

Prerequisite

MATH 002 OR (ENGL 202 OR ENGL F073) OR CMPS 165 OR (SAT 500

OR MPT 180 OR)ACT 21

MATH 211
Calculus III
Credits: 3

Vectors. Vector calculus. Functions of several variables. Differentials and applications. Double and triple integrals.

Prerequisite

MATH 102 OR MATH 182 OR MATH 104

MATH 217
Mathematics-Engineering
Credits: 3

First-Order Differential Equations: Initial-value problem. separable variables. Homogeneous equations. Exact equations. Li-near equations. Integrating factor. Bernoulli equation. Applications. Second-Order Differential Equations: Initial-value and Boundary-value problems. Linear differential operators. Reduction of order. Homogeneous equations with constant coefficients. Non-homogeneous equations. Method of undetermined coefficients. method of variation of parameters. some nonlinear equations. Applications. Higher order Differential Equations. Laplace Transforms: Definitions. Properties. Inverse Laplace transforms. Solving initial-value problems. Special functions: Heavy side unit step function. Convolution theorem. System of Linear Differential Equations: Definitions. Elimination method. Application of Linear Algebra. Homogeneous linear systems. Non-homogeneous linear systems. Solving systems by Laplace transforms. Series Solutions: Cauchy-Euler equation method. Solutions about ordinary points. Solutions about singular points. Method of Frobenius. Second Solutions and Logarithm terms. Partial Differential Equations: Some mathematical models. Fourier series solutions. Method of separation of variables. The D'Alembert solution of the wave equation. Applications

Prerequisite

MATH 211 OR MATH 208 OR MATH 283

MATH 221
Business Mathematics II
Credits: 3

This course covers some economic applications of mathematical concepts such as the linear and non linear functions, difference equations, partial derivatives, constrained and unconstrained optimization problems, definite and indefinite integration in addition to mathematics of finance.

Prerequisite

MATH 119 OR MATH 101

MATH 222
Real Analysis

Credits: 3

Structure of point sets. Real numbers. Real sequences. Limits and continuity. Differentiation and mean value theorem. Riemann integral. Riemann-Stieltjes integral.

Prerequisite

MATH 220

MATH 231
Linear Algebra
Credits: 3

Systems of linear equations. Matrices and matrix operations. Determinants. Vector spaces. Linear transformations. Eigenvalues and eigenvectors.

Prerequisite

MATH 101

MATH 251
Mathematics for Statistics
Credits: 3

Functions of Several Variables. Multiple Integrals. First Order Differential Equations. Introduction to Partial Differential Equations. Numerical Solution of Nonlinear Equations. Numerical Integration. Some Special Functions.

Prerequisite

MATH 102

MATH 325
Topology
Credits: 3

Basic concept. Basic topological constructions. Sequential convergence in topological space and derivatives sets. Basic topological properties

Prerequisite

MATH 223 OR MATH 220

MATH 385
Advanced Mathematics
Credits: 3

Complex Numbers and Complex Functions: Algebra of complex numbers. Modulus and argument. Trigonometric form. Exponential form. Roots. De Moivre's theorem. Analytic Functions: Functions of a complex variable. Mappings. Limits. Continuity. Derivatives. Cauchy-Riemann equations. Polar coordinates. Analytic functions. Harmonic functions. Harmonic conjugate. Elementary functions. Complex Integration: Definite integrals. Contours. Line integrals (Real). Line integral (Complex). Cauchy integral theorem. Cauchy integral formulas. Taylor's series and Laurent's series of analytic functions. Residue theorem. Applications. Fourier Transforms: Fourier transforms. Properties. Inverse of the Fourier transform. Convolution theorem. Fourier sine and

Fourier Cosine transforms.

Prerequisite

MATH 211 OR MATH 283

MCOM 103

Media and society

Credits :3

This course introduces students to the basics of communication, and provides an overview of the history and development of the various mass media. It deals with issues pertained to the role of communication media in society, and highlights issues of press freedom and social responsibilities of the media; role of media in fostering diversity; and the impact of mass media on society. The course provides a critical evaluation of media content in relation to social and cultural variables of society.

MCOM 212

Visual Communication

Credits :3

The course provides an introduction to the primary principals and concepts that professional communicators use to design and produce visually pleasing and effective messages in a variety of media. Includes assignments that apply concepts and introduce visual communication software applications. It focuses on main design principles used in planning communications materials, such as proximity, alignment, repetition, proportion, contrast, balance, unity and rhythm.

Prerequisite

MCOM 103

MCOM 215

Multimedia Reporting and Writing I

Credits :3

The course provides an introduction to the primary principals and concepts that professional communicators use. The course is an introduction to creating, repurposing and assembling content for distribution across integrated media platforms. Audio slideshows, video with sound, computer-based management of photos/video, Web-related skills. It provides students with a hands-on experience in writing Web content using basic HTML, creating and maintaining blogs with journalistic content, creating a Web news story and creating an audio/video news story.

Prerequisite

MCOM 212

MCOM 222

Communication Theories

Credits :3

This course deals with studying the most important communication theories and models, which emerged since the 1920s and their relationship to the practical media practices and applications. The course pays special attention to the powerful effects theories, the

selective effects theories, the indirect effects theories, as well as the critical approach.

Prerequisite

MCOM 103

MCOM 223

Media Writing

Credits :3

In this course students are taught the basic news forms with emphasis on the structure of news stories for the print and electronic media, as well as public relations news writing. The course includes a theoretical element that focuses on historical evolution of news writing, news values, news worthiness and the styles of news presentation, including headlines, body and conclusion.

Prerequisite

MCOM 103

MCOM 303

Women and media

Credits :3

This course encourages a foundational understanding of women and mass media. It helps students gain an understanding of the relationship between women and the mass media from global and regional perspectives. The course focuses on the mass media representation of women and gender roles, including whether and/or how women representation in the mass media has changed over time, what forces have affected women representation, and the current state of women representation.

Prerequisite

MCOM 103

MCOM 315

Communication Research Methods

Credits :3

The course is designed to train the students in conducting social science research through a hands-on approach that introduces the basic steps and stages of scientific research. The course teaches quantitative and qualitative research methods including descriptive and historical methods; survey and content analysis, sampling procedures, questionnaire construction and analysis of data.

Prerequisite

MCOM 222

MCOM 317

Media Law and Ethics

Credits :3

The course focuses on the legal and ethical dimensions involved in the practice of journalism, and highlights such issues and concepts like the rights and duties of journalists, freedom of the press, social responsibility, fairness, accuracy, privacy, libel, contempt, obscenity

and other ethical problems. The course also evaluates Qatar Press Law within the context of international media laws and ethics.

Prerequisite

MCOM 222

MCOM 318

Global Communication

Credits :3

The course discusses the economic, political and cultural dimensions of global communication. It analyses the political and cultural implications of globalization including the effects of corporate multinational control of global communication and American hegemony of the global scene. Issues covered include global mass communication systems, new communication technologies and their impact, imbalances in media development between the north and the south, imbalances in news and information flow and, finally, the positive and negative impact of globalization on current human communities.

Prerequisite

MCOM 222

MCOM 341

Reporting, Writing & Editing I

Credits: 3

This course aims to provide students with a background of news writing and editing with special emphasis on how to conduct face-to-face interviews, telephone interviews, new conferences, as well as preparation and writing of feature stories based on journalistic investigations. The course helps the students publish their work in department's media as well as the local media.

Prerequisite

MCOM 215 or MCOM 223

MCOM 342

News Reporting, Writing and Editing English

Credits :3

The course is designed to give students a foundation of research, reporting, writing and editing skills that will help them throughout their time in the department and into their professional careers. The course also provides training in advanced journalism skills, including writing reports, columns, editorials, opinion articles and features. The students will have the opportunity of having their reports, news stories, and /or articles published in the local or departmental publications.

Prerequisite

MCOM 215 or MCOM 223

MCOM 343

Online Journalism

Credits: 3

The best way for students to learn the craft of journalism is by doing journalism. Students in this class are expected to start thinking of

themselves as real working journalists. Most assignments will take students outside of the classroom, off the campus and into the real world. Also, students will be required to use the latest technology in the field.

Prerequisites

MCOM 342 OR MCOM 341

MCOM 345

Newspaper Design and Production

Credits: 3

Learning and producing content-oriented design, typography and lay out using desktop publishing as well as other digital technology. Using multi-media and graphic designs for layout of newspapers, magazines, newsletters and online publications.

This course focuses on enabling students to produce content-oriented design, typography and layout. Students will be trained to use the latest desktop publishing software as well as other digital technology. Students will be required to use multi-media and graphic designs for lay out of newspapers, magazines, newsletters and online publications.

Prerequisite

MCOM 208 OR MCOM 223

MCOM 346

Assisted Reporting

Credits: 3

This course will build on traditional methods of computer-assisted reporting and research methods to incorporate the tools of the internet, like social media to: Find new story ideas, trends and sources, connect with readers and viewers in new ways, enhance the quality of their reporting and research skills. The course will strive to prepare student-journalists to adapt to whatever comes with the Internet of the future.

Prerequisite

MCOM 342

MCOM 348

Investigative Journalism

Credits: 3

This course is designed to help students to learn to report and write in depth. Students in this class are expected to start thinking of themselves as real working journalists. Students will develop their tools of critical thinking in conceptualizing, developing and writing stories. They will learn advanced interviewing techniques, investigative research methods and the interpretation of trends and surveys. The course will focus on the analysis and practice of complex storytelling, including the use of narrative techniques

Prerequisite

MCOM 215 OR MCOM 223

MCOM 350

Multimedia reporting and writing 2

Credits :3

This is an advanced course that aims to provide students with more practical practice of Multimedia Reporting and Writing 1. It is designed for students of online journalism to work in a team of journalists to apply what they have learned about convergent journalism to several major stories from the real world.

Prerequisite

MCOM 215 OR MCOM 223

MCOM 361**Broadcast News Reporting and Writing I****Credits :3**

This course focuses on the following: Writing journalism for different media; writing journalism for different publics; writing journalism for different genres (news, features, opeds, profiles); media law and ethics; research methods; broadcast news writing for diversity in a globalized world; a practical guide to producing broadcast news; critical journalism and independence.

Prerequisite

MCOM 350

MCOM 363**Announcing****Credits: 3**

This course will introduce the basics of announcing skills. Students will be trained on pronunciation, rate, pacing and articulation. They will also be required to use vocal variety and vocal variety. By the end of the course students should be able to present different genres and they will be able to recognize the difference between good and bad announcing.

Prerequisites

MCOM 215 OR MCOM 223

MCOM 364**Broadcast Production****Credits: 3**

This course introduces students to the basic concepts of audio and video production. The students are trained on the operation of digital video cameras, TV studio cameras, digital audio recorders, the different types of microphones, lights and lighting styles. The students are trained in basic treatment, synopsis and script writing for a variety of radio and TV programs. The students produce Public Service Announcements (PSAs), documentaries, and Radio and TV program in which the PSAs and the documentaries are inserted.

Prerequisite

MCOM 215 OR MCOM 223

MCOM 365**Script Writing****Credits: 3**

This course helps students in developing skills of preparing and writing scripted dramatic material. Students are trained in script writing and introduced to the differences between TV and movies scripts. It emphasizes the important elements, such as theme, story, dialogue, which shape the process of developing and writing a script.

Prerequisites

MCOM 215 OR MCOM 223

MCOM 366**Broadcast Directing****Credits: 3**

This course focuses on the principles of radio and television directing, such as the techniques of mixing sound with music, and using sound effects according to the type of program. The skills of broadcast directing, such as switching between the shots, the basics of good television composition, and the technical problems involved.

Prerequisites

MCOM 361

MCOM 367**Broadcast News Reporting and Writing 2****Credits :3**

This hands-on course explores more advanced aspects of writing and reporting in the area of broadcast. It specifically delineates the differences between writing for audio and writing for the image. The course also provides the different techniques and approaches to writing for different genres, namely hard news, soft news, features, opinions and profiles.

Prerequisite

MCOM 361

MCOM 381**Principles of Public Relations****Credits: 3**

The course highlights the principles and the essential foundations of public relations, and it explains the most important concepts and terminology in the field. The course also discusses the professional and ethical guidelines in designing, applying and evaluating PR activities, and it explains the stages of successful planning of public relations.

Prerequisites

MCOM 222 OR MCOM 103

MCOM 382**Organizational Communication****Credits: 3**

The course introduces the concept of organizational communication and its various principles, and puts special emphasis on learning and practicing the skills of effective organizational communication for institutional management through case-study model. The course

adopts a methodology that tries to bridge the gap between theory and practice by putting students in real case-studies of organizational communication to handle

Prerequisites

MCOM 103

MCOM 383**Principles of Advertising****Credits: 3**

This course is an introduction to advertising in terms of concepts, procedures, design and campaigns. It will also compare the types of advertisements created for print and broadcast media with special emphasis on the effects of the new media on the advertising industry and audience. Students will be expected to criticize and evaluate advertisements. Furthermore, they will be expected to conduct research on consumers and the market and to create advertisements and advertising campaigns based on the results of their research

Prerequisites

MCOM 222 OR MCOM 212

MCOM 384**Advertising Copy Writing & Design****Credits: 3**

In this course the students are introduced to the basics of applying psychological and cognitive knowledge to creative advertising designs. Students learn how to use graphics and multimedia in designing ads, and are trained in the design and layout of attractive print and electronic ads. Students are expected to develop their own portfolio for the work they do during the course.

Prerequisites

MCOM 383

MCOM 386**Public Relations and New Media****Credits :3**

This course focuses on the assessment of the tactical and strategic implications of digital technology for profit and not-for-profit organizations. Module content includes an examination of the potential of digital technologies for public relations campaigns, the particular challenges of online communication and the planning, management and evaluation of interactive communications campaigns. Students will be required to apply the digital technologies to their PR campaigns.

Prerequisite

MCOM 215 OR MCOM 223

MCOM 388**Writing for Public Relations Writing and Presentations****Credits: 3**

The course focuses on public relations writing and the preparation of presentations for public relations purposes. The course focuses on

writing newsletters, press releases, pamphlets and brochures; as well as the preparation and delivery of presentation for the organization's audiences. The course teaches students techniques and writing styles which are used for the production of publications and for presentations. Students prepare samples of such publications and presentations for evaluation.

Prerequisite

MCOM 381

MCOM 447**Journalism Internship****Credits: 3**

This course provides students with an opportunity for actual training, and on-site professional experience in local newspapers, Qatar News Agency or Al Jazeera Online. This provides students with a hands-on experience in the professional field. Students are supervised by faculty member and professional trainer and are required to turn in two reports.

Prerequisite

(MCOM 341 AND MCOM 342) OR MCOM 344

MCOM 450**Multimedia Journalism “Capstone”****Credits :3**

This is a capstone course which is designed to stimulate students to conduct group projects, or to develop individual portfolios, in the production of at least two issues of laboratory/web newspapers or magazines under the supervision of a faculty member. Students are given hands-on experience as a reporters and editors as they produce the issues.

Prerequisite

(MCOM 342 AND MCOM 343) OR MCOM 344

MCOM 452**Magazine Writing****Credits: 3**

The course focuses on writing and reporting for magazines. It also introduces the basic features of writing, information gathering and analysis for specialized and general circulation magazines. The course includes also practical training in interviewing, investigation, and developing portfolios. It will emphasize the difference between writing news and feature stories.

Prerequisite

MCOM 341

MCOM 465**Web-Content for Radio****Credits :3**

This course is designed to give the student an understanding of radio delivered via the Internet and the opportunity to produce and deliver digital audio content. Students are introduced to the radio industry and radio production standards for the Internet. Using professional

recording and mixing equipment the students learn the basics of telling a good story. Each student goes through the process of writing for radio, in-depth reporting, imaginative use of sound, and high production values.

Prerequisite

MCOM 215 OR MCOM 223

MCOM 467 Broadcast Internship

Credits: 3

This course provides an opportunity to the student to acquire practical skills in an area of mass communication (Public Relations, Broadcast Production, Print / Online Journalism). Each student is required to spend 10 hours weekly for 8 weeks in his or her designated institution under the direct supervision of a training field mentor from the institution and an academic supervisor from the university.

Prerequisite

(MCOM 364 AND MCOM 361) OR MCOM 362

MCOM 469 Television Documentary Production

Credits: 3

elements, the factors needed for its success, as well as the various stages of producing it. The student is taken through training in preparing the treatment, synopsis, script, scheduling, shot list, and storyboards. The student is also taken through the fundamental elements of production and post-production of a major project.

Prerequisite

MCOM 361

MCOM 470 Broadcast Capstone

Credits: 4 3

In this course, the student uses the various technical, analytical and thematic skills in the field of radio and television in the context of a complex and multi-layered graduation project. This could include, but not limited to, producing documentaries, features, talk shows, audio and video essays, and experimental pieces. Each project must go through the stages of idea development, writing and presenting a production folder, presenting a rough-cut (rough edit) of the work, and finally presenting the finished mastered work.

Prerequisite

(MCOM 361 AND MCOM 350) OR MCOM 362

MCOM 487 PR-AD Internship

Credits: 3

This course provides an opportunity to the student to acquire practical skills in an area of mass communication (Public Relations, Broadcast Production, Print / Online Journalism). Each student is required to spend

10 hours weekly for 8 weeks in his or her designated institution under the direct supervision of a training field mentor from the institution and an academic supervisor from the university.

Prerequisite

MCOM 388 AND MCOM 384

MCOM 490 Strategic Communication "Capstone"

Credits: 4

This course allows the students to practically apply all PR and advertising theories and concepts through the design of public relations or advertising campaigns in the context of a graduation project. The course practically engages the students in the various stages of the campaign, and the choice of the suitable techniques, and the measurement and evaluation of campaign results.

Prerequisite

MCOM 388 AND MCOM 384

MCOM 491 Strategic Communication

Credits: 3

This course defines strategic communication and provides a foundation for creating persuasive messages used in advertising and public relations. It offers challenges of organizational strategies and introduces models and plans to help organizations in reaching target audiences within the time and budget limits.

Prerequisite

MCOM 381

MCOM 492 Social Marketing

Credits :3

Social marketing is one of the fields that addresses social issues that threaten the quality of life with the objective of a positive behavioural change of its target audience in regards to these issues. The course provides the student with a different perspective in marketing which is social marketing. A lot of companies in their efforts to practice corporate social responsibility are turning to social marketing as a means of responding and helping in the needs of society or a community

Prerequisite

MCOM 381

MCOM 493 Public Opinion Research

Credits :3

This course aims to provide students with knowledge about public opinion history, theories, concepts and research methods. Through this course students will learn how public opinion affects social, political, cultural, and economic phenomena. This is a practical course where students will apply the research methods learned in analysing public

opinion in a variety of contexts.

