American University of Sharjah Catalog

2001 - 2002

His Highness Sheikh Dr. Sultan Bin Mohammed Al Qassimi

Supreme Council Member, Ruler of Sharjah

Founder and President of the American University of Sharjah

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American University of Sharjah

Academic Calendar 2001 – 2002

Catalog

Fall Semester			
August	23	Thursday	Dorms Open
	24	Friday	Parents' Orientation (New Students)
	25	Saturday	New Students' Initial Orientation
	26 - 29	Sunday - Wednesday	TOEFL and Placement Tests
September	1 - 5	Saturday - Wednesday	Returning Students' Registration
	1	Saturday	New Students' Academic Orientation
	3 - 5	Monday - Wednesday	New Students' Registration
	8	Saturday	First Day of Class
October	15	Monday	Al-Isra Wal Miraaj Holiday
December	2	Sunday	National Day Holiday
	12	Wednesday 10 pm	Eid Al-Fitr Holiday begins
	22	Saturday 8 am	Classes Resume
	25	Tuesday	Holiday
	30	Sunday 10 pm	Fall Semester Classes end, Study and Examination Period begins
January	1	Tuesday	Gregorian New Year Holiday
	10	Thursday 10 pm	Study and Examination Period ends

Spring Semester			
January	16	Wednesday	Dorms Open
	18	Friday	Initial Orientation of New Students and Parents
	19 - 20	Saturday-Monday	TOEFL and Placement Tests
	19 - 23	Saturday-Wednesday	Registration for Returning Students
	21	Monday	New Students' Academic Orientation
	22 - 23	Tuesday-Wednesday	Registration for New Students
	26	Saturday	First Day of Class
February	20	Wednesday 10 pm	Eid Al-Adha Holiday begins
	26	Tuesday 8 am	Classes resume
March	16	Saturday	Al-Hijri New Year Holiday
	17	Sunday 8 am	Classes resume
May	15	Wednesday 10pm	Spring Semester Classes end, Study and Examination period begins
	25	Saturday	Prophet Mohamed's Birthday Holiday
	26	Sunday 8 am	Examinations Resume
	27	Monday	Study and Examination Period ends
June	3	Monday	Commencement

Islamic holidays are determined after sighting the moon. Thus, actual dates may not coincide with the dates in this calendar. In the event of loss of teaching days due to unscheduled closings, the Semester (s) will be extended.

Chancellor's Message

Dear Prospective Student:

Choosing a university is one of the most important decisions that you will ever make. It can be the key that opens the door to a lifetime of opportunities for growth and service.

This catalog is designed to provide you with a straightforward description of the courses of study offered by the American University of Sharjah. It is not an advertisement. We want you to base your choice of a university on reliable information.

AUS presents you with the chance to experience American education in the Gulf. That statement has four meanings that should be important to you. First, the curriculum is organized according to the American pattern of semesters and courses. Second, the method of classroom instruction is American in its emphasis on individual initiative, active learning and the application of knowledge. Third, the standard of instruction is comparable to that in good universities in America. Fourth, student life on the campus is rich with clubs and sports and cultural events. AUS feels like an American university.

You will find a special sense of excitement on our campus as we enter the fifth year of our existence. Faculty and students are working together to create a great university. You could become part of this effort to establish a new standard of academic excellence for the region.

Our academic standards are challenging, but we are dedicated to helping you to meet those standards. We will judge our success as an institution by how well you do in realizing your potential as a student and in your later professional life.

I invite you to visit our magnificent campus, inspect our state-of-the-art facilities, talk with students, meet members of the faculty and discover for yourself why so many bright young men and women have made AUS their first choice.

Roderick S. French, Chancellor

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The University

Historical Preamble

The American University of Sharjah (AUS) was founded in 1997 by His Highness Sheikh Dr. Sultan Bin Mohammed Al Qassimi, Member of the Supreme Council of the United Arab Emirates and Ruler of Sharjah. Sheikh Sultan articulated his vision of a distinctive institution against the backdrop of Islamic history and in the context of the aspirations and needs of contemporary society in the UAE and the Gulf region.

AUS was mandated to:

* Reinforce the efforts of the leaders of the UAE "to ensure that science and education regain their rightful place in the building and advancement of our society and shaping the lives of our children"
* Join other institutions of higher education in seeking "to reshape fundamentally the minds of our youth to enable them to address the challenges of life using the scientific method"
* Become a "center of research for educational development and the solution of social problems"
* Become "organically linked" to the economic, cultural, scientific and industrial sectors of society in "productive cooperation"
* Exercise the "independence and objectivity in teaching and research" necessary for the achievement of these goals

Mission Statement

The American University of Sharjah (AUS) is a not-for-profit, independent, coeducational institution of higher education formed on the American model:

* AUS will offer academic programs that are the equivalent in content and quality to those offered by leading institutions of higher education in the United States
* AUS will admit students solely on the basis of their academic qualifications regardless of race, color, gender, religion, disabilities, age or national origin. The creation of a multicultural, coeducational, international academic community is both a means and an end in the mission of the university
* AUS will provide students with a rich and varied campus life that fosters their personal growth and supports their transition to responsible adulthood in a rapidly changing world
* AUS will integrate liberal studies and professional education to give its graduates both breadth and specialization
* AUS will give its students access to the resources of art, literature and religion accumulated by earlier generations in various civilizations as well as mastery of the latest technical skills required for success in modern life
* AUS will give its graduates an education that enables them to comprehend the dynamism and complexity of contemporary global processes and empowers them to guide those processes in constructive directions
* AUS will adapt the model of the great American universities of the 20th century to the cultural setting of the Gulf in preparation for serving the educational needs of a new century

University Terminology

Academic Status	Determined by regulations governing good standing, probation and suspension.
Admission	Formal application and acceptance as a regular student in a degree program. Students are admitted to degree programs fall and spring semesters only.
Advisor	The advisor is the faculty member assigned by the university to assist each student in planning the proper academic pro gram. The student is called the advisor's "advisee."
Audit	To take a course without credit and grade.
Credit	Described in semester credit hours, a credit is commonly defined as the equivalent to a one-hour lecture or three hours of laboratory or recitation work per week for one semester.
Curriculum	A structured set of learning objectives contained in a specified set of courses.
Corequisite	A formal course of study required to be taken simultaneously with another.
Department	An academic unit of a college or school.
Dismissal	The involuntary separation of a student from the university for unsatisfactory academic achievement or conduct.
Extracurricular	Those activities that are part of student life but are not part of the regular course of study, such as dramatics, athletics and music.
Fee	Per semester or per credit charges for courses.
GPA	Grade point average. See page 27 of this catalog for method of calculation.
Good Standing	A student who is not on probation or suspension.
Grade Points	Grades are evaluated in terms of quality points. See page 27 of this catalog to determine grade points for the letter grade earned.
I.D. Card	University student identification card.
Incomplete	The "I" symbol is a temporary grade given when a student has been performing satisfactorily, but, for a reason beyond the student's control, has been unable to complete the required work for the course before the end of the semester. Permanent grades must be submitted by the end of the second week of the semester immediately following the semester in which the course was taken.
Load	The total credits for which a student is registered in any registration period.
Major	Subject or field of study.
Prerequisite	The preliminary requirement that must be met before a certain course may be taken. All prerequisite courses must be completed with a C- grade or better. In some cases, a course and its prerequisite may be taken concurrently.
Probation	A warning status resulting from the student's unsatisfactory academic achievement or conduct.
Registration	The process of enrolling in classes.
Regular Student	A degree-seeking student who is officially admitted to the university.
Required Subjects	Those subjects that are prescribed for the completion of a particular program. The student, after consulting the advisor, may choose elective subjects; the required subjects are determined by the college or school.
Schedule, Class	The semester list of courses offered, including the names of the instructors, the days, hours and locations of classes.
Schedule, Student	A listing of the courses that the student takes each semester.
Transcript	A certified copy of the student's permanent academic record on file in the Registrar's Office. The transcript lists each course that the student has taken and the final grade received.
Undergraduate	A student who has not yet obtained the bachelor's degree.
Withdrawal	The act of officially leaving the university. Students may also withdraw from individual courses without withdrawing from the university.

Telephone Directory

American University of Sharjah
P.O. Box 26666 - Sharjah, U.A.E.

U.A.E. Code: 971, Sharjah City Code: 6 Website: www.aus.ac.ae

Department	Telephone	Fax	E-mail
• **Chancellor's Office**	505-5205	558-5858	chancellor_office@aus.ac.ae
• **College of Arts & Sciences**	505-5412	558-5067	docas@aus.ac.ae
• **Comptroller**	505-5185	505-5190	finance@aus.ac.ae
• **Continuing Education Center (CEC)**	505-5023	505-5020	edu_center@aus.ac.ae
• **General Information**	558-5555	505-5200	public_affairs@aus.ac.ae
• **Human Resources**	505-5228	505-5280	hr@aus.ac.ae
• **Information Technology**	505-5119	505-5120	it@aus.ac.ae
• **Library**	505-5252	558-5008	library@aus.ac.ae
• **Office of Admissions**	505-5002	558-5018	admission@aus.ac.ae
• **Office of the Registrar**	505-5006	505-5040	registration@aus.ac.ae
• **Public Affairs**	505-5207	505-5200	public_affairs@aus.ac.ae
• **School of Architecture & Design**	505-5825	505-5800	docad@aus.ac.ae
• **School of Business & Management**	505-5310	558-5065	deanofsbm@aus.ac.ae
• **School of Engineering**	505-5948	505-5979	dosoe@aus.ac.ae
• **Student Accounts**	505-5233	505-5190	finance@aus.ac.ae
• **Student Affairs**	505-5166	558-5024	stud_affairs@aus.ac.ae
• **University Health Services**	505-5699	505-5690	clinic@aus.ac.ae
• **University Services**	505-5223	558-5009	university_services@aus.ac.ae
• **Vice Chancellor's Office**	505-5208	505-5150	vcaa@aus.ac.ae


THE AMERICAN UNIVERSITY OF SHARJ

Overview

Introduction

The American University of Sharjah (AUS) admitted its first students and began classes in the fall of 1997. Modeled on US institutions of higher education, AUS is the first comprehensive university of its kind in the Gulf. AUS is officially licensed by the Ministry of Higher Education and Scientific Research of the UAE to award degrees in 22 fields of study.

While Arabic is the official language of the United Arab Emirates, the language of instruction at AUS is English. All classes and administrative functions are carried out in English.

The university facilities have been designed to accommodate 4000 students. Baccalaureate degrees are offered in over twenty majors by the faculty of the College of Arts and Sciences and three schools: Architecture and Design, Business and Management, and Engineering. The major programs of study are all described in this catalog.

The American University of Sharjah has succeeded in building a multicultural university that brings together people from diverse nations and backgrounds. AUS strives to instill in its students the importance of appreciating and understanding diversity, global issues and their own roles in society.

AUS serves students from the Gulf region and around the world by introducing them to a culture of high aspiration and achievement so they may lead productive and meaningful lives. The university is committed to a vision of itself as an independent, coeducational institution based on the American model, but thoroughly grounded in Arab culture. Its aim is to serve the educational needs of the diverse student population represented on campus. AUS is also dedicated to the preservation of the physical environment, free from pollution and degradation. This sense of environmental responsibility is passed on to AUS graduates in order to create ecologically aware citizens.

Islam is the official religion of the state and Arab Islamic culture predominates in the UAE. The nation is also distinguished by its tolerance toward its large expatriate communities, which comprise diverse nationalities, cultures and religious beliefs. Following in this spirit of understanding and acceptance of all peoples, AUS admits students solely on the basis of their academic qualifications regardless of race, color, gender, religion, disabilities, age or national origin. The university's mission is to create a multicultural, international academic community in order to prepare its students to become lifelong learners equipped to adapt to the needs of our changing world in the new millennium.

In keeping with its mission, AUS provides students with an education that will enable them to comprehend the dynamism and complexity of contemporary global processes. Through the integration of liberal studies and professional education, students are given both breadth of knowledge and specialization in their chosen fields. Education at AUS runs the gamut from art, poetry and religions from past civilizations to the latest skills and technologies of today's information age. These are all presented to students in order to produce leaders of the future with a firm understanding of how society has reached its present state.

The university also gives its students a cultural and educational foundation that benefits them as they strive towards roles of leadership in professional careers and service. The combination of traditional and innovative teaching methods provides an educational environment in which students can realize their individual potential and pursue their future goals.

AUS is ready to meet the challenges inherent in preparing its students for life in the age of electronic communications, global economies, social pluralism and political interdependence. The university's mission will be met as it begins the new century in pursuit of excellence in turning out the citizens of tomorrow.

Buildings and Grounds

The American University of Sharjah is situated in University City, a 1640 acre educational complex, located 10 miles (15 kilometers) from the center of Sharjah and at a short distance from both the Sharjah International and the Dubai International Airports. University City also includes the University of Sharjah and the Higher Colleges of Technology.

Leading up to the campus of the American University of Sharjah is a three-mile (4.7 kilometer) grand boulevard flanked by chandelier lampposts, palm trees, plants and grass. Dividing the broad boulevard is an esplanade beautifully landscaped with colorful beds of flowers.

The center of the American University of Sharjah campus comprises eight academic buildings, six of which flank a large plaza in front of the Main Building. The stunning architecture of the domes and arches of the main administrative building and academic buildings is accentuated with graceful Islamic motifs. The campus also includes eight student residence halls, six for men and two for women, as well as a large sports complex and a student center. Faculty housing complexes are also located on campus.

The Main Building

The Main Building houses the offices and Majlis of His Highness, the Founder and President of the University, Sheikh Dr. Sultan Bin Mohammed Al Qassimi.

It also includes the offices of the Chancellor, the Vice Chancellor, the Director of Admissions, the Registrar, the Continuing Education Center (CEC) and other administrative units. The building has a restaurant and a coffee shop for faculty and staff as well as a VIP dining room. Most significantly, the building houses a state-of-the-art university library. In the rear of the Main Building is a 946-seat auditorium that features theatrical, dance and musical performances in addition to symposia and other public events. The building also has two smaller lecture halls of 280 and 150 seats that feature similar activities. The Campus Bookstore, the University Post Office, a pharmacy, and a bank are located on the ground floor of the Main Building.

The Academic Buildings

Eight academic buildings are located on both sides of the central plaza surrounding the Main Building. The academic buildings house classrooms and lecture halls of various sizes, science and computer laboratories, workshops, studios and dark rooms as well as offices for faculty.

The City of Sharjah

The location of the university also serves its mission. Sharjah is situated strategically between the Far East and the West, between Africa and Asia. Straddling the breadth of the UAE, the emirate of Sharjah has beautiful beaches on the shorelines of both the Arabian Gulf and the Gulf of Oman. Its landscape varies from level plains to rolling sand dunes and mountain ranges. Today, as in ancient times, Sharjah is a global trade center.

Modern Sharjah is a city of learning and the arts as confirmed by its designation, in 1998 by UNESCO, as the Cultural Capital of the Arab World.

This context facilitates the university's intention to be an academic center at the intersection of ancient cultural traditions and contemporary intellectual currents.

The city of Sharjah boasts ten museums with splendid collections of artifacts and art objects as well as exhibitions in science and natural history. These institutions are sites for field trips, research and possible internships. Sharjah hosts many cultural festivals, programs, educational conferences, fairs and economic expos. These resources permit American University of Sharjah students to broaden their formal

education in a way not possible elsewhere in the region.

On-Campus Services

Campus Bookstore

Located on the ground floor of the Main Building, the Campus Bookstore meets many of the needs of AUS students. Its many items include: all required textbooks, various other categories of books, art supplies, stationery, notebooks, gifts and many other items students find essential. An electronics shop that sells a wide range of products, such as computers and accessories, cameras, sound systems, etc. is located in the Student Center.

Dining Services

The university campus provides a student dining cafeteria and a coffee shop both adjacent to the Student Center. The student cafeteria offers various hot meals and a salad bar. The coffee shop offers sandwiches, snacks and beverages. Most residence halls are equipped with kitchenettes, including a refrigerator and hot plates, in addition to vending machines containing snacks and beverages.

Parking and Transportation

Parking lots are provided on university grounds for faculty, staff and students free of charge. Vehicles must be registered with the Public Relations Office and must display a valid AUS parking sticker on the windshield. These permits are issued once the vehicle is registered. Visitor parking is also available in the university parking lots.

AUS also offers a bus shuttle service between the student residence halls and other areas of campus. Students wishing to travel off campus may use the university services, which provide transportation to the cities of Sharjah, Dubai, Abu Dhabi and Al-Ain.

University Post Office and Mail Service

AUS provides a full-service post office on campus. All mail intended for university offices and for those residing on campus should be addressed to

American University of Sharjah
P.O. Box 26666
Sharjah, UAE

Mail is distributed daily to all university offices by the University Post Office. The post office also maintains individual post office boxes for the university community.

Travel Office

Located in the Main Building, the Travel Office offers an efficient and cost-effective program designed to assist all AUS students, faculty and staff. The role of the office is to handle all travel arrangements and negotiate the most favorable rates.

Copy Center

The AUS Copy Center is located on the ground floor of the Main Building. The copy center serves faculty, staff and students by providing a variety of quality and reasonably priced document reproduction services. Besides copying, the center also offers: professional binding, lamination, stapling and other related services.

University Health Center (UHC)

The University Health Center (UHC) provides primary health care to all AUS students, faculty and staff and their dependents. This health service includes 24-hour accident and emergency care and depending on the severity of the illness, patients are referred to the government or private hospitals for further treatment. An ambulance service is available to deal with emergencies on campus. Great emphasis is placed on making the campus a healthy and safe place to study, work and live.

Health Services

* Primary Health care to students, administrative staff, faculty and dependents (including 24-hour emergency care to residence halls and other campus residents). Consultations by Internists, General Practitioners, Dentist, Dietitian, Clinical Therapist, include basic examination and basic medications.
* Basic investigations - blood sugar, blood grouping, sugar/protein in urine, ECG, pulmonary function test, Sonography.
* Preventive care including vaccinations and immunizations.
* Follow-up treatment, observation and referral to specialists
* Counseling/Psychotherapy services for a wide range of emotional and psychological disorders (this service is confidential and voluntary)
* Diet Counseling services
* Pre-registration check-up for students
* Pre-employment check-up for faculty and administrative staff
* Group medical check-ups for U.A.E. residency purposes, in cooperation with the Ministry of Health
* Blood tests and vision tests for driving licenses
* Assistance in advising and dealing with medical insurance coverage
* Life and Group Medical Insurance for employees
* Group Medical insurance for students
* Referrals to outside specialists or insurance network doctors
* Overseeing the safety in the various university labs and buildings - Chemistry, Physics, Engineering, Sports Complex, Leisure Centers, Day Care Center and Residence Halls
* Overseeing cleanliness and hygiene in the cafeterias
* Dental services as per AUS Plan for faculty, staff and dependants.
* Health Education - self care, first-aid and disease/accident prevention
* Fitness Tests and Certification - Sports
* Pharmacy on campus.