Prerequisite

MCOM 381

MECH 213 Engineering Measurements

Credits: 2

Introduction to techniques of engineering measurements. Data acquisition and processing systems. Calibration of instruments, response time, and error analysis. Measurements of basic physical quantities (for example force, stress, strain, temperature, viscosity, pressure, velocity, flow rate, heat flux, surface irregularities, frequency). Carry out and design laboratory experiments.

Prerequisite

GENG 200 AND PHYS 193

MECH 223 Solid Mechanics

Credits: 3

Axial stress and strain, statically indeterminate members, thermal stresses. Multiaxial loading. Torsion of circular shafts, flexure of beams, transverse loading, combined stresses. Carrying out laboratory experiments.

Prerequisite

GENG 221 OR GENG 210

MECH 230 Manufacturing Processes

Credits: 3

Engineering materials, introduction to entrepreneurship, manufacturing processes: casting, welding, forming, sheet metal working and joining processes. Hand work and hand tools, concept of machining processes, turning, drilling milling, and grinding. Metrological concepts. Industrial safety. Laboratory experiments.

Prerequisite

GENG 231

MECH 241 Thermodynamics I

Credits: 3

Basic concepts and definitions. Properties of pure substances and ideal gases. Work and heat. The first law of Thermodynamics and its application to closed systems and control volumes. The second law of Thermodynamics and the concept of efficiency. Entropy and irreversibility. Exergy analysis. Carrying out laboratory experiments

Prerequisite

MATH 101

MECH 321 Mechanical Mechanisms

Credits: 3

Basic concepts. Kinematics fundamentals. Graphical linkage synthesis. Analysis of displacement, velocity, and acceleration of linkages. Gears and gear trains. Cams and cam design. Force analysis. Balancing of Machines. Carrying out laboratory experiments

Prerequisite

GENG 222

MECH 322 Mechanical Vibrations

Credits: 3

Introduction: elements of vibrating systems, examples of vibratory motions, simple harmonic motion, vector representation. Systems with single and multiple degrees of freedom: linear and torsional vibrations, damped and undamped free vibrations, forced vibrations, vibration isolation. Vibration absorbers. Vibration measurement instruments. Properties of vibrating systems: Eigenvalues and Eigenvectors, modal matrix and normal mode summation. Field and computer based applications. Carrying out laboratory experiments.

Prerequisite

GENG 222 AND MATH 217

MECH 323 Mechanical Design I

Credits: 3

Design philosophy and methodology: phases of design process, design consideration, standards and codes. Engineering materials: classification, specification and selection. Factors affecting constructional details: manufacturing and assembly processes, safety, aesthetics and economy. Three-dimensional stresses, stress concentration and failure theories. Design for static and fatigue loading. Applications on designing various machine elements such as beams, shafts, springs, fasteners and power-screws. Design of practical mechanical systems. Term projects.

Prerequisite

MECH 223 AND MECH 230 AND GENG 111

MECH 331 Machining & Forming Process

Credits: 3

Theory and applications of metal cutting; basic principles; significant features of current research. Chip formation mechanics, tool life and machinability, economics of metal removal, and precision engineering. Metal forming processing, include, casting, forging, sheet metal, rolling, extrusion, and welding. Carrying out laboratory experiments.

Prerequisite

MECH 230 AND MECH 223

MECH 342 Thermodynamics II

Credits: 3

Steam and gas power cycles. Ideal and Actual cycles. Refrigeration cycles: ideal and actual vapor compression cycle, gas refrigeration cycles, absorption systems. Thermodynamic relations. Gas mixtures: Dalton and Amagats principles. Gas-vapor mixtures: dew point, adiabatic saturation process, Psychrometric chart, air conditioning processes. Chemical reactions with application to combustion processes: Enthalpy of formation, A/F ratio, enthalpy of reaction, Adiabatic flame temperature. Carrying out laboratory experiments.

Prerequisite

MECH 241

MECH 343**Fluid Mechanics****Credits: 3**

Fundamental concepts. Properties of fluids. Fluid Statics. Momentum and energy equations, applications. Bernoulli equation, applications. Dimensional analysis and similitude. Introduction to viscous flows and boundary layers. Internal flows, laminar and turbulent flows. Head loss and friction factor. Flow over immersed bodies (external flow). Lift and drag. Carrying out laboratory experiments.

Prerequisite

GENG 222

MECH 344**Heat Transfer****Credits: 3**

Introductory remarks. Conduction: one dimensional conduction in various geometries, conduction with volumetric energy sources, conduction through composite medium, extended surfaces (fins). Transient conduction. Forced convection: boundary layers, internal and external flows (laminar and turbulent). Natural convection: external flow and flow in enclosures. Basic introduction of heat exchangers. Radiation: properties, shape factor, analysis of radiation in a non-participating media. Carrying out laboratory experiments.

Prerequisite

MATH 217 AND MECH 343 AND MECH 241

MECH 361**Control Systems****Credits: 3**

Introduction to control systems. Mathematical models for mechanical, pneumatic, electrical, and hydraulic feedback systems. Transfer functions. State space representation. System time and frequency responses. Basic control action and industrial automatic controls. Performance specifications of feedback control systems. Analysis and design of systems by means of root-locus and frequency response methods. Compensation techniques. Computer-aided control system design of single input single output systems. Laboratory experiments.

Prerequisite

MECH 322

MECH 399**Practical Training****Credits: 3**

Students spend a period equivalent to eight weeks of practical training in an engineering organization. This course aims at providing the students with technical and practical skills by participating in engineering activities and performing assignments through training programs. The program is jointly specified by the department and industrial organizations.

Prerequisite

GENG 107 AND MECH 441

MECH 421**Mechanical Design II****Credits: 3**

Design based on rigidity and deflection limits. Load determination and motor selection. Elements of power transmission equipment: shafts and bearings, housings and frames. Friction transmission equipment: belts, brakes and clutches. Positive transmission equipment: couplings, keys, chains and gears. Applications on designing some relevant mechanical assemblies. Role of computers in the design process. Term projects.

Prerequisite

MECH 321 AND MECH 323

MECH 425**Finite Element Method****Credits: 3**

Fundamental concepts of the finite element method for linear stress and deformation analysis of mechanical components. Development of truss, beam, frame, plane stress, and plane strain elements. Practical modeling techniques and use of general purpose codes for solving practical stress analysis problems.

Prerequisite

MECH 223

MECH 426**Computer-Aided Des****Credits: 3**

Basic elements of CAD and relevance to current industrial practice. Input and output devices for geometric modeling systems. Representation of curves and curved surfaces. Graphical programming languages, and development of interactive 3-D computer graphics programs. Numerical optimization and its application to parameter design.

Prerequisite

MECH 323

MECH 427**Mechanics of Composite Materials****Credits: 3**

Analysis, design and applications of laminated and chopped fiber reinforced composites. Micro- and macro-mechanical analysis of elastic constants, failure and environmental degradation. Design project.

Prerequisite

MECH 223 AND GENG 231

MECH 431**Failure Analysis****Credits: 3**

Function of failure analysis. Techniques of failure analysis (investigation procedure). Testing used in failure analysis (Mechanical, Metallurgical, and NDT). Types of failure. Designing against failure. Failure due to excessive elastic deformation. Failure due to distortion. Brittle fracture (Fast fracture). Fatigue failure. Failure due to creep. Wear. Corrosion and oxidation. Practical: Case study from industry. Laboratory experiments.

Prerequisite

GENG 231 AND MECH 223

MECH 432**Welding & Casting Technologies****Credits: 3**

Importance of welding and casting in industry, Welding processes, Weldability of metals, Welding defects, Designing of welded joints, Welding positions. Oxy-acetylene welding, Arc welding and Arc characteristics, Welding electrodes in SMAW, GTAW and GMAW, Submerged and Plasma arc weldings, Resistance welding, Castability of metals, Solidification of metals, Casting processes, Design of casings. Experiments in Welding processes, Welding Metallurgy, NDT, and Casting metallurgy and casting Techniques. Laboratory experiments.

Prerequisite

MECH 230

MECH 433**Mod Machining Techniques****Credits: 3**

Current trends in manufacturing techniques. Advanced machining. Thermal machining, Chemical and electrochemical machining. Mechanical machining, Abrasive machining. Hybrid machining. and Rapid prototyping. Computer numerical controlled machining. Approach to flexible manufacturing systems and computer integrated manufacturing systems. Laboratory experiments.

Prerequisite

MECH 230

MECH 435**Corrosion Engineering****Credits: 3**

Cost of corrosion, Electrochemical principles of corrosion, How to predict the corrosion in industry, Mechanical and metallurgical factors

affecting corrosion, Corrosion rate measurements, Polarization, Passivity, Uniform corrosion, Bi-metallic corrosion, Crevice and Pitting corrosion, Inter-granular corrosion, De- alloying, Erosion-corrosion, Stress corrosion cracking and Hydrogen damage, Corrosion-fatigue. Modern electrochemical principles of corrosion, Cathodic protection, Coating, Designing against corrosion.

Prerequisite

GENG 231

MECH 441**Energy Systems Lab****Credits: 1**

Application of basic measurement techniques and theoretical background gained in energy-related courses in conducting and designing laboratory experiments on complete thermofluid systems. Emphasis is given to parametric effects on the performance of internal combustion engines, compressors, turbines, centrifugal pumps, heat exchangers, air conditioning /refrigeration and similar systems.

Prerequisite

MECH 342 AND MECH 344 Concur.

MECH 442**Refrigeration and AC****Credits: 3**

Basic refrigeration concepts, refrigerants. Multistage and cascaded vapor-compression systems, liquid-to-suction heat exchangers, inter-coolers. Absorption refrigeration. Air and steam jet cooling. Thermoelectric refrigeration and flash cooling. Cooling load estimation. Refrigeration equipment component selection. Liquefaction. Air conditioning: human comfort, psychrometry, heating, cooling, humidification, dehumidification and mixing. Summer and winter A/C processes. Recirculating air, the sensible heat factor. A/C thermal load estimation. Component selection and duct design.

Prerequisite

MECH 342

MECH 443**Heat Transfer Systems****Credits: 3**

Advanced conduction: Basic equation and boundary conditions, analytical and numerical solutions of steady and unsteady conduction. Convection: basic relations of convection, analytical solutions of some simple flows (forced and natural convection). Design and rating of heat exchangers. Heat transfer in condensing and boiling processes. Energy exchange by radiation. Radiative heat transfer in furnaces. Solar collectors and concentrators. Laboratory experiments.

Prerequisite

MECH 344

MECH 445**Fluid Systems**

Credits: 3

Compressible flow: fundamental concepts, isentropic compressible flow with area change, normal shock waves, performance of nozzles, frictional flow in constant-area ducts (Fanno flow), flow in constant-area ducts with heat transfer (Rayleigh Flow). Potential flow: stream function, velocity potential, and solution of simple flows. Viscous flow: differential formulations, solution of simple flows. Analysis flow in pipeline networks. Use of commercial software.

Prerequisite

MECH 343

MECH 446**Turbo Machines****Credits: 3**

Classification of turbomachines, dimensional analysis, specific speed, prototype and model testing, basic laws. Incompressible flow turbomachines: centrifugal and axial flow pumps, Eulers theory, characteristics and laboratory testing, cavitation in pumps, hydraulic turbines, and system matching. Compressible flow turbomachines: centrifugal compressors and fans, impeller and diffuser design, optimum design of compressor inlet, choking in a compressor stage, axial flow compressors and turbines, reaction ratio, stage loading, stage efficiency, radial flow turbines, Laboratory experiments.

Prerequisite

MECH 343 AND MECH 241

MECH 447**Heat Engines****Credits: 3**

Internal versus external combustion engines. Automotive engines: Air standard cycles, fuels and combustion, combustion in spark ignition and compression ignition engines, actual gas cycles, supercharging, knocking, fuel rating. Gas turbine engines: actual cycles, optimum operation, application to turbo-fan, turbo-prop, and turbojet engines. Non-conventional engines. Carrying out laboratory experiments and Term Projects.

Prerequisite

MECH 342

MECH 448**Des of Energy Systems****Credits: 3**

Applications of thermo-fluids principles to design an integrated energy system. Examples include power generation, air conditioning, and industrial processes. Students work in teams on projects incorporating engineering standards, realistic constraints that may include economic, environmental, ethical, social, political, health and safety considerations. Term project.

Prerequisite

MECH 342 AND MECH 344

MECH 463**Mechatronics System Design****Credits: 3**

Introduction and definition of Mechatronics. Analog and digital circuit fundamentals. Microprocessor architecture and applications, Data Acquisition systems. Actuation systems: Mechanical, Hydraulic and pneumatic systems. Electric actuation systems. Basic types of sensors. Programmable Logic Controllers (PLC). Application to intelligent systems. Carry out laboratory experiments.

Prerequisite

MECH 213 AND MECH 361

MECH 464**Introductions to Robotics****Credits: 3**

Overview of robotics. Robot coordinate systems. Direct and inverse kinematics. Introduction to manipulator dynamics. Robot sensors and actuators. Control strategies: robot specification and selection, economic justification. Safety and implementation.

Prerequisite

MECH 321 AND MECH 361

MECH 471**Selected Topics I****Credits: 3**

Selected topics that meet student interests and reflects recent trends in one of the fields of mechanical engineering.

MECH 472**Selected Topics II****Credits: 3**

Selected topics that meet student interests and reflects recent trends in one of the fields of mechanical engineering.

MECH 480**Senior Project I****Credits: 1**

Carry out analysis and design of a system in one of the areas of mechanical engineering. Students follow systematic design approach, apply project planning and scheduling techniques, devise analytical, computational and/or experimental solutions, and design and build their own test-rig. Students attend technical seminars and learn to interact with speakers and at the end of the semester; they are required to present a seminar on the project status, progress and future work.

MECH 483**Operations Management****Credits: 3**

Presents a broad conceptual framework for the operation management and management of science. Topics include: Decision Making, role of quantitative models, Forecasting, capacity planning, aggregate planning,

materials management and inventory theory, Total Quality Management.

Prerequisite

GENG 200

MECH 485**Engineering Management****Credits: 3**

Engineers as managers. Engineering management functions. Total quality management: principles and approaches, techniques and applications. Personnel management, team working and creativity. Communication in the organization. Management of engineering projects. Engineers and the law. Liability. Project planning and control using activity network analysis.

MECH 486**Quality Analysis and Control****Credits: 3**

Analysis & design of quality control systems, Statistical Process Control (SPC) design and implementation. Control charts for attributes and variables. Process capability analysis, techniques. Quality management and recent developments.

Prerequisite

GENG 200

MECH 490**Senior Project II****Credits: 3**

Participating students continue the work on the topic selected in MECH480. Students are required to present their findings at the end of the project in the form of a seminar as well as a written formal report.

Prerequisite

MECH 480

MECH 499**Independent Study****Credits: 3**

Independent research of a topic not previously studied in other mechanical engineering courses. Offered under the supervision of a faculty member. A formal report is required.

MIST 201**Introduction to Management Information Systems (MIS)****Credits: 3**

This course provides students with the basic concepts of information systems as well as the use and management of current information technologies for business processes. Course emphasizes electronic commerce, information technology contribution to competitive advantage, and enterprise resource planning.

Prerequisite

(MAGT 101 OR MAGT 112) AND (COMP 002 OR IC3 2350 OR CPT2

060 OR CMPS 165 OR MATH 119)

MIST 301**Introduction to Programming in Business****Credits: 3**

This course introduces the student to basic concepts of programming logic and design. Areas studied include the use of computers as a problem-solving tool, methodology for algorithm design, and for structured modular implementation.

Prerequisite

MIST 201

MIST 302**Data Base Management Systems (DBMS)****Credits: 3**

This course covers concepts and methods in design, implementation, and maintenance of the database for a management information system. The course develops an understanding of database development including data modeling, normalization, and implementation in the relational model using SQL, to develop an understanding of database administration, and to explore other database models including the object-orientated model.

Prerequisite

MIST 201

MIST 303**Systems Analysis and Design (S & D)****Credits: 3**

This course provides students with the foundation in systems analysis and design concepts, methodologies, techniques, and tools. Students will analyze system requirements, design software solutions, and adopt appropriate development approaches such as the object-oriented approaches, rapid application development (RAD), and joint application development (JAD).

Prerequisite

MIST 201

MIST 304**Data Communications and Networking****Credits: 3**

This course introduces students to all aspects of current computer networks. Topics include cabling, signaling, serial, wide and local area networks, network protocols and network operating systems, and mixture of equipment, including serial, Integrated Services Digital Network (ISDN), LAN servers, clients, analyzers and bridges/routers.

Prerequisite

MIST 201

MIST 404**Information Technology for Financial Services**

Credits: 3

This course introduces students to the changing relationship between IT providers and the financial community, the impact of technology on the organization of banking institutions and its impact on market structures. The course emphasizes the impact of information technology on the control and supervision of financial institutions to gain competitive advantage.

Prerequisite

MIST 201

MTHL 220**Adolescent Development****Credits: 3**

This course aims to supply the students with basic developmental principles and theories in different aspects of human development, and to help them identify the developmental features of the deferent developmental stages in general, and adolescence in particular. In addition, the course discusses some issues and problems related to adolescence in the local community and in the larger Arabian and Islamic culture.

MTHL 315**Introduction to Counseling Psychology****Credits: 2**

This course aims to supply the students with some basic theories and principles of counseling psychology and to help them identify the different types of counseling and their uses in varieties of contexts. It also aims to supply the students with some preliminary skills for thinking about mental health and psychological disorder. In addition, this course discusses some professional, cultural, and ethical issues related to the practice of counseling.

MTHL 325**Health Psychology****Credits: 2**

This course addresses the concepts of health and illness from psychological, social, and biological aspects. This course examines the role of health behaviors in personal and public health care. The course also deals with individual differences in health by focusing on the role of personality and lifestyle or locus of control as psychological determinants for health. Among other topics that this course covers are: health concept and its relationship to psychological stress, psychology of chronic illnesses, and the application of health psychology in public health domains, health education, and prevention-health care.

NUTR 221**Principles of Food Science & Nutrition****Credits: 4**

An overview of the interactions among basic disciplines of science and technology which are integrated into the development of more wholesome, stable, and nutritious food products. General principles are stressed using examples which demonstrate the progression of raw agricultural commodities through the integrated technologies which

result in commercial food products.

NUTR 222**Environmental Health****Credits: 3**

Concept of the ecosystem. Natural, industrial and agricultural environments. Water pollution and waste water treatment. Air pollution and its quality. Solid waste and the environment. Vectors and reservoirs of epidemic diseases. Immunization programs. Hygiene of the local environment in schools, hospital, institutions and recreational places.