Health Insurance Plan for Students
As part of the registration procedures, every student must enroll in one of the two following health insurance plans:

Plan I
(Compulsory for AUS-sponsored students, but optional for others who are officially enrolled in health insurance

plans with their families)

Benefits include:

* Full medical and hospitalization insurance up to AED 50,000 for hospitalization and AED 7,000 for outpatient expenses
* Coverage throughout the UAE, not only on campus
* 15% co-pay on medicines
* Dh. 25/- for consultation of outside specialist.
* Health services at the University Health Center on campus (as in Plan II)

Plan II

(Compulsory for all students who are not enrolled in Plan I)

Benefits include the following health services provided at the University Health Center on campus:

* Basic Primary care - Consultation by- Internist, GPs, Dietitian, Dentist, includes examination and medication.
* Basic investigation - Blood Sugar, Blood grouping, Sugar/protein in Urine, ECG, Pulmonary function test, Sonography.
* Free emergency dental services

* Dental services as per AUS Plan - 'Schedule C'
* Emergency care & first aid - 24-hours to dorms and campus residents.
* Ambulance services - 24-hours
* Pre-registration check-up
* Vision and blood tests for driving license purposes
* Fitness test and fitness certification for sports
* Follow up care
* Referral to insurance network providers
* Pharmacy on campus (insurance network)

The AUS Clinic - Staff & Department Particulars.

The clinic is staffed with a highly qualified medical team, comprised of an internist, two general practitioners - one with pediatric experience, a dentist and an assistant dentist, a psychologist, a nutritionist, a charge nurse and two staff nurses. The clinic is equipped with the following:

* All basic medical equipment and medications
* ECG machine to monitor heart ailments
* Nebulizers for respiratory problems
* Respiratory Function Test (Spirometer)
* Glucometers - to check blood sugar levels
* Ultrasound
* Observation room (day care) to closely monitor patients
* A fully equipped dental clinic (with latest equipment - digital x-ray, intra-oral camera, etc.)
* Fully equipped ambulance with emergency team.

Health Education Programs

As part of an educational institution, the UHC plays an active role in educating the university community and promotes on-campus health and wellness activities throughout the academic year. The UHC programs include lectures and awareness campaigns on health related issues such as:

* First aid training and CPR courses
* Seminars on substance abuse
* Mental Health Workshops
* Newsletter on health related issues

Athletics and Recreation

The American University of Sharjah has a brand new sports complex that caters to the needs of nearly all athletic interests. The indoor facilities of this complex include: an olympic-size swimming pool, a fitness center and various athletic courts such as: basketball, volleyball, tennis and squash. Outdoors, next to the sports

complex, one can find athletic fields, basketball, volleyball and tennis courts in addition to a new football field. The university has an intramural sports program that serves as an exciting complement to students' academic, social and cultural education. Involvement in intramural sports activities is a wonderful opportunity for students to make new acquaintances, develop new friendships and enjoy the benefits of physical activity and exercise.

University Resources

The University Library

The AUS library occupies the third floor of the Main Building. The library's collection is growing by approximately 15,000 entries per year and is comprised of materials to support the curriculum and the general information needs of AUS. The majority of the library's holdings are in English; however, there are also materials available in Arabic. The library is student-oriented and provides group study rooms, quiet study areas and access to computers. An online catalog system can be used to search for library materials from any location on campus. Using the library website, students and faculty have access to a number of on-line periodical indexes, full text journals and magazines. The library utilizes a computer classroom where students are taught how to use library resources. The library works in conjunction with all parts of the university in order to provide academic resources for all classes taught at AUS.

Computer Laboratories

AUS maintains a variety of specialized computer laboratories that are available for all students. Various training courses are offered throughout the academic year, targeted at helping members of the university community (students, faculty and staff) utilize the computing resources.

The Information Technology Department (ITD) is at the center of AUS's computer needs. The university's computer network uses fiber-optic cables that interconnect the entire campus, including the residence halls and faculty housing. ITD enables the whole campus to benefit from this system. ITD serves the computer related administrative, instructional, technical and research needs of students, faculty and staff. ITD maintains a campus-wide network and acts as the university's gateway to the Internet for academic purposes.

Science and Engineering Laboratories

The Science and Engineering Programs are equipped with state-of-the-art laboratories and equipment. Chemistry and chemical engineering laboratories are equipped with standard chemical instrumentation, including: balances, centrifuges, pH-meters, spectrophotometers and chromatographic equipment and special labs for polymer chemistry. The physics laboratories are supplied with all the standard equipment and the latest electronic technology. The biology laboratory will be equipped with the latest in binocular microscopes. All of the necessary sample slides and other equipment will be ready for thelaboratory part of the general biology course. Computer, civil, electrical and mechanical engineering laboratories and workshops, located in the engineering buildings, are also supplied with modern equipment to complement the high quality curricula designed for educating engineers of the future.

Architecture and Design Digital Studios

The School of Architecture and Design uses the Macintosh operating system in its digital classrooms and studios. Basic computer instruction is given in the digital classrooms. Second year students benefit from personally assigned workstations in digital studios. Multimedia, video and sound equipment are featured in the Advanced Digital Laboratory.

Language Resource Center

The English Language Resource Center is located in the Languages Building. The center can serve 25 students simultaneously using audio, video, slides and computer-assisted instruction. State-of-the-art computerized teaching labs provide interactive learning in English and will include other languages in the future.

Centers for Learning Enhancement

The American University of Sharjah offers several special programs through a variety of departments that students can use in order to help them with their studies. The goal of these centers is to create an environment that supports the learning endeavors of AUS students. In them, students gain the skills and insights they need to meet educational challenges and thrive in their life and learning. The centers are all program specific and students should contact the departments for information about how they may utilize the following programs:

* General chemistry tutorial sessions
* Math Lab Learning Center
* The Physics Clinic
* The AUS Writing Center
* Accounting Lab Learning Center
* The Economics Tutorial Center

Career Advising and Placement Services

Career Advising and Placement Services at the American University of Sharjah helps students and graduates in their search for internships and employment. The professional staff at the center provides assistance in developing career objectives and strategies for exploring career opportunities. The center organizes career development workshops, corporate briefings and employment fairs in order to facilitate interaction between potential employers and AUS students and graduates. The center is also developing an up-to-date electronic database of employers in the UAE and the Middle East. The database will be available to all students on campus.


FILA

Admissions, Registration and Degree Programs

Admissions

The American University of Sharjah places particular emphasis on quality education. Applicants are considered on the basis of their qualifications regardless of race, color, gender, religion, disabilities, age or national origin. The most qualified candidates will be selected to fill the places available in any school or college.

The university requires regular attendance at all classes, lectures, studios, laboratory sessions and seminars. Pursuing one's education through correspondence or by merely passing university examinations is not permitted.

The Office of Admissions is responsible for the admission of students to any division of the university. All inquiries, requests for application forms and subsequent correspondence should be addressed to:

American University of Sharjah
Office of Admissions
P.O.Box 26666
Sharjah, United Arab Emirates
E-mail: admission@aus.ac.ae

General Requirements for Admission to AUS

Every applicant is required to submit the following documents:

1. An application for admission - every item in the application must be filled in
2. A recognized secondary school certificate
3. Four recent photographs
4. A photocopy of identity card or passport
5. A non-refundable application fee of AED 150
6. Test of English as a Foreign Language (TOEFL) score: Applicants must score 173 (minimum) on the International TOEFL in order to be admitted to a specific school. Scores are only valid for two calendar years. Students who do not attain the minimum score, but who otherwise meet AUS admission standards, will be admitted to the Intensive English Program (IEP) at AUS. They must study for at least one semester in the program, and score the required 173 in TOEFL to be eligible to matriculate into their chosen field of study.

Note: AUS TOEFL code is 0526

Procedure for Applying

There are three main types of admission procedures: early, regular or transfer. Regardless of the type of admission, all applicants must submit all documents needed to complete the general admission requirements.

Early Admission
A student in his or her final year of secondary school may apply for early provisional admission by submitting official transcripts from at least the two years previous to the final year of secondary school. Admission offered to those who apply early is not considered final until a student submits a recognized and official secondary school certificate, or equivalent, showing the successful completion of a secondary education and all items as requested in the applicants letter of admission.

Students are not allowed to register for classes until the admissions process has been completed.

Regular Admission
Students who have completed their secondary school education, and have a secondary school certificate, can apply under the regular admission procedure. To do so a student must submit a recognized and official secondary school certificate, or equivalent, and the grades of the last three years of secondary schooling showing grade average and class rank. Students who took official secondary school exit exams must provide certified documents of their results.

Deadlines for applying for Regular Admission

All applications must be on file in the Office of Admissions by the following dates:

Fall Semester	**by August 15, 2001**
Spring Semester	**by January 2, 2002**

Admission as Transfer
AUS approves, in principle, the admission of transfer applicants. Candidates transferring from institutions of higher education are eligible for consideration for admission subject to the following conditions:

1. They are transferring from a recognized institution of higher education and have successfully completed one (1) or more semesters in that institution
2. Prior to their admission to the institution from which they are transferring, they met the requirements for admission to AUS
3. They meet the English language proficiency requirements
4. They submit official transcripts of their high school and college/ university records along with the syllabi and descriptions of courses they seek to transfer

All transfer applicants are required to submit their official transcript of record together with the syllabus and course descriptions for courses they seek to transfer. In some programs, students may be required to submit samples of their work, assignments and examinations. Students who seek transfer credits for studio courses are advised to also provide a portfolio of completed coursework in photographic, digital or original format. The appropriate academic division makes the

decision regarding which credits are awarded.