Prerequisite

NUTR 221

NUTR 231**Human Nutrition****Credits: 3**

This course emphasizes the physiological and biochemical aspects of vitamins, minerals, fiber, energy and macronutrients. Students are introduced to topics of current human nutrition interests e.g. antioxidants, eicosanoids. Students are trained in this course to use interactive electronic learning and literature searching strategies

Prerequisite

CHEM 351

NUTR 319**Quantity Food Production & Equipment****Credits: 3**

Principles of quantity food production and presentation, including stocks, sauces, soups, sandwiches, breakfast preparation, short order cooking, deep fat frying, grilling, meat cutting, vegetable and salad preparation, basic principles and techniques of baking; portion control, yield tests, recipe conversion and costing; principles of sanitation in quantity food production; principles underlying safe operation and cleaning of commercial food equipment

Prerequisite

NUTR 321

NUTR 320**Introduction to Dietetic and & Nutrition Practice****Credits: 1**

This course introduces students to the profession of dietetics and provide overview of the many career directions and opportunities open to dieticians both clinically and in the community.

Prerequisite

NUTR 221

NUTR 321**Food Chemistry****Credits: 3**

This course covers the basic chemical structures and properties of moisture, protein, carbohydrate, lipids, minerals and vitamins and their roles in food systems. Also covered will be the principles of chemical and instrumental methods for the qualitative and quantitative analyses of moisture, protein, carbohydrate, lipids, minerals and vitamins. Students will perform experiments to determine major food components using chemical and instrumental methods.

Prerequisite

CHEM 351

NUTR 329**Nutrition Education and Communications****Credits: 2**

Principles of nutrition communication and education theories applied to individual and group patient education will be addressed. This course aimed at improving students' interviewing skills and counseling techniques. The course will discuss the different educational programs that are focused on the improvement of nutritional knowledge, status through increasing positive health behavior.

Prerequisite

NUTR 338 Or NUTR 334

NUTR 335**Nutritional Metabolism I****Credits: 2**

Digestion and absorption of macronutrients. Body fluids and electrolytes balance. Concepts of balance, flux, turnover and metabolic pools. Energy metabolism at the cellular level. Metabolic pathways of synthesis and degradation of lipids, carbohydrates, proteins and amino acids. Macronutrients' metabolism in major organs and tissues. Substrate flux in long term and short term fasting. Apoptosis, nutritional genomics.

Prerequisite

NUTR 231

NUTR 336**Nutritional Metabolism II****Credits: 2**

Mechanism of action, metabolism and interaction with other nutrients of water and lipid soluble vitamins, macro-minerals, trace elements and ultra-trace elements.

Prerequisite

NUTR 231 OR NUTR 331

NUTR 338**Nutrition throughout the Lifespan****Credits: 3**

This course is designed to provide students with a view of the life cycle as a whole, with each life cycle stage supported by the nutrition that is essential for a good development. Nutritional needs are presented on

the basis of both physical and psychosocial. development.

Prerequisite

NUTR 231

NUTR 340**Assessment of Nutritional Status****Credits: 3**

Practical techniques in evaluation of nutritional status for individuals and groups. Anthropometrics measurements and their reference values. Biochemical indicators of deficiencies, excesses and storage of nutrients in the human body, and their reference values. Evaluation methods of dietary intakes and consumption. Modern techniques for body composition measurements (BIA, DXA, CT, MRI, NAA) will be covered.

Prerequisite

NUTR 231

NUTR 439**Meal Planning and Evaluation****Credits: 2**

This course aims to introduce the nutritional value and the characteristics of food groups, principles and guidelines for diet-planning, diet-planning guides with emphasis on food group plans and exchange lists, and approaches of applying diet-planning guides in meals planning and methods of meals evaluation.

Prerequisite

NUTR 231

NUTR 441**Food Safety & Quality Control****Credits: 3**

This course will provide comprehensive information on food safety; food contamination i.e. microbial, chemical, plant and animal adulterants and radioactive materials. Routes of contamination of major food groups, analysis and control. Fields and concepts of the quality systems of foods. Risk analysis and management of the food chain. Sensory properties of foods and statistical means of quality control. Food standards and regulations. National and international agencies related to food control.

Prerequisite

NUTR 321

NUTR 442**Management of food services operations 1****Credits: 2**

The course purpose is to introduce management theories and principles, and the effective use of resources in the design and administration of food service facilities. Design of floor plans and equipment selection for various institutional food service operations are included. Consideration is given to operating environmentally safe and efficient facilities with emphasis on sanitation and safety. Administrative and leadership

responsibilities of the food service manager are emphasized.

Prerequisite

NUTR 319 OR NUTR 322

NUTR 443

Management of food services operations 2

Credits: 2

The application of principles of management as they relate to the administration of human, physical and financial resources of food and nutrition services. In addition, emphasis is placed on food costing, labor issues, diversity, marketing, accounting, and budgeting for institutional food service.

Prerequisite

NUTR 442 OR NUTR 325

NUTR 450

Medical Nutrition Therapy I

Credits: 3

The course provides detailed information on the role of nutrition in prevention and treatment of disease. This course covers conditions most seen in dietetic clinics; obesity, diabetes, dyslipidemia, iron deficiency anemia, osteoporosis and the more common disease of inborn error of metabolism. The disease process, related biochemical issues, nutritional assessment, medical nutrition therapy and food and fluid issues are discussed in details for each disease.

Prerequisite

NUTR 231

NUTR 451

Medical Nutrition Therapy II

Credits: 3

This is the second course in medical nutrition therapy following Medical Nutrition Therapy I. The course introduces students to the etiology of nutrition related diseases of the digestive system. Liver and pancreas, renal system, oncology and metabolic stress and eating disorders. The disease process, related biochemical issues, nutritional assessment, medical nutrition therapy and food and fluid issues are discussed in details for each disease. Enteral and parenteral nutrition support are also covered in this course..

Prerequisite

NUTR 450 OR NUTR 351

NUTR 453

Medical Nutrition Lab II

Credits: 1

This course deals with diseases covered by the course medical nutrition therapy 2 (NUTR451) and should be taken concurrently. Sessions include self-study modules, tutorials, case studies and simulated clinical set ups.

Prerequisite

NUTR 450

NUTR 454

Medical Nutrition Laboratory I

Credits: 1

This course deals with diseases covered by the course medical nutrition therapy 1 (NUTR351) and should be taken concurrently. Sessions include self-study modules, tutorials, case studies and simulated clinical setups.

Prerequisite

NUTR 231

NUTR 456

Professional issues in Dietetics and Nutrition

Credits: 1

This course covers professional issues and trends affecting dietetics and nutrition practice, planning for professional advancement and conduct "Code of Ethics for Dietetic Practice" .

Prerequisite

NUTR 340 OR NUTR 433

NUTR 457

Public Health Nutrition

Credits: 3

The study of social, economical and environmental impact on the nutritional status off the community. Nutrition epidemiology. Methods of nutritional surveys. Nutrition surveillance systems. Preventive and control measures for community nutritional problems. Combating chronic problems related to diet. Nutritional and chronic disease in Arab countries with emphasis on GCC. Development of science-based and food-based dietary guidance. The role of the food industry in community nutrition. Food distribution systems.

Prerequisite

NUTR 340 OR NUTR 433

NUTR 490

Capstone Course

Credits: 3

The student is directed to undertake a clinical or community project in a specific subject under supervision of a staff member. The course is intended to reflect different skills and competencies acquired by the student in different courses.

Prerequisite

(NUTR 340 OR NUTR 433) AND NUTR 451

NUTR 491

Nutrition Seminar

Credits: 1

Students will be required to present a seminar in selected topics in human nutrition and dietetics. Topics will be selected in areas that are currently under active research. Presented by students, faculty and invited speakers.

Prerequisite

(NUTR 340 OR NUTR 433) AND NUTR 451

NUTR 492

Research Methods in Human Nutrition

Credits: 1

Students learn research methods used in nutrition and dietetics research. The course cover study designs e.g. cross-sectional, prospective, controlled studies and clinical trials. The course builds upon students' basic knowledge of statistics to introduce them to the statistical methods used in these studies.

Prerequisite

(NUTR 340 OR NUTR 433) AND NUTR 451

NUTR 494

Supervised Dietetic Practice I

Credits: 10

Students spend 15 of 30-weeks in a supervised dietetic practice (dietetic internship). The program provides interdisciplinary practicum that will prepare dietetic interns to attain entry-level competencies in nutrition therapy, food service systems management, and public health nutrition. Students will conduct training during two semesters, rotating through various clinical, public health and foodservice departments. Interns will be required to demonstrate proficiency in a defined set of competencies.

Prerequisite

NUTR 490

NUTR 495

Supervised Dietetic Practice II

Credits: 10

Students spend 15 weeks of a total of 30 weeks of supervised dietetic practice (dietetic internship). The program provides interdisciplinary practicum that will prepare dietetic interns to attain entry-level competencies in nutrition therapy, food service systems management, and public health nutrition. Students will conduct training during two semesters, rotating through various clinical, public health and foodservice departments. Interns will be required to demonstrate proficiency in a defined set of competencies.

Prerequisite

NUTR 494

PHAR 200

Medicinal Chemistry I

Credits: 2

Medicinal Chemistry I (PHAR200) is the first of a series of two medicinal chemistry courses. The course has been designed to introduce first year students to concepts required to understand drugs as organic molecules whose biological activities are derived from their chemical structures and physico-chemical properties. This will be achieved by first reviewing

fundamental principles in organic chemistry, which will subsequently allow students to make clear connections between physical organic and biological chemistry, and ultimately the general principles of medicinal chemistry (such as ADME principles, drug metabolism and structure-activity relationships). The course also includes a brief overview of the pharmaceutical industry, drug design and development, and those regulatory factors and agencies associated with drug development.

PHAR 201

Medicinal Chemistry II

Credits: 2

Medicinal Chemistry II (PHAR201) is the second of a series of two medicinal chemistry courses. The course has been designed to offer applications on what had been covered in PHAR200. Students will use their understanding of concepts such as drug receptor interactions, physicochemical properties, ADME, drug metabolism, and structure activity relationship on different classes of drugs. The course will cover in details drug groups that are used to treat different diseases, including, but not limited to, epilepsy, schizophrenia, Parkinson disease, depression, allergies, ulcers, diabetes, hypertension, pain, influenza, AIDS and cancer. For each drug class, students will learn the mechanism of action, detailed SAR, side effects, drug-drug interaction (if applicable) and drug metabolism. Students will advise to use a computerized chemical drawing program (Symyx draw) as a learning tools to facilitate the drawing and the memorization of chemical structures.

Prerequisite

PHAR 200

PHAR 210

Pharmaceutics I

Credits: 3

Pharmaceutics I (PHAR210) is the first of a series of four (PHAR210, PHAR310, PHAR311, PHAR410) pharmaceutics courses. This course focuses on physical pharmacy, which is the research area of pharmacy that applies theoretical principles and practical research methods of science to the research on pharmaceutical phenomena and to the practice of pharmacy. The aim of the course Pharmaceutics I is to provide an insight into a number of physicochemical basics and to explain these within a pharmaceutical context. The course broadens the knowledge offered in general organic chemistry and physics courses and provides the required knowledge and foundation necessary for future courses that focus on pharmaceutical dosage forms, pharmacokinetics and bio-pharmaceutics which build upon and critically rely on Pharmaceutics I.

PHAR 220

Foundations of Pharmacology & Pharmacotherapeutics I

Credits: 1

Foundations of Pharmacology and Therapeutics (PHAR220) is designed to provide first year students with an introduction to general pharmacologic and therapeutic principles and concepts, and provides a broad overview of the pharmacological and therapeutic properties of select common drugs. The course provides students with a fundamental

vocabulary and background for future courses in the program. This course is intended to prepare students for the series of integrated Pharmacology (PHAR320, PHAR321, PHAR420, PHAR421) and Therapeutics (PHAR380, PHAR381, PHAR480, PHAR481) courses that will be delivered during the second and third years of the program.

PHAR 221
Foundation Pharmacology & Pharmacotherapy II
Credits: 1

Foundations of Pharmacology and Therapeutics II (PHAR221) is a continuation of Foundations of Pharmacology and Therapeutics I (PHAR220). It is designed to provide first year students with an introduction to general pharmacologic and therapeutic principles and concepts, and provide a broad overview of the pharmacological and therapeutic properties of select common drugs. The course provides students with a fundamental vocabulary and background for future courses in the program. This course is intended to prepare students for the series of integrated Pharmacology (PHAR320, PHAR321, PHAR420, PHAR421) and Therapeutics (PHAR380, PHAR381, PHAR480, PHAR481) courses that will be delivered during the second and third years of the program.

PHAR 230
Pharmacy & Health Care I
Credits: 2

Pharmacy and Health Care I (PHAR230) is the first of a series of two pharmacy and health care courses. The course is designed to introduce first year students to the role of the pharmacist within the health care system. Pharmacy and Health Care I is a survey course in the sense that it will sample from a broad range of related topics designed to inform students of current trends and challenges in pharmacy practice and health care. Pharmacy and Health Care I intends to be a launching point for specialized education and is designed to begin developing competence in the practice of pharmacy.

PHAR 231
Pharmacy & Health Care II
Credits: 2

Pharmacy and Health Care II (PHAR 231) is the second in a series of two pharmacy and health care courses. The course follows PHAR230 is designed to continue with the introduction of the first year students to the role of the pharmacist within the health care system. PHAR231 is also a survey course in that it continues to sample from a broad range of related topics designed to inform students of current trends and challenges in pharmacy practice and health care.

Prerequisite
PHAR 230

PHAR 240
Professional Skills I
Credits: 2

Professional Skills I (PHAR240) is the first of a series of six (PHAR240, PHAR241, PHAR340, PHAR341, PHAR440, PHAR441) pharmacy

professional skills courses. PHAR240 is an introduction to the prescribing process, medication dispensing practice, drug information, patient care process used in pharmacy practice, and the language and terminology of medicine. This course is also an introduction to interpersonal communication theory and provides a foundation for development of the skills needed to interact with patients, customers and other health care professionals.

PHAR 241
Professional Skills II
Credits: 2

Professional Skills II (PHAR241) continues and expands on the themes and subjects covered in Pharmacy Professional Skills I (PHAR240). PHAR241 covers drug information accessing, evaluating, and provision, dispensing specific drug formulations, pharmaceutical calculations, health promotion, and health outcomes. This course also serves as an introduction to interpersonal communication theory and provides a foundation for the development of the skills needed to interact with patients, families, and other health care professionals. All workshops conducted in an environment that encourages the utilization of adequate communication skills and the language and terminology of medicine.

Prerequisite
PHAR 240

PHAR 250
Microbiology for Pharmacy
Credits: 3

Microbiology for Pharmacy (PHAR250) is designed to be a general microbiology course which includes the discussion of: bacterial structures and physiology; bacterial, fungal and viral infectious agents; the response of the host to infection by innate and acquired immune responses; and the control of infectious agents by drug therapy and vaccination.

PHAR 305
Pharmacy Research, Evaluation & Presentation Skills I
Credits: 1

Pharmacy Research, Evaluation and Presentation Skills I (PHAR305) is the first of six (PHAR305, PHAR 306, PHAR405, PHAR406, PHAR505, PHAR506) courses designed to introduce the students to the detailed aspects of optimizing research design for clinical and basic research. The material presented builds on the content covered in previous non-pharmacy statistics and research design courses. Design strategies for varying types of health care-related research, as well as skills for critical evaluation of research studies and literature will be a primary focus. In addition, oral presentation and debating skills will be developed.

PHAR 306
Pharmacy Research, Evaluation & Presentation Skills II
Credits: 1

Pharmacy Research, Evaluation and Presentation Skills II (PHAR306) is the second of six (PHAR305, PHAR306, PHAR405, PHAR406, PHAR505, PHAR506) courses designed to introduce the students to the detailed aspects of optimizing research design for clinical and

basic research. The material presented builds on the content covered in previous non-pharmacy statistics and research design courses. Design strategies for varying types of health care-related research, as well as skills for critical evaluation of research studies and literature are a primary focus. In addition, skills for research findings dissemination through oral presentation and poster writing will be developed.

PHAR 310
Pharmaceutics II
Credits: 2

Pharmaceutics II (PHAR310) is the second of a series of four (PHAR210, PHAR310, PHAR311, PHAR410) pharmaceutics courses and is designed to provide pharmacy students with an understanding of the science of formulation and dispensing of liquid dosage forms and their delivery systems. In particular, this course will cover an in depth knowledge regarding pharmaceutical solutions, suspensions and emulsions. The composition, preparation, performance (both in vitro and in vivo) and the implications and relationship with patient-centered care in relation with liquid dosage forms will also be discussed. The lab component of this course will focus on contemporary compounded prescriptions that will train the student on the pharmaceutical skills and the practical concepts involved in the preparation, use, and evaluation of liquid dosage forms.

Prerequisite
PHAR 210

PHAR 311
Pharmaceutics III
Credits: 2

Pharmaceutics III (PHAR311) is the third of a series of four (PHAR210, PHAR310, PHAR311, PHAR410) pharmaceutics courses and is designed to provide pharmacy students with an understanding of the science of formulation and dispensing of solid, semisolid and gaseous dosage forms and their delivery systems. In particular, this course covers an in depth knowledge regarding tablets, capsules, ointments, creams, suppositories and inhalers, The composition, preparation, performance (both in vitro and in vivo) and the implications and relationship with patient-centered care in relation with solid, semisolid and gaseous dosage forms are also discussed. The lab component of this course will focus on contemporary compounded prescriptions that will train the student on the pharmaceutical skills and the practical concepts involved in the preparation, use, and evaluation of tablets, lozenges, capsules, ointments, creams and suppositories.