Depending on the university the student is transferring from, transfer applicants may be given transfer credit for courses required in their majors if they obtained grades of not less than a B (3.0) in those courses. For courses that are not required by the major, transfer credits may be given if the grades received were not less than a C (2.0).

A maximum of 75 transfer credit hours will be accepted from four-year colleges and/or universities and a maximum of sixty credit hours will be accepted from two-year colleges.

Deadlines for Admission as Transfer Student

All transfer applications must be on file in the Office of Admissions by the following dates:

Fall Semester *By August 7, 2001*

Spring Semester *By December 26, 2001*

Visiting Students
A visiting student is one who is not formally admitted to the American University of Sharjah but is allowed to take courses at the university. A visiting student must submit a Visiting Student Application (obtainable from the Office of the Registrar), an official university transcript, and a letter of good standing to the Office of the Registrar. Students studying at universities outside the USA must also submit their TOEFL results. If admission is approved, registration is done with the Office of the Registrar pending available seats. Normally a visiting student is allowed to register as a visitor for not more than one academic year.

Applicants with Disabilities
Depending on available facilities, the university provides special services to applicants with certain disabilities. Those who need special services are requested to contact the dean of Student Affairs at AUS. This information will be treated confidentially.

Readmission
A student in good standing whose studies at the university are interrupted for no more than two semesters must submit a formal request for readmission to the Office of the Registrar. This must be done at least one month before the beginning of the semester for which the student wishes to be readmitted.

Students requiring visas should apply at least one month before the above deadlines.

Admission is valid only for the semester for which a student applies. If an applicant is granted admission for a certain semester and fails to register, the application may be reconsidered, upon request, for the following semester only.

Recognized Secondary School Certificates

Secondary school certificates are awarded either by ministries of education or by private schools and institutions. AUS recognizes certificates awarded by ministries of education. However, some countries award two levels of secondary school certificates. In this case, the university recognizes the higher certificate. The university accepts certificates awarded by private secondary schools that are recognized by their host country. The university also accepts certificates awarded by recognized qualification authorities, international boards and national boards.

Examples of Secondary School Certificates
The following is a list of certificates and corresponding levels of performance commonly required for admittance to AUS. These certificates and levels of achievement serve as guidelines for admission to AUS and may differ from other institutions or the standards that are generally accepted in an applicant's native country. The university may consider other of types of secondary school certificates.

1. General Secondary School Certificate - Arts or Science Track: Must have a minimum average of 70% in best two years of secondary education
2. International Baccalaureate (IB): Must complete any six subjects, with at least three at the higher level. The School of Engineering requires mathematics or physics at the higher level
3. Lebanese Baccalaureate: Completion of Part II required
4. French Baccalaureate or equivalent: Completion of Part II required
5. Pakistani Board(s) Certificates: Higher Secondary School Certificate (Part II)
6. Indian Board (s) Certificates: Senior Secondary School Certificate (12th Standard)
7. Iranian Certificate: Completion of pre-university year
8. German Abitur: Minimum average of four (4)
9. American-style High School Diploma: Minimum 2.0 GPA on scale of 4.0
10. IGCSE, GCSE, GCE:
    i. Minimum of 11 years of schooling
    ii. Minimum of eight (8) different subjects with at least a grade of C for each subject
    iii. Students who complete advanced supplementary (AS-level) and advanced level (A-level) are given preference in admissions considerations.
    iv. Only subjects classified as academic will be accepted for admission consideration.

For admission consideration, secondary school grades must meet the minimum established standards as set by the university.

Advanced Standing
Students who achieve a minimum grade equivalent to B in the IB Higher Level, GCE A-Level, the Lebanese Baccalaureate, the French Baccalaureate, the German Abitur or the American Advanced Placement tests may be awarded course credits.

Program Admission Requirements

Types of secondary school certificates and program admission requirements admit to only the following:

Literary Certificates

1. College of Arts and Sciences, except for computer science and environmental sciences majors
2. School of Architecture and Design, except for architecture and interior design majors
3. Any major offered by the School of Business and Management

Scientific Certificates
Admit to any of the three schools or the College of Arts and Sciences.

Technical & Vocational Secondary School Certificates
Highly motivated and academically qualified students may be admitted to a major that corresponds to the nature of the technical or vocational secondary school program. For example, a holder of a technical secondary school certificate in electricity may apply to the electrical engineering program.

Placement Tests
All freshmen applicants who attain the minimum score or higher on the TOEFL are required to sit for placement tests appropriate for their intended majors as shown in the chart below:

Major	English	Arch. Math	Science/ Eng'g Math	Bus. Math	Physics
Engineering (any major)	Yes	No	Yes	No	Yes
Business (any major)	Yes	No	No	Yes	No
Architecture / Interior Design	Yes	Yes	No	No	No
Multimedia / Visual Communication/ Heritage Management / Design Management	Yes	No	No	Yes	No
Computer Science / Environmental Sciences	Yes	No	Yes	No	Yes
All other majors in College of Arts and Sciences	Yes	No	No	Yes	No
Undeclared Major	Yes	No	*	*	*

* The appropriate placement test must be taken before a student can enroll in the first year freshman course. No student is allowed to sit for the placement test more than once for any given admissions session.

Registration

Orientation Program

Prior to registration, the Office of Student Affairs organizes an orientation program for all new students to acquaint them with university life. This is achieved through campus tours and visits, meetings, lectures, demonstrations and other relevant activities. For more information refer to the section in this catalog on the Office of Student Affairs.

Registration

A registration guide is distributed to every student before the registration period begins by the Office of the Registrar. The guide divides students into various groups and indicates the registration steps along with the place, date and time for each step. The Office of the Registrar also publishes a list of course offerings that is posted on the AUS web page as well. Students are urged to carefully read the registration guide and the list of courses offered each semester.

Registration involves three main steps:

1. Advisement and consultation

2. Selection and registration of courses

3. Payment of fees

Registration in the student's absence or by way of proxy is not permitted. Registrants are urged to make sure that all documents required for finalizing their admission, particularly those indicated in the letter of admission, are submitted to the Office of Admissions before registration begins.

Change of College or Major

Students seeking a change of major within their college/school or a change of college/school must pick up the appropriate form from the Office of the Registrar. Requests for a change of major of school/college should be submitted to the Office of the Registrar at least two weeks before the registration time of the affected semester.

Change of Major (within the college/school)
This category refers to a change of major within a school or college. To be eligible for transfer, the student must meet the requirements for admission to the new major. A student seeking transfer must submit the transfer request form to the new department. The new department makes the decision on the student's admission and forwards it to the Office of the Registrar.

Transfer from one school or college to another
A student transferring from one school or college to another within the university is considered as a new student by the school or college to which the transfer takes place. Thus, the student must submit the change of college/school request form to the Office of the Registrar. The Office of the Registrar will then forward this request along with the student's transcript of record to the school/college the student is seeking admission to for approval.

Auditing Courses

Please refer to "Audit Registration" in the "Non-Degree Study" section.

Drop and Add

Students are allowed to drop and/or add courses during the first week of fall and spring classes. Such changes in courses are not inscribed in student transcripts. Students interested in dropping or adding courses should first consult with their respective advisors.

Withdrawal from Courses

Students are permitted to withdraw from courses after submitting the appropriate withdrawal form. However, maintaining a minimum of 12 credits is required. Withdrawal from courses must occur no later than the end of the 10th week of classes. A grade of W will be recorded on the transcript for the course from which the student has withdrawn.

As of the 11th week of classes and up to the last day of classes, a grade of WF will be recorded for those who withdraw from a course. The grade points of WF is 0.00, and is used in the calculation of the GPA.

Withdrawal from the University

In the event a student withdraws from the university, the following refund schedule will be applied:

	Refund
Before the first day of classes	90%
During the first week of classes	70%
During the second week of classes	50%
During the third week of classes	25%
After the third week of classes	0%

University Divisions and Undergraduate Degree Programs

College of Arts and Sciences

The College of Arts and Sciences offers programs leading to the following degrees:

* Bachelor of Arts in Communication
* Bachelor of Arts in Economics
* Bachelor of Arts in English Language and Literature
* Bachelor of Arts in International Studies
* Bachelor of Arts in Public Administration
* Bachelor of Arts in Translation and Interpreting
* Bachelor of Science in Computer Science
* Bachelor of Science in Environmental Sciences

Please refer to the graduate section of the catalog for a listing of graduate programs.

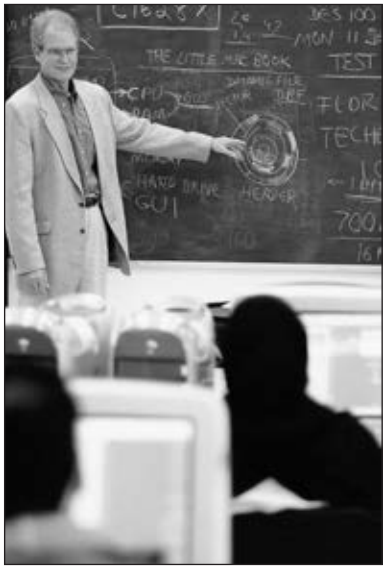
School of Architecture and Design

The School of Architecture and Design offers programs leading to the following degrees:

* Bachelor of Architecture
* Bachelor of Interior Design
* Bachelor of Science in Design Management
* Bachelor of Science in Heritage Management
* Bachelor of Science in Multimedia Design
* Bachelor of Science in Visual Communication

School of Business and Management

The School of Business and Management offers programs leading to the following degrees:



* Bachelor of Science in Business Administration with possible concentrations in accounting, finance, management, marketing and management information systems
* Bachelor of Science in Finance
* Bachelor of Science in Management Information Systems

Please refer to the graduate section of the catalog for a listing of graduate programs.