Prerequisite
PHAR 310

PHAR 316
Pharmacokinetics I
Credits: 1

Pharmacokinetics I is designed to introduce the pharmacy student to the basic principles of pharmacokinetics including the absorption, distribution, metabolism and elimination of drugs and metabolites in

the human body, drug transport, parenteral and enteral routes of drug administration, and factors effecting these processes. Mathematical pharmacokinetic models and drug delivery processes are also studied

PHAR 317
Pharmacokinetics II
Credits: 1

Pharmacokinetics II is designed to assist the pharmacy student in gaining a greater appreciation of the fundamental concepts of the pharmacokinetic processes and to assist the student in using these concepts for the rational design and monitoring of individualized dosage regimens for commonly used and low therapeutic-index drugs with the aim of improving the therapeutic management of patients

PHAR 320
Pharmacology I
Credits: 2

Pharmacology I (PHAR320) is the first of a series of four (PHAR320, PHAR321, PHAR420, PHAR421) pharmacology courses and is designed to provide an understanding of how drugs exert their effects on living systems. This course is integrated with the pathophysiology and therapeutics course series, and is delivered in a disease-based approach. Drug classes and representative agents are covered in the context of the systems and diseases discussed. For this course, this will include a review of basic concepts and drug classes used for neurologic, psychiatric, eyes, ears, nose and throat, respiratory, gastrointestinal and urologic disorders. For each therapeutic drug classification, topics to be covered include representative drugs, chemical structures, mechanism(s) of action, pharmacokinetic characteristics, toxicity profiles and related pharmacological issues. These topics will complement content taught in the balance of integrated courses. Students will also become familiar with common abbreviations and vocabulary terms related to drug therapy

Prerequisite
PHAR 220

PHAR 321
Pharmacology II
Credits: 2

Pharmacology II (PHAR321) is the second of a series of four (PHAR320, PHAR321, PHAR420, PHAR421) pharmacology courses and is designed to provide an understanding of how drugs exert their effects on living systems. The course is integrated with the pathophysiology and therapeutics course series and is delivered in a disease-based approach. Drug classes and representative agents will be covered in the context of the systems and diseases discussed. For this course, this will include a review of drug classes used for cardiovascular, dermatologic, bone and joint disorders. For each therapeutic drug classification, topics to be covered include representative drugs, chemical structures, mechanism(s) of action, pharmacokinetic characteristics, toxicity profiles and related pharmacological issues. These topics will complement content taught in the balance of integrated courses. Students will also become familiar with common abbreviations and vocabulary terms related to drug therapy

Prerequisite

PHAR 320

PHAR 330 Structured Professional Practical Experience I Credits: 4

SPEP I (PHAR330) is the first of a series of six (PHAR330, PHAR430, PHAR530, PHAR531, PHAR532, PHAR533) courses designed to provide students with a variety of practice-based opportunities that apply the knowledge and skills gained through campus-based learning. These opportunities will occur in select hospital, community and clinic-based pharmacy practice sites and are structured around a number of formalized activities, each designed to lead to the attainment of specific learning objectives. Select pharmacy practitioners will serve as mentors, role models, trainers and assessors of student learning.

PHAR 340 Professional Skills III Credits: 2

Pharmacy Professional Skills III (PHAR340) is the third of a series of six (PHAR240, PHAR241, PHAR340, PHAR341, PHAR440, PHAR441) courses. PHAR340 continues with the development of knowledge and skills related to pharmaceutical care, medication prescribing and dispensing processes, and drug information resource retrieval and application in pharmacy practice. This course continues exercising interpersonal communication and development of the skills needed to interact with patients, families and other health care professionals.

Prerequisite

PHAR 241

PHAR 341 Professional Skills IV Credits: 2

Pharmacy Professional Skills IV (PHAR341) is the fourth of a series of six (PHAR240, PHAR241, PHAR340, PHAR341, PHAR440, PHAR441) courses. PHAR341 continues with the development of knowledge and skills related to pharmaceutical care, medication prescribing and dispensing processes, and drug information resource retrieval and application in pharmacy practice. This course continues exercising interpersonal communication and development of the skills needed to interact with patients, families and other health care professionals.

Prerequisite

PHAR 340

PHAR 350 Pharmacy Ethics and Law Credits: 1

Pharmacy Ethics and Law (PHAR350) is a course that focuses on legal, cultural, and ethical aspects of pharmacy practice and research. The course is designed to build on concepts introduced in previous courses and is intended to provide the student with a more in depth understanding of the related issues in both a local and international

environment.

PHAR 359 Interpretation of Lab Data I Credits: 1

Interpretation of Lab Data I (PHAR359) is designed to focus on the clinical interpretation of the various tests performed in clinical chemistry, hematology, microbiology and imaging (e.g. x-ray, ultrasound). The course will focus on the physiological basis for the test, the basic principles and procedures for the test, and the clinical significance of the test results, including quality control and normal values. The course is integrated with the physical assessment course and is delivered in anatomical system-based approach to health management. The systems that will be covered include the nervous system, head and neck systems, respiratory system, gastrointestinal system, genitourinary system, cardiovascular system, peripheral vascular system, musculoskeletal and the dermatologic systems.

PHAR 360 Interpretation of Lab Data II Credits: 1

Interpretation of Lab Data II (PHAR360) is designed to focus on the clinical interpretation of the various tests performed in clinical chemistry, hematology, microbiology and radiology. The course will focus on the physiological basis for the test, the basic principles and procedures for the test, and the clinical significance of the test results, including quality control and normal values. The course is integrated with the physical assessment course, and is delivered in an anatomical system-based approach to health management. The systems that will be covered include the nervous system, head and neck systems, respiratory system, gastrointestinal system, genitourinary system, cardiovascular system, peripheral vascular system, musculoskeletal and the dermatologic systems.

PHAR 361 Patient Assessment Lab I Credits: 1

Patient Assessment Laboratory I (PHAR361) is designed to introduce the pharmacy students to the various techniques and tools necessary to conduct physical examinations and to monitor changes caused by common disease states and drug therapy. In addition this course helps the students in interpreting physical findings and evaluating patient information in order to make appropriate decisions regarding the health of the patient, and his or her drug therapy needs and problems and to intervene in order to resolve the identified drug related problems and to ensure outcomes of drug therapy are met. This course will be delivered in an anatomical system-based approach to health management. The systems that will be covered include the nervous system, head and neck systems, respiratory system, gastrointestinal system, genitourinary system, cardiovascular system, peripheral vascular system, musculoskeletal and the dermatologic systems.

PHAR 362 Patient Assessment Laboratory II

Credits: 1

Patient Assessment Laboratory II (PHAR362) is designed to introduce the pharmacy students to the various techniques and tools necessary to conduct physical examinations and to monitor changes caused by common disease states and drug therapy. In addition, this course helps the students in interpreting physical findings and evaluating patient information in order to make appropriate decisions regarding the health of the patient, and his or her drug therapy needs and problems and to intervene in order to resolve the identified drug-related problems and to ensure outcomes of drug therapy are met. This course will be delivered in an anatomical system-based approach to health management. The systems that will be covered include the nervous system, head and neck systems, respiratory system, gastrointestinal system, genitourinary system, cardiovascular system, peripheral vascular system, musculoskeletal and the dermatologic systems.

PHAR 370 Pathophysiology I Credits: 1

Pathophysiology I (PHAR370) describes the incidence, etiology and clinical manifestations of local and systemic body responses which reflect adaption and course of a disease process. PHAR370 is integrated with the courses in pharmacology and pharmacotherapy and is delivered in anatomical system-based approach to health management. The systems that will be covered include the nervous system, head and neck systems, respiratory system and the gastrointestinal system.

PHAR 371 Pathophysiology II Credits: 1

Pathophysiology II (PHAR371) describes the incidence, etiology and clinical manifestations of local and systemic body responses which reflect adaption and course of a disease process. PHAR371 is integrated with the courses in pharmacology and pharmacotherapy and is delivered in anatomical system-based approach to health management. The systems that will be covered include the nervous system, head and neck systems, respiratory system, gastrointestinal system, genitourinary system, cardiovascular system, peripheral vascular system, musculoskeletal and the dermatologic systems.

PHAR 380 Pharmacotherapy I Credits: 3

Pharmacotherapy I (PHAR380) is the first of a series of four (PHAR380, PHAR381, PHAR480, PHAR481) courses dealing with drug-based therapeutics. The course is integrated with the pathophysiology and pharmacology course series and is delivered in a disease-based approach to health management. For this course, this will include a review of the therapeutics for neurologic, psychiatric, ophthalmic, otic, respiratory, gastrointestinal and urologic disorders. For each system, topics to be covered include epidemiology and etiology, clinical presentation, investigations, diagnosis, goals of therapy, therapeutic choices, treatment algorithms (including clinical practice guidelines), dosing and pharmacoeconomic considerations. Students will also

become familiar with relevant patient management issues. These topics will complement content taught in the balance of integrated courses.

Prerequisite

PHAR 220

PHAR 381 Pharmacotherapy II Credits: 3

Pharmacotherapy II (PHAR381) is the second of a series of four (PHAR380, PHAR381, PHAR480, PHAR481) courses dealing with drug-based therapeutics. The course is integrated with the pathophysiology and pharmacology course series and is delivered in a disease-based approach to health management. For this course, this will include a review of the therapeutics for cardiovascular, renal, dermatologic, bone and joint disorders. For each system, topics to be covered include epidemiology and etiology, clinical presentation, investigations, diagnosis, goals of therapy, therapeutic choices, treatment algorithms (including clinical practice guidelines), dosing and pharmacoeconomic considerations. Students will also become familiar with relevant patient management issues. These topics will complement content taught in the balance of integrated courses.

Prerequisite

PHAR 380

PHAR 390 Integrated Case-Based Learning I Credits: 2

Integrated Case-based Learning I (PHAR390) is the first in a series of five (PHAR390, PHAR391, PHAR490, PHAR491, PHAR590) courses and involves case studies and other activities aimed at integrating scientific and clinical concepts from across all courses in a problem-based learning environment. Patient case complexity increases across the sequentially delivered courses. For this course, emphasis will be on the comprehensive delivery of pharmaceutical care to patients with psychiatric, neurologic, respiratory, and pain disorders and will apply knowledge gained in the balance of integrated courses. Patient and disease management will occur in the context of a virtual health care environment.

PHAR 391 Integrated Case-Based Learning II Credits: 2

Integrated Case-based Learning II (PHAR391) is the second in a series of five (PHAR390, PHAR391, PHAR490, PHAR491, PHAR590) courses and involves case studies and other activities aimed at integrating scientific and clinical concepts from across all courses in a problem-based learning environment. Patient case complexity increases across the sequentially delivered courses. For this course, emphasis will be on the comprehensive delivery of pharmaceutical care to patients with cardiovascular, renal, dermatologic, bone and joint disorders. These topics will complement content taught in the balance of integrated courses. Patient and disease management will occur in the context of a

virtual health care environment.

Prerequisite

PHAR 390

PHAR 405 Pharmacy Research, Evaluation and Presentation Skills II Credits: 1

Pharmacy Research, Evaluation and Presentation Skills III (PHAR405) is third of six (PHAR305, PHAR306, PHAR405, PHAR406, PHAR505, PHAR506) courses designed to introduce the students to the detailed aspects of optimizing research design for clinical and basic research. The material presented builds on the content covered in previous non-pharmacy statistics and research design courses. Design strategies for varying types of health care-related research, as well as skills for critical evaluation of research studies and literature will be a primary focus. In addition, oral presentation and debating skills will be developed.

Prerequisite

PHAR 305

PHAR 406 Pharmacy Research, Evaluation and Presentation Skills III Credits: 1

Pharmacy Research, Evaluation and Presentation Skills IV (PHAR406) is fourth of six (PHAR305, PHAR306, PHAR405, PHAR406, PHAR505, PHAR506) courses designed to introduce the students to the detailed aspects of optimizing research design for clinical and basic research. The material presented builds on the content covered in previous non-pharmacy statistics and research design courses. Design strategies for varying types of health care-related research, as well as skills for critical evaluation of research studies and literature will be a primary focus. In addition, oral presentation and debating skills will be developed.

Prerequisite

PHAR 405

PHAR 410 Pharmaceutics IV Credits: 2

Pharmaceutics IV (PHAR410) is the fourth of a series of four (PHAR210, PHAR310, PHAR311, PHAR410) pharmaceutics courses and is designed to introduce pharmacy students to the basic principles governing the applications of radio-pharmacy in medical diagnosis and therapy. The status of current biotechnology-based pharmaceuticals and biotechnology related matters will be addressed. Additionally, the different techniques utilized in the analysis of pharmaceutical products will be introduced.

Prerequisite

PHAR 311

PHAR 415 Toxicology

Credits: 2

Toxicology (PHAR415) is an introductory toxicology course for pharmacy students. It is designed to provide a basic understanding of toxicology as it pertains to drugs and common toxins and toxicants likely to be encountered in pharmacy practice. Topics to be covered will include principles of toxicology, selected potential toxins and toxicants, signs, symptoms and mechanisms of toxicity, the outcomes of exposure to toxic levels of therapeutic agents, drugs of abuse and common toxins and toxicants, and the use of antidotes when available and their mechanisms of action. In addition, students will learn about the availability and use of clinical resources for identifying unknown toxicants and information resources on toxins and toxicants.

PHAR 420 Pharmacology III Credits: 2

Pharmacology III (PHAR420) is the third of a series of four (PHAR320, PHAR321, PHAR420, PHAR421) pharmacology courses designed to provide an understanding of how drugs exert their effects on living systems. The course is integrated with the pathophysiology and therapeutics course series and is delivered in a disease-based approach. Drug classes and representative agents will be covered in the context of the systems and diseases discussed. For this course, this will include a review of drug classes used for treating cancer (including anti-emetics), leukemias, anemias, immunosuppressants, endocrine-metabolic disorders including diabetes, obesity, osteoporosis, thyroid disorders and hypothalamic, pituitary and adrenal disorders. For each therapeutic drug classification, topics to be covered will include representative drugs, chemical structures, mechanism(s) of action, pharmacokinetic characteristics, toxicity profiles and related pharmacological issues. These topics will complement content taught in the balance of integrated courses. Students will also become familiar with common abbreviations and vocabulary terms related to drug therapy.

Prerequisite

PHAR 321

PHAR 421 Pharmacology IV Credits: 2

Pharmacology IV (PHAR421) is the fourth of a series of four (PHAR320, PHAR321, PHAR420, PHAR421) pharmacology courses designed to provide an understanding of how drugs exert their effects on living systems. The course is integrated with the pathophysiology and therapeutics course series and is delivered in a disease-based approach. Drug classes and representative agents will be covered in the context of the systems and diseases discussed. For this course, this will include a review of drug classes used for managing gynecologic disorders and infectious diseases including bacterial, fungal, protozoal and viral infections. Topics to be covered will include representative drugs, chemical structures, mechanism(s) of action, pharmacokinetic characteristics, toxicity profiles and related pharmacological issues. These topics will complement and 'complete' content taught in the balance of the integrated courses. Students will also become familiar

with common abbreviations and vocabulary terms related to drug therapy.

Prerequisite

PHAR 420

PHAR 425 Pharmacognosy, Alternative/Complementary Treatments Credits: 2

Pharmacognosy, Complementary/Alternative Medicine Treatments (PHAR 425) is designed to introduce students in their third professional year to phytopharmaceuticals, utilizing an evidence-based approach. The course will build on previous knowledge in organic and medicinal chemistry, as well as pharmacology and pharmacotherapy. The focus is on herbs with proven clinical efficacy and discussions will include plant name, part used, adverse effects, contraindications, potential drug interactions, dose, mechanism of action and clinical evidence. A comparison between herbal preparations and other drugs in the management of specific conditions will be included to stimulate rational and evidence based approaches to therapeutic recommendations.

PHAR 430 Structured Practical Experiences in Pharmacy II Credits: 4

SPEP II (PHAR430) is the second of a series of six (PHAR330, PHAR430, PHAR530, PHAR531, PHAR532, PHAR533) courses designed to provide students with a variety of practice-based opportunities that apply the knowledge and skills gained through campus-based learning. These opportunities will occur in select hospital, community and clinic-based pharmacy practice sites and are structured around a number of formalized activities, each designed to lead to the attainment of specific learning objectives. Select pharmacy practitioners will serve as mentors, role models, trainers and assessors of student learning.

Prerequisite

PHAR 330

PHAR 440 Professional Skills V Credits: 2

Pharmacy Professional Skills V (PHAR440) is the fifth of a series of six (PHAR240, PHAR241, PHAR340, PHAR341, PHAR440, PHAR441) courses. PHAR440 continues with the development of knowledge and skills related to pharmaceutical care, medication prescribing and dispensing processes, and drug information resource retrieval and application in pharmacy practice. This course continues exercising interpersonal communication and development of the skills needed to interact with patients, families and other health care professionals.

Prerequisite

PHAR 341

PHAR 441 Professional Skills VI

Credits: 2

Pharmacy Professional Skills VI (PHAR441) is the final course in the series of six (PHAR240, PHAR241, PHAR340, PHAR341, PHAR440, PHAR441) courses. PHAR441 continues with the development of knowledge and skills related to pharmaceutical care, medication prescribing and dispensing processes, and drug information resource retrieval and application in pharmacy practice. This course continues exercising interpersonal communication and development of the skills needed to interact with patients, families and other health care professionals.

Prerequisite

PHAR 440

PHAR 445 Rx Elective I Credits: 2

Pharmacy Elective I (PHAR445) is the first in a series of three successive elective courses for P-3 and P-4 students. PHAR 445 is delivered as a two-part course which provides the students with an opportunity to enhance their research skills. The first component of PHAR445 involves the required attendance and participation at the biweekly Faculty Research Seminar. The second component is a research opportunity for students, whereby they work in a 2:1 relationship with a full-time faculty member on an assigned directed studies project. The goal of this course is to provide an opportunity for students to further advance their understanding of selected pharmacy topics and to further enhance their research skills. Projects will be variable in focus, with clearly defined and achievable research objectives, study design and activities. Projects will be pre-approved by course coordinators, completed within one semester and will not require external funding. These projects will enhance the students' understanding of topics or issues addressed within didactic courses and/or complement the existing curricular content. The activities undertaken by the students will provide them with hands on experience with the conduct of a research project including database design, data management, analysis and interpretation.

PHAR 446 Rx Elective II Credits: 3

Pharmacy Elective II (PHAR446) is the second in a series of three successive elective courses for P-3 and P-4 students. PHAR 446 is delivered as a three-part course which provides the students with an opportunity to enhance their critical thinking, literature evaluation and formal debating skills. The first component of PHAR446 involves the required attendance and participation at the biweekly Faculty Research Seminar. The second component is a weekly "journal club", lead by a faculty member. Journal clubs have become a popular mechanism for published study review and critique, and to keep abreast of the literature, and we will employ this process in this course. The third component involves conducting formal debates on a pharmacy related topic. Pharmacy deals with constant change and debate is a process that determines how that change should occur. In this course, students will be introduced to

“formal” debate and develop some fundamentals debating skills.

PHAR 450
Healthcare Delivery Systems
Credits: 1

Healthcare Delivery Systems (PHAR450) is a course designed to expand upon content introduced in Pharmacy and Health Care (PHAR230) and the Professional Skills (PHAR240-341) course series, as well as experiences gained during the SPEP-1 (PHAR330) clerkship. This course is intended to better prepare students to be knowledgeable about the various healthcare settings in which they may ultimately work. The specific goal of the course is to further improve the students understanding of the development, organization, components and characteristics of contemporary health care systems. This will be undertaken through a detailed exploration of the variables that must be considered when implementing optimal pharmacy services in a hospital and community environment.