School of Engineering

The School of Engineering offers programs leading to the following degrees:

* Bachelor of Science in Chemical Engineering
* Bachelor of Science in Civil Engineering
* Bachelor of Science in Computer Engineering
* Bachelor of Science in Electrical and Electronic Engineering
* Bachelor of Science in Mechanical Engineering

Detailed information about concentrations within majors are given in the section of the college/school offering the major.

University Degree Requirements

Students are governed by the following minimum requirements for the bachelor's degree. Each specific degree program has further major and major-related requirements that are detailed in the respective teaching unit sections.

Caution: The course offerings and requirements of the American University of Sharjah are under continual examination and revision for improvement. This catalog is not a contract; it merely presents the offerings

and requirements in effect at the time of publication and in no way guarantees that the offerings and requirements will not change. The university specifically reserves the right to change requirements for any major during any particular year. The individual student assumes full responsibility for compliance with all academic requirements. The graduation requirements for any individual student are determined exclusively either by the catalog that was effective when the student joined AUS or (and not both) the catalog effective for the academic year when the student graduates.

Credit Hours and Residence Requirements

All bachelor's degrees require completion of between 120 to 172 credit hours of course work. Students seeking a bachelor degree must complete the last 21 credits immediately preceding graduation (42 credit hours for students seeking a bachelor degree in Architecture) in residence at AUS. These should be credits in upper-level courses (300 level or higher)in the student's major.

Overall Grade Point Average

Students enrolled in a degree program must maintain an overall grade point average of at least 2.0 on a scale of 4.0 in order to remain in good standing to graduate. See page 27 for method of calculation.

Major Grade Point Average

In order to be considered in good standing in a major, a student must maintain a major grade point average of at least 2.0 on a scale of 4.0.

Major Requirements

Each student in a degree program must complete at least 36 credit hours in the degree major and in related courses, no fewer than 21 of which must be earned in upper-level courses taken in residence at the American University of Sharjah.

A grade of C- or better is required for each major, major-related or minor course. Course grades lower than C- in the major will have to be repeated or an equivalent course will need to be taken in order to satisfy the major requirement involved.

A studio course completed with a "D" may not have to be repeated if it is part of a "course pair" that allows averaging. An average grade of "C" or better is then required for the "course pair". See requirements listed under individual degree programs.

Declaration of Major

Normally, students declare their academic major by applying to a particular school or college and to a major program within that school or college for admission. If a student is admitted with an undeclared major, he/she must formally choose and declare a major by the end of his/her second year (sophomore year).

Interdisciplinary Majors

In addition to the established major programs, students may opt to construct their own major program leading to a Bachelor's degree in Interdisciplinary Studies. To design and complete an interdisciplinary major, a student must have the approval of three faculty members who represent the various disciplines involved in the interdisciplinary field and the dean of the college/school.

Interdisciplinary major programs must include at least 42 credit hours, including 36 credit hours carefully selected to form an academically sound, unified and well defined program and six credit hours in independent study for a senior thesis. At least 75% of the 36 credit hours must be upper level as defined by the teaching units that offer them.

For permission to undertake an interdisciplinary major, the student applies to the dean of the college/school in which he or she is enrolled. A maximum of 18 credit hours of work completed prior to the semester in which the application is made may be included in the program. The six credit hours of an independent study for a senior thesis must be supervised by the major advisor and must be focused on the program's central concept.

Minors

All minor programs consist of a minimum of 18 credit hours including at least nine credit hours in courses above the introductory level in the discipline. At least nine credit hours of the minor must be taken in residence at the American University of Sharjah.

Specific course requirements for minors are listed under departmental programs. Students should consult their advisors and/or the department about the procedure for declaring a minor. Minors are noted on the student's permanent record (transcript) at the time of graduation. A grade of C- or better is required for each course used to satisfy the requirements of the minor.

Second Field of Study

Students may pursue a second field of study in an area by taking a minimum of 15 credit hours (five courses) in that area. Those courses will be specified by the department offering the second field. A grade of C- or better is required for each course used to satisfy the second field of study.

Free Electives

To satisfy the free elective requirements, a minimum of nine credit hours of free electives must be completed. These free electives can be taken from available courses offered by the university.

A grade of D or better is required to obtain the credit of a course which has been taken to satisfy the free elective requirement, and is not a pre-requisite for another course.

University Graduation Requirements

Every student must successfully complete the following requirements to graduate:

* Arabic heritage requirement
* English language competency

requirement

* Mathematics and/or statistics requirement
* Computer literacy and information access requirement
* Science requirement
* General education requirement
  - Theme course requirement
  - Humanities and/or social sciences requirement

Arabic Heritage Requirement
All students must satisfy the Arabic heritage requirement by passing with a grade of C- or better any one (1) of the following Arabic courses:

* ARA 101 Readings in Arabic Heritage I
* ARA 102 Readings in Arabic Heritage II
* ARA 103 Composition for Native Speakers of Arabic
* THM 201 or THM 202 Arabs and the West: The Andalusian Symbiosis I and II
* Any other Arabic language or literature course with the approval of the dean of the College of Arts and Sciences

Students who transfer to the American University of Sharjah may also satisfy the Arabic heritage requirement by transferring three hours of acceptable Arabic credits with a grade of C (2.0) or better.

English Language Competency Requirement
All students must be able to write with a level of mastery equal to the demands of university course work. In addition, students need to acquire the critical reading and comprehension skills necessary for all their courses.

All matriculating students must take the English Placement Test to determine which COM (communication) course they are to be placed into (001, 101 or 102). To graduate, all students must satisfy the English language competency requirement by completing, with a C- grade or better, 12 credits, level 100 or above, in English/communication courses.

COM 101 (Academic Writing) and COM 102 (Writing and Reading Across the Curriculum) should be completed in the first year (freshman) or before completion of 30 credit hours. Students should complete their 12 credit hours in COM/ENG courses by the end of their second year (sophomore) or before the completion of sixty credit hours.

Students who transfer to the American University of Sharjah may satisfy the English language requirement by transferring up to six credit hours of acceptable English/communication credits and taking an additional six credit hours of English/communication courses at the 200 level or higher.

Students transferring to the College of Arts and Sciences, the School of Business and Management, or to the school of Engineering have to satisfy the COM203 or COM204 requirement at AUS.

A student who receives an exemption from one or two of the required communication courses will be able to take any course outside his/her major to accumulate the credit hours required for completing the degree requirements.

Mathematics and/or Statistics Requirement
All students must have mastery of quantitative reasoning and university level mathematical skills. Students should satisfy this requirement by the end of the second year.

All students must satisfy the mathematics and statistics requirement by passing with a grade of C- or better two courses (six to eight credit hours) in mathematics and/or statistics; at least one course must be in mathematics. These courses should be chosen from the list approved by the college/school of the student's major in consultation with and the approval of the student's academic advisor.

Students who transfer to the American University of Sharjah may satisfy the mathematics and statistics requirement by transferring a maximum of seven credit hours of acceptable mathematics and statistics; at least three of these credit hours must be in mathematics.

Computer Literacy Requirement
All American University of Sharjah students must be computer literate and know how to access informationthrough digital technology. Computer skills are taught within the context of many courses. In addition, students may be required to take additional specific computer courses depending on the requirements of their school or college.

Science Requirement
All AUS students must have university-level knowledge of scientific reasoning and the experimental sciences. Students may satisfy the science requirement by passing any two (2) of the following courses with a grade of C- or better:

* BIO 101 (General Biology I)
* BIO 102 (General Biology II)
* BIO 103 (Introduction to Life Sciences)
* CHM 101 (General Chemistry I)
* CHM 102 (General Chemistry II)
* CHM 103 (Chemistry and Everyday Life)
* CHM 105 (Chemistry and the Environment)
* ENV 101 (Introduction to Environmental Sciences)
* PHY 100 (Conceptual Physics)
* PHY 101 (General Physics I)
* PHY 102 (General Physics II)
* PHY 103 (Astronomy)
* PHY 104 (Physics for Architecture)

Students who transfer to the American University of Sharjah may also satisfy the Science requirement by transferring up to six credit hours of acceptable science courses.

General Education Requirement
Students must satisfy the general education requirement by completing at least 15 credit hours or five (5) courses in the humanities and social sciences curricula with a grade of C- or better. Students must take four of the courses (12 credit hours) from the thematic sequences courses. Two of these courses must be on the same theme. The thematic courses are designed around themes that aim to connect history, culture, civilizations, nature and peoples of different times and places. The remaining credit hours (three or six) must be taken from courses in the humanities (H) and social sciences (SS) or other designated courses as listed below. Three credits are required if an Arabic course is taken to satisfy the Arabic heritage requirement, and six credits are required if the Arabic heritage requirement is satisfied by a designated theme course.

Students who transfer to the American University of Sharjah may also satisfy the General Education requirement by transferring up to 15 credit hours of acceptable general education courses.