PHAR 470
Pathophysiology III
Credits: 1

Pathophysiology III (PHAR470) describes the incidence, etiology and clinical manifestations of local and systemic body responses which reflect adaption and course of a disease process. PHAR470 is integrated with the courses in pharmacology and pharmacotherapy and is delivered in anatomical system-based approach to health management. The systems that will be covered include the metabolic-, endocrine-, hematological/immune- and reproductive systems. The basic cellular mechanisms in tumor formation and common oncological diseases will also be covered.

PHAR 471
Pathophysiology IV
Credits: 1

Pathophysiology IV (PHAR471) describes the incidence, etiology and clinical manifestations of local and systemic body responses which reflect adaption and course of a disease process. PHAR471 is integrated with the courses in pharmacology and pharmacotherapy and is delivered in anatomical system-based approach to health management. The topics that will be covered include disorders of the female reproductive system and local and systemic infectious diseases.

PHAR 480
Pharmacotherapy III
Credits: 3

Pharmacotherapy III (PHAR480) is the third of a series of four (PHAR380, PHAR381, PHAR480, PHAR481) courses dealing with drug-based therapeutics. The course is integrated with the pathophysiology and pharmacology course series and is delivered in a disease-based approach to health management. For this course, this will include a review of the therapeutics for oncologic/haematologic, immunologic, and endocrinologic disorders. For each system, topics to be covered include epidemiology and etiology, clinical presentation, investigations, diagnosis, goals of therapy, therapeutic choices, treatment algorithms

(including clinical practice guidelines), dosing and pharmacoeconomic considerations. Students will also become familiar with relevant patient management issues. These topics will complement content taught in the balance of integrated courses.

Prerequisite
PHAR 381

PHAR 481
Pharmacotherapy IV
Credits: 3

Pharmacotherapy IV (PHAR481) is the fourth of a series of four (PHAR380, PHAR381, PHAR480, PHAR481) courses dealing with drug-based therapeutics. The course is integrated with the pathophysiology and pharmacology course series and is delivered in a disease-based approach to health management. For this course, this will include a review of the therapeutics for obstetric and gynecologic disorders and infectious diseases. For each system, topics to be covered include epidemiology and etiology, clinical presentation, investigations, diagnosis, goals of therapy, therapeutic choices, treatment algorithms (including clinical practice guidelines), dosing and pharmacoeconomic considerations. Students will also become familiar with relevant patient management issues. These topics will complement content taught in the balance of integrated courses.

Prerequisite
PHAR 480

PHAR 485
Pediatrics/Geriatrics
Credits: 1

Pediatrics/Geriatrics is a course designed to introduce pharmacy students to general considerations pertaining to two special patient populations. The course is designed to complement and expand on content previously introduced in other courses. Topics covered include medical and drug-related issues that affect early and late age groups, including the pharmacological aspects of pediatric development and the aging process. Challenges in the delivery of pharmaceutical care to these groups will be discussed.

PHAR 490
Integrated Case-Based Learning III
Credits: 2

Integrated Case-based Learning III (PHAR490) is the third in a series of five (PHAR390, PHAR391, PHAR490, PHAR491, PHAR590) courses and involves case studies and other activities aimed at integrating scientific and clinical concepts from across all courses in a problem-based learning environment. Patient case complexity increases across the sequentially delivered courses. For this course, emphasis will be on the comprehensive delivery of pharmaceutical care to patients with cardiovascular, renal, dermatologic, bone and joint disorders. These topics will complement content taught in the balance of integrated courses. Patient and disease management will occur in the context of a virtual health care environment.

Prerequisite
PHAR 391

PHAR 491
Integrated Case-Based Learning IV
Credits: 2

Integrated Case-based Learning V (PHAR491) is the fourth in a series of five (PHAR390, PHAR391, PHAR490, PHAR491, PHAR590) courses and involves case studies and other activities aimed at integrating scientific and clinical concepts from across all courses in a problem-based learning environment. Patient case complexity increases across the sequentially delivered courses. For this course, emphasis will be on the comprehensive delivery of pharmaceutical care to patients with cardiovascular, renal, dermatologic, bone and joint disorders. These topics will complement content taught in the balance of integrated courses. Patient and disease management will occur in the context of a virtual health care environment.

Prerequisite
PHAR 490

PHAR 505
Pharmacy Research, Evaluation and Presentation Skills IV
Credits: 1

Pharmacy Research, Evaluation and Presentation Skills V (PHAR505) is fifth of six (PHAR305, PHAR306, PHAR405, PHAR406, PHAR505, PHAR506) courses designed to introduce the students to the detailed aspects of optimizing research design for clinical and basic research. The material presented builds on the content covered in previous non-pharmacy statistics and research design courses. Design strategies for varying types of health care-related research, as well as skills for critical evaluation of research studies and literature will be a primary focus. In addition, oral presentation and debating skills will be developed.

Prerequisite
PHAR 406

PHAR 506
Pharmacy Research, Evaluation and Presentation Skills V
Credits: 1

Pharmacy Research, Evaluation and Presentation Skills VI (PHAR506) is the sixth and final installment of the 6-course PREP series designed to introduce the students to the detailed aspects of optimizing research design for clinical and basic research. The material presented builds on the content covered in previous PREP courses and non-pharmacy statistics and research design courses. In PHAR506, students will be required to moderate one paper session and submit three pharmacy review articles based on preselected scientific journals. The goal of this course is to enhance scientific writing skills. In addition, peer mentoring and critical evaluation of scientific literature skills will be further developed.

Prerequisite
PHAR 505

PHAR 525
Pharmacoepidemiology, Pharmacoeconomics
Credits: 2

The PHAR525 course starts by providing brief understanding of the approach to resource allocation in relation to health sector. It analyzes the ‘market’ for health care in terms of efficiency and equity. The bulk of the course then goes to define pharmacoeconomics and to provide an outline for the understanding and application of its concepts at a patient and policy level. It presents various techniques, tools and strategies to evaluate the economic contribution of drug therapies. The course also follows up on some of the contents in courses PHAR231, PHAR305 and PHAR405, regarding pharmacoepidemiology, describing strengths and weaknesses of different epidemiological studies design, including the basic concepts and methods of biostatistics, with a focus on their place in practice as well as the pharmacoeconomics research.

PHAR 530
Structured Practical Experiences in Pharmacy III
Credits: 4

SPEP III (PHAR530) is the third of a series of six (PHAR330, PHAR430, PHAR530, PHAR531, PHAR532, PHAR533) courses designed to provide students with a variety of practice-based opportunities that apply the knowledge and skills gained through campus-based learning. These opportunities will occur in select hospital, community and clinic-based pharmacy practice sites and are structured around a number of formalized activities, each designed to lead to the attainment of specific learning objectives. Select pharmacy practitioners will serve as mentors, role models, trainers and assessors of student learning.

Prerequisite
PHAR 430

PHAR 531
Structured Practical Experiences in Pharmacy IV
Credits: 4

SPEP IV (PHAR531) is the fourth of a series of six (PHAR330, PHAR430, PHAR530, PHAR531, PHAR532, PHAR533) courses designed to provide students with a variety of practice-based opportunities that apply the knowledge and skills gained through campus-based learning. These opportunities will occur in select hospital, community and clinic-based pharmacy practice sites and are structured around a number of formalized activities, each designed to lead to the attainment of specific learning objectives. Select pharmacy practitioners will serve as mentors, role models, trainers and assessors of student learning.

PHAR 532
Structured Practical Experiences in Pharmacy V
Credits: 4

SPEP V (PHAR532) is the fifth of a series of six (PHAR330, PHAR430, PHAR530, PHAR531, PHAR532, PHAR533) courses designed to provide students with a variety of practice-based opportunities that apply the knowledge and skills gained through campus-based learning. These opportunities will occur in select hospital, community and clinic-

based pharmacy practice sites and are structured around a number of formalized activities, each designed to lead to the attainment of specific learning objectives. Select pharmacy practitioners will serve as mentors, role models, trainers and assessors of student learning.

PHAR 533
Structured Professional Practice Experience
Credits: 4

SPEP VI (PHAR533) is the sixth of a series of six (PHAR330, PHAR430, PHAR530, PHAR531, PHAR532, PHAR533) courses designed to provide students with a variety of practice-based opportunities that apply the knowledge and skills gained through campus-based learning. These opportunities will occur in select hospital, community and clinic-based pharmacy practice sites and are structured around a number of formalized activities, each designed to lead to the attainment of specific learning objectives. Select pharmacy practitioners will serve as mentors, role models, trainers and assessors of student learning.

PHAR 535
Pharmacy Management
Credits: 2

The Pharmacy Management course aims to provide comprehensive management overview in terms of concepts and techniques to students who are entering employment in any capacity within the field of pharmacy. This involves fostering the acquisition of knowledge and skills required to excel in the areas of entrepreneurship, resource management, business operations, value added services, marketing and risk management. Group discussions with some role models in the field of management will be utilized to enhance learning, facilitate communication, critical thinking, problem solving, and team building skills. The course follows up on some of the contents in courses PHAR450 (Health Care Delivery System) regarding pharmacy administration while giving more focus and details to resource management, risk management and managing value added services.

PHAR 545
Pharmacy Elective III
Credits: 3

Pharmacy Elective III (PHAR545) is the third in a series of three successive elective courses for P-3 and P-4 students. In 10AY, PHAR545 will be delivered as a two-part course which will provide the student with an opportunity to enhance their research skills. The first component of PHAR545 will involve the required attendance and participation at the Faculty Research Seminar. The second component will be a research opportunity for students whereby they work in a 2:1 relationship with a full-time faculty member on an assigned directed studies project. The goal of this course is to provide an opportunity for students to further advance their understanding of selected pharmacy topics and to further enhance their research skills. Projects will be variable in focus, with clearly defined and achievable research objectives, study design and activities. Projects will be pre-approved by course coordinators, completed within one semester and will not require external funding. These projects will enhance the students understanding of topics or issues addressed within didactic courses and/or complement the

existing curricular content. The activities undertaken by the students will provide them with hands on experience with the conduct of a research project including database design, data management, analysis and interpretation

PHAR 590
Integrated Case-Based Learning V
Credits: 2

Integrated Case-based Learning V (PHAR590) is the final course in a series of five (PHAR390, PHAR391, PHAR490, PHAR491, PHAR590) courses and involves case studies and other activities aimed at integrating scientific and clinical concepts from across all courses in a problem-based learning environment. Patient case complexity increases across the sequentially delivered courses. For this course, emphasis will be on the comprehensive delivery of pharmaceutical care to patients with multiple co-morbidities. In addition, this course will include some didactic lectures on topics which have not yet been addressed in the Pharmacotherapy series. These topics will complement content taught in the balance of integrated courses. Patient and disease management will occur in the context of a virtual health care environment, emphasizing transitioning patients throughout the continuum of care with consideration of the social and economic dimensions of medication management.

Prerequisite
PHAR 491

PHIL 110
Introduction to Philosophy
Credits: 3

This course is an overview to the problems of philosophy throughout ages. It tackles the following topics: Various definitions of philosophy and its methodology – classification of sciences – historical overview of the developing stages in philosophy from the Greek era until now– the relation between science and philosophy – relation between religion and philosophy – Epistemology: possibility of knowledge, its sources and nature – Ontology: nature of being, materialism and spiritualism – Axiology: logic as the study of truth, ethics as the study of morals, and aesthetics as the study of norms of beauty. – The problem of body and mind.

PHYS 101
General Physics I
Credits: 3

Vectors - motion in one dimension - motion in a plane - Newton's laws - work and energy - potential energy - momentum - rotational motion - dynamics of rotational motion - elasticity - fluid mechanics.

Prerequisite
MATH 101

PHYS 102
General Physics II

Credits: 3

Periodic motion - mechanical waves - superposition of waves - sound-heat and temperature - quantity of heat - mechanism of heat transfer-thermal properties of matter - the first law of thermodynamics- the second law of thermodynamics - the nature and propagation of light - geometric optics - optical instruments.

Prerequisite
PHYS 101

PHYS 103
General Physics Lab
Credits: 1

This is the Lab course covering the subject matter of PHYS101, and PHYS102 and designed to be taken concurrently with PHYS102. The course presents an introduction to the methods of experimental physics. Emphasis is placed on developing students' skills in experimental techniques, data analysis, and scientific reporting of lab work. During the course, students will execute a series of experiments on Kinematics of motion, Kinetic and potential energy, Oscillatory motion, Thermal properties of matter, and Viscosity. The course includes computer-based experiments in Classical Mechanics

Prerequisite
PHYS 102 Concurrent

PHYS 110
General Physics for Biology
Credits: 3

This course is designed primarily to be appropriate for students planning to major in Nutrition, Pharmacy, and Biological and Environmental sciences. It is algebra- and trigonometry-based study of some selected topics drawn from classical and modern Physics, with an emphasis on applications to the course-targeted specialty areas. Topics studied include Classical description of motion in terms of force and energy, States of matter, Elasticity and elastic modulus, Basic of Fluid mechanics, Thermal properties of matter, Electrostatics, Electrodynamics, Elements of Electric Circuits, Electricity and the human body, Sound and light, Optical instruments, and Radiation and Radiation protection.

PHYS 111
Practical Physics For Biology
Credits: 1

This is the Lab-based course to supplement the lecture material of PHYS 110. The course presents an introduction to the methods of experimental physics. Emphasis is on developing student's skills in experimental techniques, data analysis, and scientific reporting of lab work. During the course, students execute a series of experiments on Dynamics of motion, Oscillatory motion, Thermal properties of matter, geometrical optics, Viscosity, Spectroscopy, and Radioactivity. The course includes computer-based experiments in Classical Mechanics.

Prerequisite
PHYS 110 Concurrent

PHYS 183
Introduction to General Physics
Credits: 3

PHYS 191
General Physics For Engineering I
Credits: 3

- Physics and Measurements: Units and Physical Quantities- Vectors- Motion in One Dimension- Motion in Two Dimension- Horizontal Motion- Vertical Motion- Projectile Motion- Kinematic Equations.
- The Laws of Motion: Newton's First Law- Newton's Second Law- Some Applications of Newton's Laws- Circular Motion and its Application.
- Work and Energy: Kinetic Energy- Work Done by Constant Force- Work Energy Theorem- Potential Energy- Conservation of Energy- Quantization of Energy.
- Linear Momentum and Collision: Linear Momentum- Impulse of Momentum- Collisions- Elastic and Inelastic Collision- The Center of Mass- Motion of a System of Particles.
- Rotational Motion: Angular Position, Velocity and Acceleration- Rotational Kinematic Motion Equations- Angular and Linear Quantities- Rotational Kinetic Energy- Calculations of Moments of Inertia- Torque- Work, Power and Energy in Rotational Motion- Rolling Motion of a Rigid Objects.
- Angular Momentum: Angular Moment- Angular Moment of a Rotational Objects – Conservation of Angular Moment- The Motion of Gyroscopes and Tops.
- Elasticity: Elastic Properties of Solids- Type of Elasticity- The Center of Gravity and Static Equilibrium.
- Universal Gravitation: Newton's Law of Gravitation, Measuring the Gravitational Constant – Free-Fall Acceleration and the Gravitational Force- Kepler's Law and Motion of Planets- Energy Considerations in Planetary and Satellite.
- Waves: Definitions of Waves, Pulse on a Rope, Transverse Wave, Longitudinal Wave, Complex Waves, Earthquake Waves, Amplitude of Waves, Wavelength of Waves, Frequency of Waves.
- Temperature: Definition of Temperature, Thermal Equilibrium, Zeroth Law of Thermodynamics, Celsius Scale, Kelvin Scale, Fahrenheit Scale, Thermal Expansion, The Mole, The Ideal Gas Law.
- Heat: Definition of Heat, Heat Capacity, Specific Heat, Calorimetry, Phase Change, Energy Transfer Mechanism, First Law of Thermodynamics, Thermal Processes.

Prerequisite
MATH 101

PHYS 192
Experimental General Physics For Engineering I
Credits: 1

This is the Lab-based course covering the subject matter of PHYS 191. The course presents an introduction to the methods of experimental physics Emphasis is on developing student's skills in experimental techniques, data analysis, and scientific reporting of lab work. During the course students execute a series of experiments on Kinematics

of motion, kinetic and potential energy, Oscillatory motion, Thermal properties of matter, and Viscosity. The course includes computer based experiments Classical Mechanics.

Prerequisite

PHYS 191 Concurrent

PHYS 193 General Physics For Engineering II Credits: 3

Electrostatics: Electric charges, atomic structure, charging and induction, Coulomb's law, the electric field and lines of force, Gauss's law, potential and potential energy, capacitors, stored energy in capacitors. The Electric Current: Resistors, electromotive force. Magnetic Properties of Matter: Magnetic material, molecular theory of magnetism, magnetization and magnetic intensity, ferromagnetic, hysteresis. Magnetic Fields and Magnetic Forces: Magnetism and magnetic fields, magnetic flux, motion of charged particles in magnetic fields, force on a conductor, torques on current loops, Biot-Savart law, force between parallel conductors, Ampere's law, motional electromotive force, Faraday's law, Lenz's law, self and mutual inductance, energy associated with inductors. Light: Nature of light, sources of light, light waves and their speed, the laws of reflection and refraction of light, absorption and illumination. Wave Phenomena: Interference, diffraction, polarization of light.

Prerequisite

(PHYS 191 OR PHYS 180 OR PHYS 181 OR PHYS 101) AND (PHYS 192 OR PHYS 103)

PHYS 194 Experimental General Physics for Engineering II Credits: 1

This is the Lab course covering the subject matter of PHYS 193. The course presents an introduction to the methods of experimental physics. Emphasis is on experimental, data analysis, and written presentation skills of lab work. During the course students execute a series of experiments on electrostatic fields, Magnetic fields, Induction, DC circuits, and AC circuits.

Prerequisite

PHYS 193 Concurrent AND PHYS 192 AND PHYS 191

PHYS 201 Renewable Energy Credits: 2

Electric charge and electric field: Coulomb's law and Gauss's law. Electric potential - capacitance and dielectric - current - resistance - electromotive force - direct current circuits. Magnetic field and magnetic forces - sources of magnetic field: the force between parallel conductors - Amper's law and its applications - electromagnetic induction: Faraday's law, Lenz's law, Maxwell's equations - inductance - alternating current: L-R-C series and parallel circuits, resonance circuits,

filters, transformers

Prerequisite

PHYS 102 AND PHYS 103

PSYC 201 Introduction to Psychology Credits: 3

The course provides students with introductory knowledge and skill about the basic principles, methods, and areas of psychology, such as learning, memory, emotion, perception, physiological, developmental, intellectual, social, and abnormal. The aim of this course is to provide students with a basic overview of psychology as behavioral science and to help them develop a more comprehensives and accurate understanding behavior.