General education subject areas and courses

* Arabic literature (H)
* Cultural studies (H)
* Economics (SS)
* English language (H)
* English literature (H)
* Geography (SS)
* History (H)
* Philosophy (H)
* Political science (SS)
* Psychology (SS)
* Sociology (SS)

As well as these specific courses: MUS 101, DES 121, DES 122, HRM 201 and HRM 202

Non-degree Study

Non-degree status is the designation used for students who are enrolled in credit courses at the American University of Sharjah but are not currently pursuing a degree program. Some students begin their studies in non-degree status while others do not wish to pursue a degree program. To be considered for admission, a student must submit a regular application with the required documents, specifically in terms of grades and TOEFL scores, to the Office of Admissions on the dates assigned for regular full-time students. An applicant should hold a secondary school certificate and obtain the approval of the pertinent dean. Credit earned in courses at the American University of Sharjah in non-degree status may be applied to a degree program in one of the schools or in the College of Arts and Sciences in accordance with the guidelines below.

Enrollment Criteria
Non-degree students may enroll in any university course for which they have the necessary academic background and qualifications. Courses are open to

* High school graduates
* Students in good standing at other accredited colleges or universities
* Students with undergraduate degrees (bachelor's degrees)

American University of Sharjah students who have not completed their degree program and students who have been dismissed from the university in the previous twelve months are not allowed to register with non-degree status.

Registration
Non-degree students must register for courses through the Office of the Registrar. Information on university degree programs and non-degree programs is available at the Registrar's Office. Non-degree students will be given access to computer laboratories but not a computer account number. They will also have library privileges but no access to the sports complex. The fees are 1500 Dirhams per credit hour.

In courses with enrollment limits, priority is given to students pursuing degree programs.

Academic Standards and Regulations
Non-degree students are held to the same academic standards as degree students. The student must maintain a 2.0 GPA.

Transferring from Non-degree to Degree Status
Students wishing to transfer from non-degree status to degree status may apply to have their non-degree credit hours applied toward a degree program. To apply to a degree program, students must have completed 15 credit hours with a cumulative GPA of 2.0 and submit the appropriate application forms and supporting documents to the Office of Admissions.

If admitted to a degree program, non-degree students are entitled to request transfer of their credits to the regular university program they wish to join. The university rules and regulations governing transfer courses and credits will apply.

Audit Registration

A person who has been admitted to the university, who wishes to attend a class but does not wish to participate, take examinations, receive a final grade or receive credit for the course may register, with the permission of the instructor, as an auditor in the class. An auditor is not required to take active part or to pass examinations. The instructor may establish standards of class participation and attendance for auditing that must be met if a student is to remain in audit status.

Changes to or from audit status must be made before the last day to add a course. Tuition and fees for auditors are the same as those for students registering for credit. In courses with enrollment limits, priority is given to students pursuing degree programs.

Tuition and Expenses

Tuition Fees Applicable During the Academic Year 2001-2002

* College of Arts and Sciences:	Dhs. 17,940 per semester for all majors except computer science Dhs. 20,500 per semester for majors in computer science
* School of Business and Management:	Dhs. 20,500 per semester
* School of Architecture and Design:	Dhs. 20,500 per semester
* School of Engineering:	Dhs. 20,500 per semester
* Intensive English Program:	Dhs. 17,500 per semester

Student Activities Fee

All students

Dhs. 100 per semester

Health Insurance Fee

Plan I (compulsory for AUS sponsored students and optional for others)

Dhs. 400 per semester

Plan II (compulsory for all students

who are not on Plan I)
Dhs. 160 per semester

(Refer to the section on University Health Services for descriptions of the benefits of the two plans)

Other Expenses

Costs of textbooks and supplies are the responsibility of the student.

Third-year students in the School of Architecture and Design are required to provide their own laptop computer.

Late Registration Fees

An additional fee of Dhs. 200 is charged for late registration.

Student Housing Fees

AUS has eight campus residence halls (six for men and two for women). Students who secure visas to the United Arab Emirates through the university are required to reside on campus. For others, living on campus is optional. Students should contact the Office of Student Affairs for information regarding individual cases. The housing fees are as follows:

Private **Dhs. 6,500 per semester**
(Single occupancy with private bath and kitchenette)

Semi-Private **Dhs. 5,250 per semester**
(Single Occupancy with a shared bath and kitchenette)

Sharing **Dhs. 3,250 per semester**
(Double occupancy with a shared bath and kitchenette)

Single **Dhs. 3,250 per semester**
(Single occupancy with a common bath and no kitchenette - for men only)

Double **Dhs. 2,100 per semester**
(Double occupancy with a common bath and no kitchenette - for men only)

Internet connection fee (optional):
Dhs. 400 per semester

Note: All fees are due each semester at the time of registration and form an integral part of registration.

Fees for Summer Session 2001–2002

Tuition:
Tuition fees for the Summer Session are calculated at the rate of Dhs. 1,500 per credit hour.

Student activities fee: **Dhs. 50**

Health Insurance Fee

Plan I (compulsory for AUS sponsored students and optional for others)
Dhs. 150

Plan II (compulsory for all students who are not on Plan I)
Dhs. 50

Other expenses: cost of textbooks and supplies are the responsibility of the student.

Late Registration Fees
If available **Dhs. 200**

Student housing fees: three types of rooms are available during the summer session.

Private **Dhs. 2,600**
(Single occupancy with private bath and kitchenette)

Semi-Private **Dhs. 2,100**
(Private room with a shared bath and kitchenette)

Sharing **Dhs. 1,300**
(Double occupancy with a shared bath and kitchenette)

Internet connection fee (optional):
Dhs. 150

Financial Aid

Several types of financial aid are available to full-time AUS students. University funded financial aid is not available in the summer.

Scholarships

The university has some funds available for highly qualified students with limited financial resources. Students may apply for financial aid regardless of their race, gender, religion or national origin. The following is a brief description of the financial aid policy.

Tuition Remission

First-time students with limited financial resources who demonstrate academic excellence by achieving a minimum cumulative grade point average of 85% or the equivalent in the last three years of secondary education may apply for a tuition remission ranging generally between 25% to 55% of the tuition fees. Financial aid applications must be submitted to the Financial Aid Office by August 1st for the fall semester and December 15th for the spring semester.

Full-time students with limited financial resources who have completed a minimum of 12 credits at AUS and who demonstrate academic excellence by achieving a minimum semester GPA of 2.5 and cumulative GPA of 3.0 may apply for a tuition remission ranging generally between 25% to 55% of the tuition fees. Financial aid applications must be submitted to the Financial Aid Office by May 15th for the fall semester and December 15th for the spring semester.

University Merit Scholarship

First-time students who demonstrate academic excellence by achieving a minimum cumulative grade point average of 95% or the equivalent in the final year of their secondary education may apply for the Merit Scholarship. The scholarship granted in this category is 10% of the tuition fees. Scholarship applications must be submitted by August 1st for the fall semester and December 15th for the spring semester.

Chancellor's Scholarship

(Highly competitive)

First time students with limited financial resources who demonstrate academic excellence by achieving a minimum grade point average of 95% or the equivalent in the last three years of secondary education, have outstanding personal qualities and leadership abilities in school and the community, may apply for the Chancellor's Scholarship. The scholarships granted in this category generally range from 75% to 100% of the student's tuition fees. Financial aid applications must be submitted by August 1st for the fall semester.

Family Tuition Grant

For families that have more than one child enrolled simultaneously in AUS, a tuition discount of 25% is given to the second child. When three children from the same family are enrolled simultaneously, the third child will receive a tuition discount of 50%.

Rules for Maintaining Financial Aid

For Enrolled Students

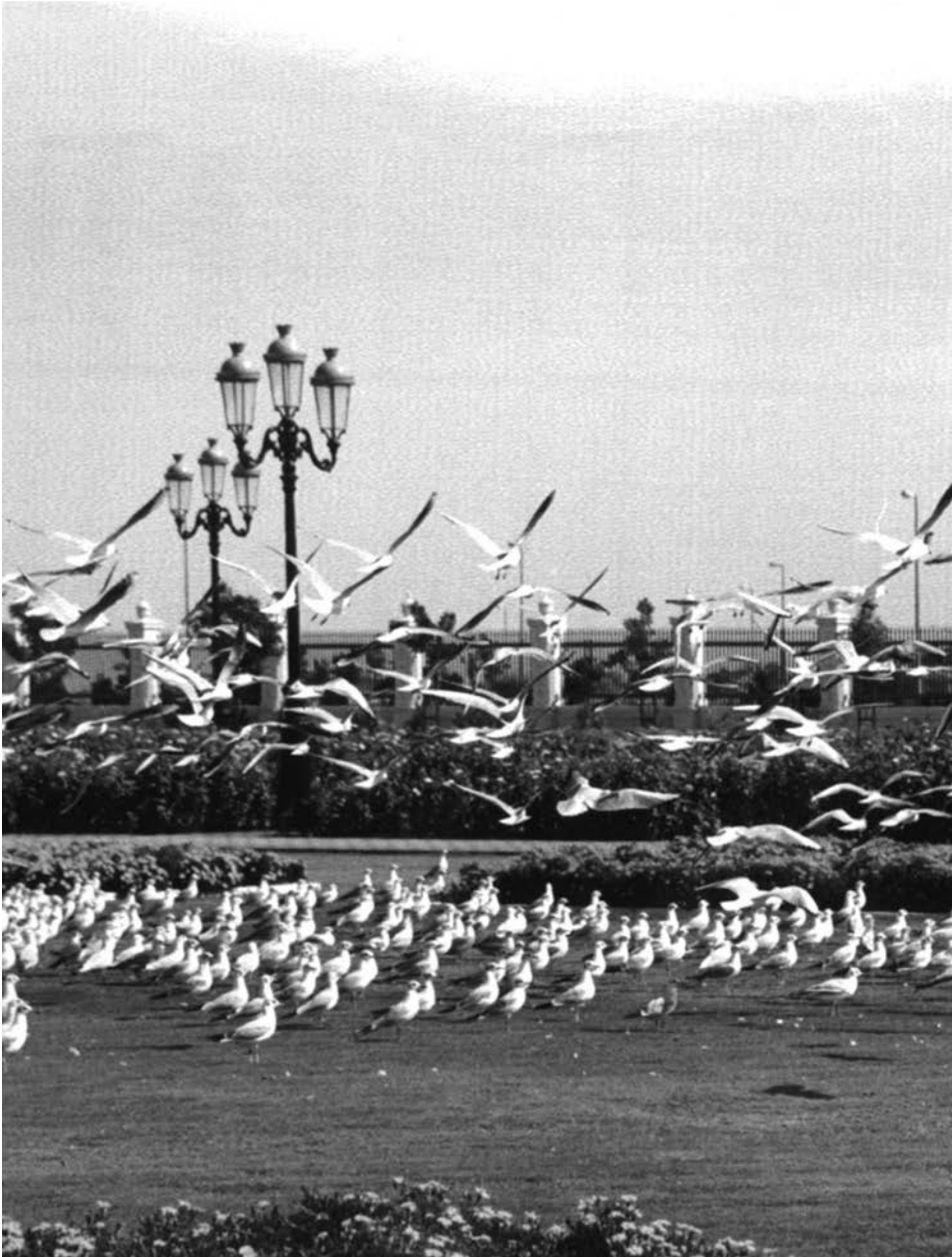
- Minimum semester GPA of 2.5
- Minimum cumulative GPA of 3.0
- Full-time student status