PSYC 205 Social Psychology Credits: 3

Social Psychology is the scientific study of the way in which people's thoughts, feelings, and behaviors are influenced by the real or imagined presence of other people. This course will focus on three major categories: (a) thinking about the self and the others,(b) evaluating persons and relationship, and (c) interacting with other people. Thinking about the self. Evaluating persons and relationships involves attitudes, attitude change, prejudice, interpersonal attraction, and close interpersonal power, and groups.

PSYC 410 Social Psychology Credits: 3

Social Psychology is the scientific study of the way in which people's thoughts, feelings, and behaviors are influenced by the real or imagined presence of other people. This course covers various topics, such as research methods in social psychology, group dynamics, social interaction, attitudes, values, prejudice, socialization process, anti-social/pro-social behavior, and social power.

SOCI 111 Society & Culture Credits: 3

This gateway course to the department introduces students to the scholarly approaches used by the disciplines of sociology and anthropology. Both disciplines are concerned with understanding the shape of the societies that humans construct, as well as the values and beliefs that those societies and cultures impart upon individual members. This course is intended to give students the conceptual foundations to proceed in the social sciences. Students will delve deeply into the theories of culture and society, explore the theories of cultural change, and comparatively assess cultures and cultural difference. This course includes field-based projects.

SOCI 120 Introduction To Sociology

Credits: 3

This course provides a fundamental introduction to the discipline of sociology. In the broadest terms, sociology is the study of society. More specifically, sociology explores the interactions between social institutions, cultures, groups and individuals. It examines how unequal power relations organize the social world, and how those unequal power relations shape individual lives. It also focuses upon how individuals navigate and negotiate the different social and economic contexts in which they live. To accomplish this task, sociology relies on a variety of established theories and methods. This course will introduce students to those theories and methods. It will also provide students with a critical perspective on the application of those ideas in the examination of real- world problems. This course includes field-based projects.

SOCI 121 Introduction to Anthropology Credits: 3

This course introduces students to the discipline of anthropology. Students will briefly explore the four subfields of anthropology (physical or biological anthropology, linguistic anthropology, archaeology, and sociocultural anthropology). The central focus of this course will be on the last of those subdisciplines. Students will explore the historical development of anthropology, the primary theoretical frameworks it has developed, and the methods anthropologists utilize in the field. Students will also have the opportunity to apply these tools in solving a real-world problem through a field-based project.

SOCI 200 Sustainable Development Credits: 3

This course will examine the historical development of the concept of sustainable development, differing interpretations of the concept, empirical indicators of sustainability in environmental sociology, and policy proposals for achieving sustainable development in Qatar within Arab Gulf region. The emphasis of this course is on assessing the political, economic, social and cultural forces that pose a significant challenge to the development of a more sustainable future. There will be field-based projects.

SOCI 261 Quantitative Methods Credits: 3

The scientific method is central to much analysis in the social sciences. This course introduces students to the logic of scientific inquiry in the social arena. Students will investigate strategies for research design, sampling populations, measurement, and various structured methods of data collection. Students will also learn basic strategies for analyzing and presenting that data.

Prerequisite

SOCI 120 OR SOCI 121 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 262 Qualitative Methods

Credits: 3

Qualitative methods provide a second methodological frontier in the social sciences and a key complement to quantitative research. In this course, students will be trained in quantitative methods, with a strong focus on ethnographic methods. Ethnographic methods, frequently utilized by anthropologists, geographers, political scientists, sociologists, international development specialists, and many other disciplinary practitioners, take a holistic approach to social research. In this course, students will have the opportunity to practice these methods in the field, and to deploy their training in the implementation of an independent research project of their own design. Field-based projects and exercises are central to this course.

Prerequisite

SOCI 120 OR SOCI 121 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 263 Badawi Society Credits: 3

This course examines Bedouin society, with a strong focus on Bedouin society on the Arabian Peninsula. Students will examine the traditional livelihood of Bedouin nomads, the pastoral mode of production, and the traditional interconnections between these nomads and the villages and towns of the Arabian Peninsula. In the second portion of the course, students will evaluate the the impact of modernization and urbanization upon the Bedouin peoples, changes in the pastoral livelihood, and the intricate relations between Bedouin peoples and the state. This course includes a significant independent research project

SOCI 264 Family & Kinship Credits: 3

The importance of family and kinship is seemingly a universal aspect of human existence. A quick survey of different societies around the world, however, yields a fundamental conclusion: the concept of family and the calculation of kinship is extraordinarily variable over time and over place. In this course, students will investigate the classic approaches to studying family and kinship. They will develop a deep understanding of the variability of family and kinship across time and across cultures, and will grapple with the theories that explain that variability. While the focus will be on Arabian conceptions of family and kinship, students will explore family and kinship in other settings as well.

Prerequisite

SOCI 203 OR SOCI 120 OR SOCI 241 OR SOCI 247

SOCI 265 Population & Migration Credits: 3

Demography and populations studies have long been central to the sociological mission. But throughout history--and particularly in the contemporary era-- millions of people are on the move. In this course, students will focus on the combination of these two traditions. Students will explore the theories developed to explain and understand

population growth and change in human society. With that toolkit, students will also explore the theories that explain the increasing movement of people outside the communities, regions, and nations that are their home.

Prerequisite

SOCI 121 OR SOCI 120 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 267 Urban Studies Credits: 3

This course examines the conceptual foundation and theoretical frameworks through which the social science's understanding of urbanization and urbanism have been developed. Students will explore classic social theory concerned with urbanism and urbanization. Specific attention will be given to what those theorists had to say about the Middle Eastern City, as well as the Arabic literature's own tradition of urban studies. Turning to the contemporary era, students will explore the modern and post-modern city, and grapple with the role of globalization and neoliberalism in shaping the cities around the world, including those located here on the Arabian Peninsula.

Prerequisite

SOCI 120 OR SOCI 121 OR SOCI 241 OR SOCI 247

SOCI 268 Culture, Health & Disease Credits: 3

This course examines the social and cultural dimensions of health, illness and disease in the global arena. As such, the course introduces students to the fields of medical sociology and medical anthropology. Students will examine multiple themes over the course of the semester, including the social construction of health and disease and medical knowledge, the conceptualization and subjectification of the body, as well as the patterns of distribution of disease and mortality in Qatar and around the world. Students will also investigate the organization of the health care system in Qatar and in other parts of the world, the connection between environment and disease, and the cultural articulation of the relationship between doctors and patients.

Prerequisite

SOCI 120 OR SOCI 121 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 360 Sociological Theory Credits: 3

This course is an in-depth survey of the enduring conceptual frameworks utilized in the discipline of sociology. Students will consider the primary and fundamental questions posed by nineteenth and twentieth-century social analysts, and the theories they constructed to answer those questions. The first portion of the semester focuses upon the "classical" theorists, including Marx, Weber and Durkheim. The second half of the semester introduces students to the contemporary perspectives developed over the last five decades.

Prerequisite

SOCI 121 OR SOCI 120 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 361 Human Rights Credits: 3

This course explores human rights as a particular and historically contingent set of ideas that is tied to the project of modernity launched by Rousseau, Locke, Hobbes, and other classic philosophers in the European tradition. These ideas were crystallized in the 1948 Declaration of Human Rights, and purveyed to the rest of the world in a colonial, post-colonial, and globalized world. This course critically examines the history and development of this set of ideas, investigates alternative conceptions of human rights (with a particular focus on the Islamic and Arabic tradition), and looks at the application of human rights in Qatar and the other Gulf States. It also explores the vast distance between the idealized conception of human rights and their deployment in practice.

Prerequisite

SOCI 121 OR SOCI 120 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 362 Comparative Ethnography Credits: 3

Ethnography is the craft of Anthropology. In producing ethnographies, scholars seek to capture the entirety of the different social and cultural worlds that continue to characterize our world. In this course, students will utilize the comparative approach to build an understanding of social and cultural difference through the analysis of different social and cultural systems. Students will explore how those cultural differences come about, the factors that either foster or prevent cultural change, and the various theories scholars use to grapple with culture and cultural change.

Prerequisite

SOCI 121 OR SOCI 120 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 363 Ethnicity Credits: 3

Ethnicity is typically defined as common identity based upon a presumed or real common heritage, recognized by both the group in question and others in the world. At the same time, however, the concept of ethnicity has a long and mercurial history, and the use of this concept has shifted dramatically over time. In this course, students will explore the history of the concept of ethnicity, examine the long association of ethnicity with minority status, and evaluate the connections between the concept of ethnicity and the concept of race. While the focus of the course will be global, many case studies will be drawn from Qatar and the other Gulf States.

SOCI 364 Violence

Credits: 3

In its many forms, violence seems to be an enduring facet of human society. This course focuses explicitly upon the phenomenon of violence, the theories by which we might explain its ongoing presence in society, and the critical approaches to discerning the source of that violence. This examination of violence moves across scales: focal points include gender-based violence, terrorism, crime and criminology, human trafficking, and much more. While the focus of this course is global, students will have the opportunity for the practical application of these ideas in analyses of Qatar.

Prerequisite

SOCI 121 OR SOCI 120 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 365 Study of Gender Credits: 3

This course explores and analyzes the profound importance of gender in the organization of social life and in the construction of personal identity, with a strong emphasis on women's experiences. Gender is studied in the context of race, ethnicity, class and the other basic social divisions that characterize human social life. The course focuses intently on how groups divide labor between men and women; how they construct ideologies and social frameworks to maintain and naturalize these social divisions; and how both men and women experience, endure and challenge the gender-based constraints in the contemporary world. While the focus of this class is global, significant segments of the course will focus on women in Arab society, political participation, and human rights issues with a gender dimension.

Prerequisite

SOCI 120 OR SOCI 121 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 366 Lang, Communication & Society Credits: 3

We live in a media saturated world. From text messaging to reality TV, the influence of media cannot be overstated. This course will explore the role of the media in the contemporary social, cultural, and political landscape. Our focus, while broad, will devote special attention to Arab media in general, and Qatari Media in particular. The course also investigates the overarching issue of globalization and the impact of western media on non-western cultures. This investigation will include analysis of the proliferation of the Internet, the impact of media upon body image, and the cult of celebrity.

Prerequisite

SOCI 120 OR SOCI 121 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 367 Comparative Religion Credits: 3

This course approaches religion as a cultural system which provides a model of reality, a framework for organizing that reality, and the

architecture of the individual's relationship to that reality. This course will introduce students to a wide variety of religious perspectives, and uses a comparative approach to assess and evaluate the patterns and differences in these ideological and experiential packages. Students will also critically evaluate the concept of religion itself by grappling with the vastly different sorts of ideas and experiences that are encompassed by this concept in different cultural settings.

Prerequisite

SOCI 120 OR SOCI 121 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 368 Law & Society Credits: 3

This course examines the interaction of law with the various aspects of society in the contemporary world. Students will explore the organization of legal institutions, doctrines, and practices on other social phenomena, and similarly explore the impact of those social phenomena upon the institutions, doctrines and practices. This plan of study also includes a focus on criminology, the social construction of legal issues, and the analysis of the connections between law and social change.

Prerequisite

SOCI 120 OR SOCI 121 OR SOCI 241 OR SOCI 247 OR SOCI 203

SOCI 460 Statistics In The Social Sciences Credits: 3

This course is designed to introduce students to statistics utilized in quantitative analysis in the social sciences. The field of statistics concerns the collection, analysis, interpretation, and presentation of data. Students will acquire the toolkit for calculating basic statistical functions and examine the role of quantitative research in analyzing social phenomena. This course will include a significant applied focus on contemporary social issues in Qatar and around the world.

Prerequisite

(SOCI 261 OR SOCI 242 OR SOCI 343 OR SOCI 443) AND (SOCI 262 OR SOCI 344 OR SOCI 302) AND (SOCI 360 OR SOCI 342 OR SOCI 340 OR SOCI 341 OR SOCI 204 OR SOCI 243 OR SOCI 304)

SOCI 461 Honors Thesis Credits: 3

This course is intended for advanced students in the social sciences, and is a substitute for SOCI 469. This course will guide students through the preparation of their senior thesis. Working closely with the faculty advisor assigned by the department, students will develop a research plan, conduct that research, analyze the data they collect, and prepare a substantial analytic paper. Students may also be required to present their findings in a formal presentation.

SOCI 462 Change in Contemporary Arab Society

Credits: 3

Arab society, and particularly the petroleum-rich states of the Arabian Peninsula, have undergone significant and rapid change over the last decades. This course utilizes the sociological and anthropological toolkit to grapple with the scope and breadth of that change. Themes explored in this class include, but are not limited to, shifting gender roles and the place of women in Arab society, youth and youth culture, family and kinship in the contemporary era, migration and urbanization in the Gulf States, the impact of globalization on the peoples and cultures of the Arabian Peninsula, and the role of media in Arab cultural change.

Prerequisite

(SOC 120 OR SOC 121 OR SOC 203 OR SOC 241 OR SOC 247) AND (SOC 360 OR SOC 204 OR SOC 243 OR SOC 304 OR SOC 341 OR SOC 340 OR SOC 342)

SOCI 463**Labor & Class-Petrol Society****Credits: 3**

This course explores Khaleeji society through the canonical frameworks of labor, class and social differentiation. From a beginning point grounded in classical social theory, students will use these tools to critically explore the concept of a “Petroleum Society” and ascertain its utility in explaining the social, cultural, political and economic experience of the Gulf societies. This course includes specific focus on the development experiences of the Gulf, the population structure and workforce in the Gulf states, migration and labor, and an exploration of the cultural and social factors shaping work expectations among Gulf locals.

Prerequisite

SOCI 360 OR SOC 243 OR SOC 204 OR SOC 342 OR SOC 304 OR SOC 341 OR SOC 340

SOCI 464**Social Policy & Planning****Credits: 3**

The social sciences were originally conceived as a tool in the project of modernity, a tool that might help minimize or eradicate social problems or, from another angle, help the state better govern its subjects. In the contemporary era, the social sciences continue to interface with the government, and either assist or criticize the act of governance. This course explores academic perspectives on social policy and planning, with a strong focus on applied social studies of Qatar and nearby nations. Students will explore how social scientists have used the analytical, methodological, and conceptual toolkit they’ve developed over time to address the problems in human society and, more specifically, in Gulf Society.

Prerequisite

SOCI 360 OR SOC 243 OR SOC 204 OR SOC 342 OR SOC 304 OR SOC 341 OR SOC 340

SOCI 465**Arabian Gulf Societies****Credits: 3**

This course begins with an exploration of classic and modern theories of work. Students will use these frameworks to explore the social organization of work and emergent forms of work in the contemporary era, and the impact of globalization upon the distribution of work and industry. Students will also familiarize themselves with the international organizations that monitor and analyze work in the contemporary world. In the second half of the course, students will gain field experience in organizations here in Qatar and will explore new and emergent forms of bureaucracy and management.

Prerequisite

SOCI 120 OR SOC 121 OR SOC 241 OR SOC 247 OR SOC 203

SOCI 466**Social, Religious, & Political Movements****Credits: 3**

This course expands the focus of political sociology to include an analysis of the social and religious realm. Political sociology traditionally focuses on the role of the political in the unequal distribution of power in human society. After reviewing the classic theories of political sociology, students in this course will use those tools to examine social, religious, and political movements in Arabian society and in other parts of the world. Case studies will focus on the civil rights movement in the United States, the women’s rights movements in many parts of the world, the Islamic Brotherhood in Egypt, and the potential for labor movements in the Gulf States.

Prerequisite

SOCI 120 OR SOC 121 OR SOC 241 OR SOC 247 OR SOC 203

SOCI 467**Globalization****Credits: 3**

This course examines ways in which globalization constitutes complex economic, social, cultural and political trends around the world. In addition, it provides an overview of the major social scientific theoretical perspectives applicable to understanding the process of globalization and its connection to economic underdevelopment. The theoretical distinctions and the debate between modernization theorists on the one hand, and dependency and world- system theorists on the other are emphasized. Intrinsic to the above is an elucidation of the development of the world capitalist system and its future in a rapidly changing global context.

SOCI 469**Research Project****Credits: 3**

This course is intended to guide students through the preparation of their senior thesis. Working closely with the faculty advisor assigned by the department, students will develop a research plan, conduct that research, analyze the data they collect, and prepare a substantial analytic paper. Students may also be required to present their findings in a formal presentation.

Prerequisite

(SOC 261 OR SOC 242 OR SOC 343 OR SOC 443) AND (SOC 262 OR SOC 344 OR SOC 302) AND (SOC 360 OR SOC 304 OR SOC 243 OR SOC 204 OR SOC 340 OR SOC 341 OR SOC 342) AND (SOC 460 OR SOC 401)

SOCI 470**Independent Study****Credits: 3**

An independent study course provides for study under the supervision of a faculty member of a specific topic not covered by existing courses in order to develop a particular interest on the part of the student. The topic must be agreed upon with a faculty member and described in a proposal at the time of registration.

SOCI 471**Special Topics****Credits: 3**

This seminar involves an in-depth examination of selected topics in sociology or anthropology. A different topic is selected by faculty each time that it is offered. Relevant theory and current research is examined. Students are typically responsible for research papers and presentations under close faculty supervision. This course may be repeated for credit.

SOWO 101**Intro to Social Work****Credits: 3**

This course examines the history and philosophy of social welfare, with an emphasis on the social work profession: its mission, philosophy, ethics, values, and diverse fields of intervention with various client populations served in a range of social welfare settings.

SOWO 200**Social Work and the Law****Credits: 3**

This introductory course is designed to provide students with a basic understanding of the law, legal processes, and legal systems as they relate to social work practice as well as introduce students to the field of forensic social work: the application of social work questions and issues relating to law and legal systems, both criminal and civil.

SOWO 301**Medical Social Work****Credits: 3**

This course examines the practice of medical social work in assisting individuals and families in need of medical care, including emotional support that enable them to overcome the psychosocial problems pertaining to illness and hospitalization. And, to master strategies that enable patients to access other resources and assistance that mitigates illnesses and enhances health.

SOWO 302**Mental Health and Social Work****Credits: 3**

This course examines the nature and presenting characteristics of the major forms of mental and emotional maladjustments that may contribute to problems in social functioning, adaptation, and life satisfaction. It identifies specific categories of dysfunctional behavior, use of standard criteria, and treatments for dysfunctional behavior from a bio psychosocial perspective.

SOWO 303**School Social Work****Credits: 3**

This course addresses a specialized area of practice that examines the unique knowledge and skills needed to practice within a school system that engages students, families, teachers, the school, and the community. Course explores the policies, practices, historical educational developments and legislative trends affecting students’ well-being. School-community relationships are examined as well as the impact of societal attitudes upon schools.

SOWO 311**Social and Cultural Diversity****Credits: 3**

This course emphasizes social-economic and environmental conditions, such as socio-cultural and political assumptions of race, gender, and ethnicity. Also emphasized is the oppressed and vulnerable populations’ adaptive capabilities and strengths to function under difficult circumstances. Issues of values, ethics, diversity, social and economic justice and populations at risk are infused throughout the course.

SOWO 320**Human Behavior and Social Environment I****Credits: 3**

As the first of the two human behavior and the social environment courses, this course introduces the ecological systems theory as an umbrella for the generalist practice model. Focus is on the individual life-span approach to human development and reciprocal interactions among individuals, families, and small groups. Issues of values, ethics, diversity, social and economic justice and populations at risk are infused throughout the course.

SOWO 321**Human Behavior and Social Environment II****Credits: 3**

As the second of two human behavior and the social environment courses, this course focuses on the reciprocal relationship between individuals and large groups, organizations, and community systems. The course examines also the ways in which social systems promote or deter people in maintaining or achieving health and well-being. Issues of values, ethics, diversity, social and economic justice and populations at risk are infused throughout the course.

Prerequisite

SOWO 320

SOWO 330
Social Welfare Policy and Services I
Credits: 3

The first of two social welfare policy and services courses, this course examines the historical roots, mission, and philosophy of social welfare as an institution that responds to human needs and social problems, as well as the social, economic, and political forces that shape social welfare. The political processes for influencing policy formulation processes and improving social welfare services are reviewed. Policy analysis frameworks are introduced.

SOWO 350
Social Work Generalist Practice I
Credits: 3

As the first of three generalist practice courses, this course introduces the generalist practice problem solving model that focuses on the strengths, capacities, and resources of large groups, organizations, and communities in relation to the broader environments. Students broaden their skills in implementing the generalist practice model. Content and skills include the following: assessing large systems using empirically based theory; applying empirical knowledge and technological advances; developing, analyzing, advocating, and providing leadership for policies and services. Content on values, ethics, diversity, social and economic justice and populations at risk are infused throughout the course.

SOWO 360
Social Work Research Methods I
Credits: 3

The first of two social work research courses, this course introduces various social work research methods and techniques. The basic problem-solving process is presented and related to other research methods. Students will develop beginning skills in research and evaluation methods through the use of practical applications to learn how to critically evaluate research studies and to find answers to research questions.

SOWO 361
Society & Human Rights
Credits: 3

The course discusses social work between the concept universality of human rights and the concept of cultural relativism. The course tries to answer to what extent the universality of human rights conflicts with the concept of cultural relativism regarding the social issues dealt with in the Universal Declaration of Human Right. In general the course tries to answer the following question: how Social Work can utilize human rights documents as they are in the United Nations in dealing with the social issues?

SOWO 370
Children and Family Practice and Services
Credits: 3

Overview of practice and policy issues, problems, and opportunities in providing children and family welfare services. Emphasis is on inter-

agency collaborative services, culturally sensitive interventive approaches, managing cases to optimally meet children and family needs.

SOWO 400
Social Welfare Policy and Services II
Credits: 3

As the second of the two social welfare policy and services courses, this course reviews the theory, knowledge, research values, and skills of social welfare policy and services analyses. Emphasis is upon the processes and methods for understanding and analyzing social welfare policies/services. Various welfare policy/services assumptions, socioeconomic political values, and analysis frameworks are examined.

Prerequisite
SOWO 330

SOWO 410
Social Work Research Methods II
Credits: 3

The second of the two social work research courses, this course gives students the opportunity to integrate traditional research methods and technology into practice that is relevant to their interest. Students will be involved in quantitative and qualitative social work research.

Prerequisite
SOWO 360

SOWO 420
Social Work Generalist Practice II
Credits: 3

As the second of three generalist practice courses, this course expands the generalist practice model by introducing theory, knowledge, research, values and skills for social work practice with individuals and families. This course emphasizes the basics of communication, interviewing, relationship building and professional use of self. This course examines problem solving, interviewing, professional relationships, intervention planning and skills, and ethics. Content on values, ethics, diversity, social and economic justice and populations at risk are infused throughout the course.

Prerequisite
SOWO 350

SOWO 430
Social Work Generalist Practice III
Credits: 3

As the third generalist practice course, this course expands further the generalist practice model by introducing theory, knowledge, research, values and skills for social work practice with individuals and groups. Content and skills include developing, managing, and terminating groups; understanding group dynamics and processes; facilitating group communication; and, utilizing group leadership. Content on values, ethics, diversity, social and economic justice and populations at risk are infused throughout the course.

Prerequisite
SOWO 350

SOWO 440
Integrative Seminar
Credits: 3

A capstone seminar that enables students to integrate the theory, knowledge, values, skills, ethics, and cultural competence of generalist social work practice. Taken concurrently with the Social Work Practicum, this course provides students the opportunity to examine and review practice content and issues encountered in the practicum, as well as serve as a process group for the complex experience of becoming a generalist professional social worker.

SOWO 441
Social Work Practicum
Credits: 12

This is a 400 plus clock hours practicum placement that builds on the competencies gained in the social work courses. The practicum is educationally directed, coordinated, and monitored for all students. Structured learning opportunities allow students to compare their practice experiences, integrate knowledge acquired in the classroom, and expand knowledge beyond the scope of the practicum setting. The practicum is taken concurrently with the Integrative Seminar.

Co-Requisite
SOWO440

SPSC 200
Theory and Practice individual sports I
Credits :3

The course introduces students to a typical example for individual sports, selected amongst, e.g., athletics, swimming, judo, skateboarding, inline-skating etc. Through practical experience and theoretical reflection the students should develop their knowledge, skills and understanding of such an individual sport (one in course I and a further one in course II). The students will examine a range of issues that currently influence teaching, learning, and promotion of individual sports by this selected example of an individual sport. In addition, they are acquainted with the necessities of acquiring coaching and judging competencies in this individual sport.

SPSC 201
Theory and Practice (team sports) I
Credits :3

The courses introduce the students to an example of a team sport. Through practical experience and theoretical reflection the students should develop their knowledge, skills and understanding of the chosen team sport and be able to apply this in the education and promotion context. The students will examine a range of issues that currently influence teaching, learning and promotion of such a team sport. In addition, they are acquainted with the necessities of acquiring coaching and judging competencies.

SPSC 202
Theory and Practice (team sports) II
Credits :3

The courses introduce the students to further team sports, which should complement the experience by course I, e.g., co-active like in team-rowing or inter-active like in handball or inter-active like in tennis. Through practical experience and theoretical reflection the trainees should develop their knowledge, skills and understanding of the chosen team sport and be able to apply this in the education and promotion context. The students will examine a range of issues that currently influence teaching, learning and promotion of such a team sport. In addition, they are acquainted with the necessities of acquiring coaching and judging competencies by learning about similarities and differences amongst various team sports.

Prerequisite
SPSC 201

SPSC 203
Exercise Physiology I
Credits: 3

To understand essential facts and fundamental concepts of physiological functions of the human body during physical activity and exercise, in children, adolescents and adults to include cardiovascular, respiratory, muscle and neurological control of movement, hormonal and basic biochemistry of exercise in hypobaric and hyperbaric environments, ergogenic aids and performance, sports nutrition, control and maintenance of body weight, sex differences, cardiovascular disease, metabolic diseases and physical activity.

Prerequisite
BIOL 101

SPSC 204
Theory and Practice individual sports II
Credits :3

The course introduces students to a further individual sport, to be selected amongst, e.g., athletics, swimming, judo, skateboarding, inline-skating etc. The individual sport selected should provide complimentary experiences, e.g., process orientation like gymnastics or result orientation like athletics. Through practical experience and theoretical reflection the trainees should develop their knowledge, skills and understanding of the 2nd chosen individual sport. The students will examine a range of issues that currently influence teaching, learning, and promotion of this individual sport. In addition, they are acquainted with the necessities of acquiring advanced coaching and judging competencies in this selected example of an individual sport.

Prerequisite
SPSC 200

SPSC 206
Research Methods in Exercise Science and Health

Credits: 3

Quantitative and qualitative research approaches to disciplinary areas in Sport Science. Topics include methods and design, measurement issues, analysis and interpretation of literature and analytical procedures used in research.

Prerequisite

STAT 101

SPSC 209**Biomechanics and Movement Analysis****Credits :3**

This course will develop trainees' theoretical foundation of biomechanics and other ways of analyzing movements, physical activities and motor control. The course covers essential and practical knowledge of physiological changes associated with performance and mechanical principles and physical laws that govern human movement and sport. Intensive study will be devoted to analysis of fundamental and complex motor skills and to the use of these skills in performance and sports.

Prerequisite

BIOM 211

SPSC 210**Principles of Training and Coaching I****Credits: 3**

The course introduces to general and specific theoretical matters of training and coaching. To understand facts and concepts of sports physiological/biomechanical functions of human body during exercise and training to include neuromuscular, endocrine, metabolic, cardiovascular and immunological responses to training. Principles of low and high intensity training and training prescription in different environments, in the heat, cold, altitude, markers of overtraining and over reaching, and sports nutrition will be critically addressed and discussed at length. The course provides trainees with knowledge on aspects of planning, implementation and control of training units and focuses also on diagnostic methods of how to measure performance.

Prerequisite

PSC 203

SPSC 302**Fitness Testing and Training****Credits :3**

This course will deal with the theoretical connections between physical activity seen as a health resource and the various risk factors like high blood pressure, obesity or immune suppression. It will focus on the effect of different physical activities on the response of physiological core parameters in various age groups.

Prerequisite

SPSC 209

SPSC 303**Exercise and Metabolism****Credits :3**

This course will refer to the interrelation between exercise and metabolism with regard to various kinds of exercise and different levels of intensity, duration, and frequency. Different target groups are considered.

Prerequisite

BIOM 215

SPSC 305**Sport Marketing and management I****Credits :3**

Emotions and identification in sport demand and consequences for strategic marketing and the marketing mix The role of time in sports consumption and consequences for strategic marketing and the marketing mix Socio-cultural context of sport Sport Sponsoring Conclusions of the sport marketing specialties for sport management (planning, organizing, staffing, directing, controlling).

SPSC 306**Motor learning****Credits :3**

This course provides basic knowledge of the development and learning processes. It covers current theories and principles explaining motor behavior in general, and motor skill acquisition and performance related to sport in particular. This course deals with learning theories, information processing, motor control and motor skill learning and emphasizes why and how children and adults learn and perform motor skills

Prerequisite

SPSC 203

SPSC 307**Exercise Physiology II****Credits :3**

To understand facts and concepts of physiological functions of human body during physical activity and exercise, in children, adolescents and adults to include cardiovascular, respiratory, muscle and neurological control of movement, hormonal and basic biochemistry of exercise in hypobaric and hyperbaric environments, ergogenic aids and performance, sports nutrition, control and maintenance of body weight, sex differences and cardiovascular disease, and physical activity.

Prerequisite

SPSC 203

SPSC 308**Sport Psychology****Credits: 3**

The course provides an introduction and essential issues on sport and exercise psychology. A special emphasis will be given to concepts of motor learning and applied aspects for physical education and exercise.

Prerequisite

PSYC 205

SPSC 309**Exercise and Aging****Credits :3**

Personal and social aspects of aging. Typical diseases and their consequences for physical activity and sport. Basic information on the psychology of old age. Aims and tasks of sports for seniors, basic principles of the theory of training of sports for seniors. Main emphasis of practical experience: planning, conduction and evaluation of fitness programs for aged people (people advanced in years).

Prerequisite

BIOM 215

SPSC 310**Principles of Training and Coaching II****Credits: 3**

This course will further develop students' understanding of the current coaching theories and strategies. To understand both facts and concepts of sports training and coaching, coaching methodology, best practices for optimal performance in recreation to elite athletes. Knowledge of physiological, motor and biomechanical principles as they apply to simple and complex movements in sports that directly involve preparation in both in- and out-of-season training, and are based on current knowledge of training science, including knowledge and execution of training principles of micro, macro and meso-cycles and generally accepted coaching of athletes during training and application of periodization. The course will also cover programs to avoid overtraining and the problems associated with growth, maturation, and issues on aging.

Prerequisite

SPSC 210

SPSC 311**First Aid & CPR****Credits: 3**

Introduction and practice in immediate and temporary care of injuries and sudden illness, including administration of CPR. Students seeking CPR certification may apply in writing to program director and they may be asked to pay a small additional fee.

SPSC 318**Exercise Psychology****Credits :3**

This course is about the psychological health core topics like mental and emotional health, motivation to do health sport, change of long term life style factors with special consideration of social- psychological aspects like group communication, attitude and behavior.

Prerequisite

SPSC 308

SPSC 349**Developmental Psychology****Credits: 3**

This course provides the students with fundamentals in human development in all its dimensions (physical, cognitive, social, and emotional). Teacher candidates are introduced to information about the physical development as well as to psychological development across the life span. Teacher candidates will recognize and understand the need to support a healthy development across the life span by exercise and sports.

SPSC 399**Physical Education in Schools****Credits: 4**

The course deals with the organizational framework, relevant pedagogical concepts and methodological strategies for physical education.

Prerequisite

SPSC 206

SPSC 400**Psycho-Social Aspect of Games****Credits: 3**

This course provides the students with the opportunities and limitations of play, games and sport concerning correlates and effects on personal and social behavior. In addition emphasis is put on valuing play, games and sport for enjoyment, challenge, performance, self-expression and/or social interaction.

Prerequisite

PSYC 205

SPSC 401**Performance Analysis and Assessment****Credits: 3**

This course will focus on the scientific basis of performance analysis and assessment. Central to this course will be on cardiovascular and resistance conditioning in the off-season, pre-season, and in-season. Human Performance Laboratory equipment will be used to measure, determine and interpret the results of various performance tests. An introduction and utilization of appropriate equipment for cardiovascular conditioning and resistance training will be examined.

Prerequisite

STAT 101

SPSC 403**Exercise, Obesity and Diabetes****Credits :3**

Etiology of obesity, genetic, and environmental variations. Etiology of diabetes, genetic, and environmental factors. Body energy stores in children and adults. Understanding and theory of obesity and diabetes, knowledge of physiology and pathophysiology. Application of physical activity with regard to obesity, and the role of exercise in management of obesity. Application of physical activity with regard to diabetes,

and the role of exercise in the treatment of diabetes. Theoretical, practical, laboratory experiences, to calculate energy intake and energy expenditure.

Prerequisite

SPSC 203

SPSC 404

Exercise and Heart Disease

Credits :3

Underlying and potential causes of developing heart disease and/or hypertension Thorough knowledge of physiology and pathophysiology. Appropriate exercise prescription for individuals with heart disease or hypertension Parameters of exercise prescription. Heart disease as most common degenerative disease and the leading cause of death amongst adults. Knowledge of basic variations of heart disease. Emphasis on the identification of the heart disease, requirements of medical or no medical supervision, medications, exercise prescription, severity of heart or cardiovascular disease, monitoring of progress and changes, universal precautions, and competent monitoring and testing of heart patients. Practical experience in cardiac rehabilitation center or hospital setting (internship).

Prerequisite

SPSC 318

SPSC 405

Testing and Exercise Prescription

Credits :3

Strain and load-bearing capacity (maximum resilience) of human hard and soft tissues in sport activities Epidemiological aspects of sport injuries with special focus on typical injury mechanisms Preventive and rehabilitary interventions. Causes of motor dysfunction (disorder) and their neuro-physiological characterization. Epidemiological aspects of bad posture and damaged posture with special interest on lack of Physical activity and wrong loading, preventive effect of physical activity and sport and the aspect of the functionality of the human movement apparatus. Test batteries to analyze neuromuscular deficits (maximum strength tests, muscle function tests), preventive training methods (training of strength, coordination and flexibility) and movement strategies to prevent / improve deficits or overstrain; special programs for low back training.

Prerequisite

SPSC 206

SPSC 406

Concepts of Fitness and Nutrition

Credits: 3

Introduction to basic health and fitness concepts and related topics, including CPR. Attention will be given to the development of individual fitness programs emphasizing such topics as aerobic and anaerobic exercises, nutrition, diet, stress management, and assessment methods and procedures. The course is a combination of lecture and laboratory

activity. Examines the biological, social, and behavioral aspects of exercise and physical activity in older adults in order to develop programs for older adults to improve and/or maintain functional status. Methods of measuring physical activity and assessing functional status for older adults are also considered and practiced. The course provides a foundation for working with older adults in programs and sites for exercise and/or physical activity.

Prerequisite

SPSC 303

SPSC 407

Sport Governance and Economics I

Credits: 3

Resources economics in sport (role and substitution effects of fundraising, volunteers and subsidies) and their consequences for sport management Economic aspects of sport media and media rights and their consequences for sport management Economic impact of sport.

Prerequisite

SPSC 305

SPSC 409

Sport Marketing and Management II

Credits: 3

Integrity of sport Strategic and evaluation concepts in sport sponsoring Communication and brand development in sport business. Event marketing in sport Quality in sport Conclusions of the sport marketing specialties for sport management (planning, organizing, staffing, directing, controlling)

Prerequisite

SPSC 305

SPSC 410

Sport Governance and Economics II

Credits: 3

Students should learn the specialties of resources economics in sport and how they could be combined. They gather knowledge regarding the role of media and media communication within the sport business. Moreover, they should be able to estimate the economic impact of sport. Content distribution is about resources economics in sport (role and substitution effects of fundraising, volunteers and subsidies) and their consequences for sport management, economic aspects of sport media and media rights and their consequences for sport management, and economic impact of sport.

Prerequisite

SPSC 407

SPSC 449

Teaching PE in Primary Schools

Credits: 3

This course aims to develop teacher candidates' capabilities as a teacher of all activities in primary school. The course also focuses on teacher candidates' ability to understand and apply their pedagogical practices in a range of creative, competitive and challenging activities in preparation for teaching and learning at primary school level. Teacher candidates will recognize and understand how individuals at that age participate and respond in different situations and subsequently be able to begin to differentiate their teaching material and approach accordingly.

Prerequisite

SPSC 399

SPSC 475

Teaching PE in Secondary Schools

Credits: 3

This course aims to develop teacher candidates' capabilities as a teacher of all activities in secondary school. The course also focuses on teacher candidates' ability to understand and apply their pedagogical practices in a range of creative, competitive and challenging activities in preparation for teaching and learning at secondary school. Teacher candidates will recognize and understand how individuals at that age participate and respond in different situations and subsequently be able to begin to differentiate their teaching material and approach accordingly.