For 'Chancellor's Scholars'

- Minimum semester GPA of 3.0
- Minimum cumulative GPA of 3.3
- Full-time student status

For 'Merit Scholarship'

- Minimum semester GPA of 2.5
- Minimum cumulative GPA of 3.0
- Full-time student status



Academic Regulations

Academic Advising

Academic advising is an essential element of the educational process. The American University of Sharjah requires advisor-student conferences at least once a semester. However, students are responsible for selecting their courses, meeting course prerequisites and adhering to university policies and procedures. The advisor assists the student in obtaining a well-balanced education and in interpreting university policies and procedures. Students may also consult faculty, department or program chairs and deans.

Students are assigned academic advisors who help them in selecting their course of study and in planning their schedules. Their advisors also approve their schedules each semester. The names of advisors will be announced by the departments concerned.

Student Responsibility

Students are responsible for their behavior, academic or otherwise, at the American University of Sharjah. The university expects that students, as mature members of the academic community, will adhere to the highest standards of personal and academic integrity and propriety.

Students should keep their own records of all transactions with the university (registration schedules and forms, grade reports, payment records, etc.). It is also advisable to keep copies of all tests, digital files, papers, and so forth submitted in fulfillment of course work.

Courses and Class Schedules

Course Prefix, Number, Title, Credit Hours and Additional Information

Each discipline or field of study offered by the university is summarized by a three or four letter prefix, followed by a number indicating the level of the course content. Below is an example:
ENG 207 The Beginnings of the Novel (3-0-3)

In this example, ENG is the course prefix (which represents English) and 207 is the course number. This particular course is a second level course in English literature (denoted by the 200 level number). This course is more advanced than 100 level introductory courses such as ENG 105 (Contemporary World Literature) and ENG 107 (Introduction to Genre).

The numbers in parentheses following the title of a course indicate the contact hours and course credit information. Below is an example:

PHY 101 General Physics I (3-3-4)

In this example, the first digit in the parentheses refers to the number of class contact hours per week the course requires, the second digit denotes the number of laboratory or practice hours required weekly, and the third digit refers to the number of credit hours the student will receive upon successfully completing the course.

Courses are offered at the discretion of the department. Students should check with the respective academic departments for that information.

Certain courses also have prerequisites, corequisites and/or other criteria that are noted immediately following the course description.

Course Value

All courses are valued in credit hours. Normally, each credit hour represents fifty minutes of class instruction, 120-180 minutes of laboratory experience a week each semester or two fifty-minute problem analysis and design sessions a week each semester.

Class Periods

Except for laboratory, workshop and specialized design and studio courses, classes ordinarily meet three days a week in fifty-minute sessions or two days a week in 75-minute sessions. The university operates on a five-day schedule from Saturday through Wednesday. The university is closed for the weekend on Thursday and Friday.

Independent reading or research courses, study projects, internships, practicums and similar kinds of study opportunities meet according to the special arrangements of the school or college, department or faculty members concerned.

Course Descriptions and Syllabi

Descriptions of courses currently in the university curriculum are listed by course subject and code per college/ school in another section of this catalog. Non-recurring topics courses are published each semester in the Schedule of Classes. Course syllabi are available from department or program offices.

Course Prerequisites

Many courses above the introductory level require a minimum background of knowledge, as indicated by prerequisite courses cited in individual course descriptions. Titles and numbers are those of the American University of Sharjah courses. Equivalent courses satisfactorily completed at other institutions may also meet prerequisite requirements by transfer credit. Students need to consult the head of the appropriate academic unit for more information. Students are responsible for entering the class with the required competence.

Student Academic Load

A student admitted to and enrolled in a degree program usually registers for 15 to 19 credit hours each semester. The required minimum load for all students is 12 credit hours per semester and the maximum load is 19 credit hours per semester. Under special circumstances, a student with a cumulative average of 3.25 GPA or better, may secure the

permission of his/her dean to register for up to 21 credit hours in any one semester. All credit hours exceeding 18 credit hours will be charged at the rate of 1500 Dirhams per credit hour.

The degree programs have been designed for completion in four years, except architecture which is a five-year program. Many students require additional time in which to complete all graduation requirements.

The minimum graduation requirements for a bachelors degree vary from 120 to 170 credit hours depending on the program of study. Samples of study plans are provided in this catalog for each program. The degree programs have been designed to be completed in four years, except for architecture which is a five year program. However, some students may require additional time.

Official Class Standing

Hours	*Standing*
0-30 credit hours	First Year (Freshman)
31-60 credit hours	Second Year (Sophomore)
61-90 credit hours	Third Year (Junior)
91-120 credit hours	Fourth Year (Senior I)
121-170 credit hours	Fifth Year (Senior II)

Categories of Students

Full-time Students
To be considered full-time, a student must carry a minimum course load of 12 credit hours per semester with the average being 15.

Under special circumstances, the dean of the school or college may allow students to drop below 12 credits during their first semester at the university.

Part-Time Students
Enrollment as a part-time student is restricted to the following:

* American University of Sharjah staff members who are pursuing a degree (approval of the employee's director is required)
* Those who need fewer than 12 credits to complete an undergraduate degree (approval of the academic advisor is required)
* Those who are granted permission by their dean for health or family reasons
* Those who are enrolled as auditing, non-degree, or visiting students

Grading System

The grade point average (GPA) is computed on a four-point scale. The following grading system is used at the American University of Sharjah:

A	equals 4.00 grade points **Excellent**
A-	equals 3.70 grade points
B+	equals 3.30 grade points
B	equals 3.00 grade points **Good**
B-	equals 2.70 grade points
C+	equals 2.30 grade points
C	equals 2.00 grade points **Satisfactory**
C-	equals 1.70 grade points
D	equals 1.00 grade points **Poor**
F	equals 0 grade points **Fail**
WF	equals 0 grade points **Administrative Withdrawal Fail**

Grades not calculated in the grade point average are

I	Incomplete
IP	In Progress
AUD	Audit
EX	Exempt; no credit
TR	Transfer; credit counted
W	Withdrawal
N	No grade

The grade point average is calculated by multiplying the grade point value of the letter grade by the number of credit hours of the course. The result is the quality points that the student has earned in the course. The sum of the quality points of the courses taken are then divided by their total credit hours to obtain the grade point average. The grades obtained in non-credit courses are not included in the computation of a grade point average. Grades of EX, TR, W, and N are not assigned grade point values and are not used in the computation of the grade point average.

University Guidelines for Lateness and Attendance

Attendance and participation in all class, studio, workshop and laboratory sessions are essential to the process of education at the American University of Sharjah. Students benefit from the lectures and discussions with their instructors and fellow students. For this reason, students are expected to attend class regularly. Lateness or absence hinders progress for the individual and the class and affects the student's grade.

University guidelines for lateness and attendance are as follows:

* Any absence may affect the student's grade
* Instructors need not give substitute assignments or examinations to students who miss classes
* Three occasions of lateness count as one absence. Lateness is defined by the instructor
* In the event a student misses 15% of the sessions in a class for any reason, the instructor, with the approval of the dean, may initiate withdrawal of the student from the course. A grade of W will be entered on the student's record if the withdrawal is initiated before the end of the tenth week of class. If the withdrawal is initiated after the tenth week of class, a grade of WF will be entered on the student's record and will be calculated in the GPA

Instructors are to keep attendance records and to draw students' attention to attendance requirements noted in the course syllabus. The specific application of the attendance guidelines is at the instructor's discretion.

Incomplete Grades and Make–Up Examinations

The work for a course must be completed on the day the semester ends. No incomplete grade (I) is given as a final grade in any course unless there is a compelling medical or other such emergency certified in written form by a medical or other professional. In the case of unexcused incomplete work, an "F" grade is given for the missing work with the course grade computed accordingly. Only in exceptional cases (such as the emergencies noted above), with written approval of the instructor, chair and the dean, is a student allowed to make up incomplete work within a period of two weeks from the first day of classes of the next regular semester. An "I" grade pending beyond this time limit will revert into an "F" grade.