Prerequisite

SPSC 399

SPSC 490

Sport Science Project

Credits: 3

Students will experience how to organize and run a sport science project. Such project gives the students the chance to experience the whole life cycle of development, design as well as experiencing effectively the realization of a sport science project.

Prerequisite

SPSC 206

SPSC 499

Students Teaching PE in Primary and Secondary Schools

Credits: 6 (7 weeks each)

Student teaching is where the teacher education candidates perform content knowledge, pedagogical knowledge, and dispositions as their final opportunity. They will spend 6 weeks in a primary school and another 6 weeks in a secondary setting.

Prerequisite

SPSC 399

STAT 101

Statistics I

Credits: 3

Basic concepts, Population. Types of data, Sampling methods, Tables and graphs. Descriptive Statistics, Basic probability concepts, Random experiment. Sample space, Rules of probability. Counting techniques. Conditional probability. Independence, Discrete and continuous random variables. Sampling distributions, The Student-t distribution, F – distribution and Chi-Square distribution, Point estimation. Confidence intervals for a single population, Testing hypotheses for a single population. Statistical software like Minitab and Excel are used.

STAT 102

Statistics II

Credits: 3

Chi-Square Procedures, The Chi-square distribution. Chi-square goodness of fit test. Contingency tables. Association. Chi-square test for independence. The F-distribution. The completely randomized design. Multiple comparisons. The randomized block design. The two factor factorial design, Simple regression equation. Inference about the regression quantities. Nonparametric Statistics, The sign test and Wilcoxon signed rank test, the Wilcoxon rank sum test. The Kruskal-Wallis test. The Friedman test. The Spearman correlation coefficient. Statistical software like Minitab and Excel are used.

Prerequisite

STAT 101 OR STAT 153

STAT 151

Introduction to Applied Statistics

Credits: 3

Collection of Data; Concepts of Sampling; Organization and Graphical Presentation; Rates and Ratios; Measures of Central Tendency and Dispersion; Elementary Probability; Discrete and Continuous Distributions; Sampling Distribution, Point and Interval Estimation, Hypothesis Testing for Means, Proportions and Variances, Simple Linear Regression and Correlation, Analysis of Variance; Analysis of Categorical Data.

STAT 153

Introduction to Statistics

Credits: 3

Basic Concepts and Definitions of Statistics Terminology, Organization and Graphical Presentation of Statistical Data; Measures of Central Tendency and Dispersion; Percentiles and Quartiles; Basic Probability Concepts; Discrete and Continuous Random Variables and Distributions; Sampling Distribution of the Mean, t, Chi Square and F Distributions; Interval Estimation; Hypothesis Testing for Means, Proportions and Variances.

STAT 156

Stat for Pharmacy

Credits: 3

Statistical Concepts; Organizing and Drawing Conclusion from Data; Basic Probability; Binomial, Normal and t distributions; Estimation and Hypothesis Testing; Simple and Multiple Regression; One and Two-Way Analysis of Variance; Survey Design

STAT 211
Introduction to Probability
Credits: 3

Random experiment. Sample spaces, Events. Axioms and rules of probability. Equally likely sample spaces. Counting techniques, Conditional probability. Random variables. Expected values. Moment generating function. Probability generating function, Probability distributions, uniform, Bernoulli, binomial, geometric, negative binomial, Poisson and hypergeometric. exponential, gamma, beta and normal. Discrete and continuous bivariate random variables. Joint, Marginal and conditional distributions.

Prerequisite
(STAT 211 OR STAT 251) AND MATH 251

STAT 220
Business Statistics I
Credits: 3

This course introduces descriptive graphical techniques and numerical measures; probability distributions and their application to stock markets, production reliability and queuing systems; sampling distributions; estimation; inference with application to market segmentation; simple linear regression and correlation with application to accounting, economics, banking and insurance.

Prerequisite
(ENGL 004 OR ENGL 202 OR IBT 061 OR T02 500 OR IELT 5.5 OR CBT 173 OR ENGL F073)

STAT 221
Mathematical Statistics I
Credits: 3

The Multinomial and multivariate normal distributions. Functions of random variables. Transformation techniques. Sampling Distributions, the t , the Z , and the F distributions. The distribution of a single order statistic. The joint distribution of two order statistics. Distributions of functions of order statistics. Limit Theorems, Convergence in distribution, Convergence in Probability, Laws of large numbers. Limiting distributions. The Central limit theorem.

Prerequisite
(STAT 211 OR STAT 252) AND MATH 251

STAT 222
Business Statistics II
Credits: 3

This course examines multiple regression analysis with emphasis on model building in business and economics applied to the consumer, the firm and the markets, non-parametric statistics, time series analysis and business forecasting applied to sales, demand, revenue, consumption, share prices, exchange rates, basics of discriminate analysis and factor analysis applied to marketing research.

Prerequisite
STAT 220 OR STAT 155

STAT 231
Applied Regression Analysis
Credits: 3

Simple Linear Regression; Residual Analysis; Autocorrelation; Multiple Regression; Parameter Estimation and Testing; Model Selection Procedures; Polynomial Regression; Indicator Variables; Multicollinearity; Outliers and Influential Observation. Statistical software like Minitab, SPSS and R are used.

Prerequisite
STAT 102 AND (STAT 211 OR STAT 251)

STAT 241
Biostatistics
Credits: 3

Methods of Sampling in Medical Studies; Summarizing and Presenting Medical Data; Demographic Statistics; Survival Analysis; Analysis of Cross Tabulation; Inference for Means; Parametric and Non-Parametric with applications to medical data; Multiple Linear, Logistic, Poisson and Cox regression applied to medical data; Sample Size Determination. Statistical software like Minitab and Excel are used.

Prerequisite
STAT 102 OR STAT 151

STAT 242
Demography
Credits: 3

Basic Concepts, Meaning of population, Demographic rates. Period rates. Person years. Growth rate. The concept of cohort. The crude death rate. Age- specific death rates. The Lexis diagram. Mortality rates. Single-failure indices. The standardized death rate. The standardized mortality ratio. Life Tables, Multiple Decrement Life Tables, Fertility and Reproduction, Modeling Age Patterns.

Prerequisite
STAT 102

STAT 312
Stochastic Processes
Credits: 3

Elements of Stochastic Processes; Discrete Time Markov Chains; Random Walks; Branching Processes; Poisson Processes; Birth and Death Processes; Queuing Systems; Renewal Processes. Basic theory of martingales and Brownian motion. Applications to stochastic financial modeling.

Prerequisite
(STAT 211 OR STAT 251) AND MATH 251

STAT 322
Mathematical Statistics II

Credits: 3
Consistency, Sufficiency, the exponential family of distributions. Completeness of a family of distributions. Theory of Point Estimation, Criteria for judging point estimators. The mean squared error and the variance. Unbiasedness, Rao-Blackwell Theorem. Uniformly minimum variance unbiased estimation. Lower bounds of the variance of unbiased estimators. Information. Efficiency of an estimator. Maximum likelihood method. Moments method. Least squares method. Comparisons between the different methods. Interval estimation, Pivotal quantities. A General method for confidence intervals. Large sample confidence interval. Test of hypotheses, most powerful test. Neyman-Pearson lemma. Uniformly most powerful test. Uniformly most powerful unbiased test. Likelihood ratio test. Sequential tests. Large sample tests.

Prerequisite
STAT 221

STAT 332
Design of Experiments
Credits: 3

Principles of Experimental Design; Completely Randomized designs; Randomized Complete Block designs; Latin Square designs; Incomplete Block Designs; Factorial Experiments; Split Plot; Analysis of Covariance. Statistical software like Minitab, SPSS and R are used.

Prerequisite
STAT 102 AND (STAT 211 OR STAT 251)

STAT 333
Time Series
Credits: 3

This course discusses the analysis of time series data and their use in prediction and forecasting. The course presents various methods including time series regression, smoothing techniques and the Box-Jenkins methodology. The emphasize is on the applied side of the subject utilizing statistical packages like R, SPSS and Minitab.

Prerequisite
STAT 231 OR STAT 258

STAT 341
Actuarial Statistics I
Credits: 3

Actuarial models, classifying and creating distributions. Frequency and severity with coverage models, deductibles, policy limits and coinsurance. Aggregate loss models, compound models, computing aggregate claims distributions, comparison between the various computing methods. Discrete and Continuous time ruin models.

Prerequisite
STAT 102 AND (STAT 211 OR STAT 251)

STAT 343
Applied Survival Analysis

Credits: 3
Censored data, types of censoring, examples of survival data analysis, the survival function, the hazard function, Nonparametric Methods, Life tables, the Product-Limit Estimator of the survival function, comparing two survival distributions (Mantel-Haenszel test), Parametric Survival Distributions and Inference, Goodness of Fit for Survival, Parametric Regression Models, Cox's Proportional Hazards Model. Statistical software like Minitab, SPSS and R are used.

Prerequisite
STAT 102

STAT 344
Quality Control
Credits: 3

Analysis of Control Charts for Variables and Attributes; Histogram Analysis; Process Capability; Standard Acceptance Sampling Plans; Process Reliability. Statistical software like Minitab and SPSS are used.

Prerequisite
STAT 102 AND (STAT 211 OR STAT 251)

STAT 361
Sampling Methods
Credits: 3

Principles of sampling; questionnaire Design; Simple random sampling; Stratified and Cluster Sampling; Ratio and Regression estimation; Systematic Sampling; Multistage and Multiphase Sampling; Determination of the sample Size; Non-response and Non-sampling Errors Adjustment.

Prerequisite
STAT 102 AND (STAT 211 OR STAT 251)

STAT 371
Statistical Packages
Credits: 3

Detailed use and full exploitation of Statistical Packages such as SPSS, MINITAB, R and SAS in working with Data; Topics include Data Entry, checking, manipulation and Analysis. Comparison between the different packages, their advantages and disadvantages. Weaknesses and strengths are discussed. Effective use of statistical packages in solving real life problems. Advanced features of statistical packages.

Prerequisite
STAT 231 OR STAT 258

STAT 372
Statistical Simulation
Credits: 3

Generating of Discrete and Continuous Random Variables; Bootstrapping; Variance Reduction Techniques; Model Design and Simulation with Applications Including Queuing and other Applications; Verification and Validation of the Model. Using Statistical software like

Minitab, SPSS and R.

Prerequisite

STAT 211 OR STAT 251

STAT 381

Categorical Data Analysis

Credits: 3

Contingency Tables; Measures of Association; Exact and Asymptotic methods for 2x2 and rxc Contingency Tables; Probit and Logistic Regression Models for Binary Data; Loglinear Models for Multiway Contingency Tables. Statistical software like Minitab, SPSS and R are used.

Prerequisite

STAT 231

STAT 382

Non-parametric Methods

Credits: 3

Basic Concepts of Non-Parametric Methods; Testing and Estimation for one, Two, and Several sample Problems; Independent and Paired; Location and Dispersion Problems; Goodness of Fit Tests; Tests for Trends and Association; Analysis of variance of Ranked Data; Pittman Efficiency of Non-Parametric Methods. Statistical software like Minitab, SPSS and R are used.

Prerequisite

STAT 221

STAT 434

Generalized Linear Models

Credits: 3

The Exponential family of distributions, Properties of distributions in the Exponential family, Generalized linear models, Examples, Inference in Generalized Linear Models, Model Adequacy and Diagnostics, The deviance statistic, The residuals, modifications of the residuals and model checks based on the residuals. Special Cases of Generalized Linear Models, Normal theory linear models, Binary logistic regression, Nominal and ordinal logistic regression, Poisson regression and Loglinear models. Statistical software like Minitab, SPSS and R are used.

Prerequisite

STAT 322

STAT 442

Actuarial Statistics II

Credits: 3

Construction of Empirical Models, estimation for grouped and modified data, kernel density estimators. Parametric Statistical methods, estimation and confidence intervals in actuarial models. Model Selection, graphical methods, goodness of fit techniques. Credibility theory, Simulation of actuarial models, Case study examples.

Prerequisite

STAT 341

STAT 445

Reliability and Life Testing

Credits: 3

Reliability Concepts; Component and System Reliability; Notions of Aging; Lifetime Distributions and Hazard Functions; Types of Censoring; Nonparametric Estimation of Reliability Function; Kaplan-Meier and Nelson Estimators; Parametric Inference Procedures for Exponential, Weibull and Extreme Value Distributions; Proportional Hazards Regression Model; Accelerated Life Testing; Stress-Strength Models. Statistical software like Minitab, SPSS and R are used.

Prerequisite

STAT 322

STAT 464

Environmental Statistics

Credits: 3

Stochastic processes in the Environment. Fitting probability models to Environmental data. Tail Exponential Method. Poisson Processes and their application. Negative binomial model (Contagion and True Models). Capture-Recapture Method, Distance Sampling, Composite sampling, Introduction of Rank Set sampling methods, adaptive cluster sampling and adaptive allocation methods.

Prerequisite

(STAT 312 OR STAT 357) AND (STAT 361 OR STAT 452)

STAT 481

Multivariate Analysis

Credits: 3

Organization of Multivariate Data; Multivariate Distributions; Mahalanobis Distance; Hotelling's T₂; Multivariate Analysis of Variance and Regression; Data Reduction Techniques; Discriminant and Classification Analysis; Canonical Correlation Analysis. Statistical software like Minitab, SPSS and R are used.

Prerequisite

STAT 322 AND MATH 231

STAT 482

Bayesian Statistics

Credits: 3

Nature of Bayesian Statistics, Prior and posterior distributions. Noninformative priors. Jeffereys rule. Conjugate priors. Bayesian Inference, Quadratic loss function and Bayes estimators, Highest posterior density intervals, Bayesian tests of hypothesis. Bayesian methods in the normal and some other distributions. Approximate Bayesian Methods, Asymptotic approximations of the Bayes estimator, The Lindley and Tierney-Kadane methods, Markov chain Monte Carlo methods and the Gibbs sampler.

Prerequisite

STAT 322

STAT 497

Independent Study

Credits: 3

Designed for students who wish to pursue further reading in a particular topic of current interest in Statistics under the guidance of a faculty member. Each student is required to present analytical evaluation of his/her reading to his/her faculty supervisor

STAT 498

Special Topics

Credits: 3

Studies topics in statistics that are not part of the regular offerings. Topics will be selected by statistics faculty members as appropriate

STAT 499

Senior Project

Credits: 3

A number of skills learned throughout the curriculum are combined by expecting students to work through a variety of cases studies. Students are expected to collect data and analyze the data individually. Oral and written research reports of suitable format and content are required.

USUL 236

Research Methodology

Credits: 3

This course addresses two areas: in the first area the course aims to enable students to gain theoretical and practical knowledge of scientific research, its methods, basis and regulations. The course also aims to train student on how to do research work.

USUL 311

Analytical Commentary II

Credits: 3

Students will able to analyze Quranic texts, extract their semantics, draw conclusions, and apply these texts to surrounding circumstances a- Students will study the sutras and verses of part.29 according to the analytical methods of exegesis. b- Students are required to memorize and recite part.29 of the Quran.

USUL 312

Methodology of Exegesis

Credits: 3

This course aims to deepen the understanding of the students to exegesis and interpretation and their historical development.

USUL 313

Analytical Exegesis III

Credits: 3

The course aims to instruct students in sound social relations through the study of the relationship the prophet pbuh established with his family and the community at large. The course studies the role model of the prophets pbuh family using the methods of analytical exegesis: by highlighting the objectives of the social rules.

USUL 314

Verses of Ruling I

Credits: 3

This course aims to enable student to gain the skill of finding the relation between the Quranic of worship social transactions and how to draw judgments from texts.

USUL 315

Analytical Hadith I

Credits: 3

To the give the student an in-depth knowledge of the prophetic tradition, its meaning, and its proverb. Learning the correct prophetic traditions that explain the Muslim belief.

USUL 322

Analytical Hadith II

Credits: 3

This course aims to enable students to grasp rhetorical analysis to Hadith, so as to develop the ability to draw standard values.

USUL 330

Islamic Philosophy

Credits: 2

This courses aims to acquaint students with an important aspect of the Arabic Islamic heritage and broaden their intellectual perspectives. Students will gain analytical, critical, and rationalization skill in the light of their knowledge of the fundamentals of Islamic faith.

USUL 337

Islamic Sects

Credits: 3

This course aims to train student on how to read and comprehend classical texts in more than one field of Islamic culture, so as to understand and transcend the epochs of disputations. Students will objectively understand the Hadith of the religious sects and by so doing they will gain an objective outlook, which will enable them to discuss the modern trends of thought.

USUL 339

Ancient and Modern Logic

Credits: 3

The course aims at the direction of the mind and methods of thinking. Develop discerning abilities in students to enable them to reach knowledge through sound methods. The course also aims to help students to develop research and writing skills.

USUL 340

Studies in Religions

Credits: 3

Help students develop objective comparative skill in the study of religion, Educate students in understanding religions and cultural pluralism.

USUL 341

Ethics & Social Responsibility

Credits: 3

This course aims at acquainting students with different ethical theories and their applications in practical life situations, especially in the area of commerce and business.

Prerequisite

ENGL 004 Concurrent OR ENGL F073 Concurrent OR (IBT score 061) OR (TO2 score 500) OR (IELTS score 5.5) OR (CBT score 173) OR ENGL 202 Concurrent

USUL 344**Modern Islamic Thought****Credits: 2**

The course aims to show students the interaction and development of Islamic thought ever since the first interactive with European civilization. Students will get to know some of the major European thinkers.

USUL 411**Verses of Ruling II****Credits: 3**

The objective of the course is to train students in drawing correct judgments from the following verses Almaeda 1-7, 87-108 Alanfal 1-4, 15-18, 41, Altawba 1-29.

USUL 423**Analytical Hadith III****Credits: 2**

This course aims to direct students to the noble human values through studying an anthology of Hadith in manners and other proprieties that include charity, kindness to neighbors, keeping promises good manners, modesty, truthfulness, generosity and connecting that all with the realities of the Islamic world show their effects on the reform of individuals and at large communities.

USUL 424**Methodology of Hadith Studies****Credits: 3**

The course aims to train students to use computers to trace tradition. This course gives students an overview of attribution and its canonical texts. Students will also be trained in method of attribution, students will also be able to use authorized sources and methods of Hadith scholars particularly the compilers of the six canonical books.

USUL 435**Mysticism Ethics****Credits: 2**

This course aims at the purification of the self according to the principles of sharia, explaining the priority of order in Islam. Also the course will explain the cause of extremism and digressions in Sufism.

USUL 437**Modern Philosophy****Credits: 2**

This course aims at acquainting students with the modern philosophical theories and schools. Students will also know the effects of modern philosophy on the European civilization and thought. The course will enable students to benefit from the advantages of this thought and will also know its drawbacks in the light of Islamic belief.