It is the responsibility of the student to find out from his/her professor the specific dates by which requirements must be fulfilled. The deadline for the submission of incomplete grades for a course by the instructor is within 72 hours after the date of the make-up examination.

Applications for an incomplete grade are available in the Office of the Registrar.

Freshman Forgiveness

A first year (freshman) student who, during the first two semesters of full-time study, receives a grade of D, F or WF in a course may repeat the course at the American University of Sharjah within the calendar year thereafter or in the next two regular semesters in which the student is enrolled. If the course is not offered at that time, the student may use the option the next time it is offered. No grade is removed from the student's record, but only the grade earned the second time the course is taken is used in calculating the grade point average for purposes of making decisions concerning probation, dismissal and required grade point average for graduation.

The "Freshman Forgiveness" policy relates to probation policy only with respect to the calculation of the student's cumulative average at the end of the semester in which a course has been repeated and a new grade recorded.

The freshman forgiveness rule also applies to transfer students of freshman standing.

Placement on Academic Probation

Students in the Intensive English Program (IEP) will be placed on academic probation at the end of any semester in which their grade point average (GPA) is below (2.0). IEP students on probation will have one semester in which to achieve a GPA (non-cumulative) of 2.0 or higher. If they do so in their subsequent semester, they will be removed from academic probation. Failure to do so will result in dismissal from the program.

Other students are placed on academic probation if at the end of a semester the student's cumulative average falls below C (2.0 GPA).

A full-time student on probation for the first time is allowed to carry a load of five courses with a maximum of 16 credit hours. A full-time student who is on a second consecutive probation may only register for four courses with a maximum of 13 credit hours.

Removal of Probation and Dismissal

Probation will be removed at the end of any semester in which the student passes all courses and attains a cumulative GPA of 2.0. Students on probation are advised to repeat courses in which they have obtained failing grades.

A student may be dismissed if he/she fails to remove his/her probation by the end of the second semester on probation. Actions involving academic probation and dismissal are entered on the student's permanent record and may not be removed.

Repeating Courses

In order to raise one's average or meet graduation requirements, a student may repeat courses which he/she has failed or has received a grade lower than a C-. A required course should not be repeated more than once. The original grade and the repeated course grade will be counted in the calculation of the cumulative GPA.

Readmission after Dismissal

When, in accordance with university regulations, a student is dismissed, consideration for readmission is given only if the student is able to present a record of significant achievements at another acceptable institution of higher

education or at an appropriate work environment for a minimum of one semester. All readmission requests must be approved by the dean of the appropriate school or college.

Study at Another Institution

An enrolled student who plans to take courses at another college or university for transfer credit to the American University of Sharjah must be in good academic standing and must receive prior approval from his or her dean.The "Permission to Take Courses Outside AUS" form is available at the Office of the Registrar. The host institution must be recognized by the ministry of education of the country and/or accredited.

Study Abroad

Students of the American University of Sharjah may study abroad at accredited collegiate institutions or in programs of such institutions. The American University of Sharjah has a special relationship with the American University in Washington, DC. AUS has a similar agreement with Texas A&M University for students in good standing in the School of Engineering.

After consultation with and approval of the student's advisor, department chair and dean, application is made directly to the overseas institution by the student. Transfer credit will be granted on the basis of the transcript from the visited institution.

Permanent Record

A permanent record, reflecting academic achievement, is maintained in the Office of the Registrar for each student who registers at the university.

Disclosure of Student Records

The written consent of the student is officially required to disclose his/her academic record to any individual, institution or party. Exceptions are made for parents, sponsors, authorized AUS officials and in compliance with a judicial order.

Transcripts

Students may obtain transcripts of their academic records from the Registrar's Office. Transcripts will only be released with a signed request from the student concerned. The university will issue only complete transcripts, not parts of the student record. The university will not make copies of transcripts on file from other colleges or universities.

Names on Diplomas and Degrees

The names of AUS students on diplomas and degrees will be spelled in English exactly as they appear on their passports or identity cards. If a name on a passport or an identity card does not appear in English, then the spelling of the name will be printed according to the personal preference of the student concerned.

Graduation

The university confers degrees at the end of the spring semester. Candidates for degrees file an "Application for Graduation" form in the Office of the Registrar during the registration period of the last expected term of study. Only after an application for graduation has been filed can the Office of the Registrar begin processing the necessary information for final certification for graduation. Students who fail to complete all degree requirements by the end of the term for which they apply to graduate must reapply in order to graduate later.

Participation in the Commencement Exercises

Only students who have successfully completed degree requirements by the end of the term for which they have applied to graduate are certified for conferral of a degree. In witness of the degree conferred, the permanent record of the graduate is appropriately noted with a statement and date of graduation before their diplomas are released.

All degree candidates whose academic records indicate that they can satisfy degree requirements by the end of the term for which they have applied are

permitted to participate in commencement ceremonies.

University Honors and Awards

Dean's List

The Office of the Registrar issues a dean's list of honor students at the end of each semester. To be placed on the dean's list, a student must

* Have registered and completed a minimum of 15 credit hours in the semester
* Have at least a semester 3.5 GPA
* Rank in the top ten percent of students in his/her school
* Have no failing grades in any of his/her courses
* Have no incomplete grades
* Be in good academic standing
* Have no disciplinary action against him/her

Graduation Honors

The university grants Latin honors at graduation. To be eligible for graduation honors, students must have completed at least sixty credit hours required for their degree in residence at the American University of Sharjah and have achieved the requisite GPA. These are

Summa cum laude:	*3.90*	*GPA*
Magna cum laude:	*3.70-3.89*	*GPA*
Cum laude:	*3.50-3.69*	*GPA*

Latin honors are listed in the commencement program and on the student's diploma and permanent record.

Student Academic Integrity Code

Academic integrity lies at the heart of intellectual life. As members of a diverse community committed to the advancement of knowledge, AUS affirms the importance of respecting the integrity of individual work. The academic integrity code for the American University of Sharjah describes standards for academic conduct, students' rights and responsibilities as members of an academic community and procedures for handling allegations of academic dishonesty. As an institution of higher learning, the American University of Sharjah views academic integrity as an educational as well as a judicial issue.

The first obligation of a student is to pursue conscientiously the academic objectives that he or she has chosen. Accordingly, each student is required to conform to the regulations of the university, of the college or school in which he or she has enrolled and of the classes in which he or she is registered. It is further expected that all examinations, tests, papers and other assignments will be completed according to the standards set forth in this code.

By registering as a student at the American University of Sharjah, all students acknowledge their awareness of the academic integrity code and university registration policies and procedures. At the beginning of the academic year students will be asked to sign a statement agreeing to abide by the academic integrity code.

Students are responsible for becoming familiar with their rights and responsibilities as defined by the academic integrity code and for understanding the requirements for their particular courses (regarding such issues as collaborative work, use of study aids or take-home examinations). Students are also responsible for learning the conventions of documentation and acknowledgment of sources required in academic discourse.

Definition of Academic Violations

Members of the academic community are expected to conduct themselves with integrity as a matter of course. Certain violations of ethical conduct relate specifically to academic integrity. Academic violations include, but are not limited to, the following:

Plagiarism
To plagiarize is to use the work, ideas, images or words of someone else without attribution. Plagiarism may involve using someone else's wording - a distinctive name, a phrase, a sentence or an entire passage or essay - without using quotation marks. It may also involve misrepresenting the sources that were used. The issue of plagiarism applies to all student assignments.

Inappropriate Collaboration
Close collaboration on academic work requires acknowledgment. Inappropriate collaboration involves working with someone else in developing, organizing or revising a project (such as a paper, an oral presentation, a research or design project or a take-home examination) without acknowledging that person's help. The use of unauthorized assistance must be avoided in the production of all academic work. Specific policies regarding collaborative work, peer review, use of tutors and editing may vary among individual professors.

Dishonesty in Examinations and Submitted Work
All academic work and materials submitted for assessment must be the sole original work of the student, unless otherwise directed by the instructor. Communication is not allowed between or among students, nor are students allowed to consult books, papers, study aids or notes, without explicit permission. Cheating includes, but is not limited to: copying from another's paper, giving unauthorized assistance, obtaining unauthorized advance knowledge of examination questions, or use of mechanical or marking devices or procedures for the purpose of achieving false scores on machine-graded examinations. Specific policies regarding examinations may vary with individual professors. Students are prohibited from submitting any material prepared by, or purchased from another person or company.

Work Completed for One Course and Submitted to Another
Students may not present the same work for more than one course. Under exceptional circumstances, faculty members may permit a significant piece of research to satisfy requirements in two courses. However, both professors

must agree in advance to this arrangement. Students are reminded that when incorporating their own past research in current projects, they need to reference such previous work.

Deliberate Falsification of Data
Students may not deliberately falsify data or distort supporting documentation for course work or other academic activity.

Interference with Other Students' Work
Students may not intentionally interfere with the work of others, such as sabotaging laboratory experiments, research or digital files, or by giving misleading information or disrupting class work.

Copyright Violations
Copyright laws must be observed. These laws govern practices such as making use of printed materials, duplicating computer software, duplicating images, photoduplicating copyrighted materials and reproducing audio-visual works. The academic integrity code prohibits theft and the unauthorized use of documents and requires adherence to the laws of Sharjah and the federal laws of the UAE.

Complicity in Academic Dishonesty
Complicity in academic dishonesty consists of helping or attempting to help another person commit an act of academic dishonesty or willfully assisting another student in the violation of the academic code of integrity. Complicity in academic dishonesty is pre-meditated and intentional. This can include but is not limited to (1) doing the work for another student, (2) designing or producing a project for another student, (3) willfully providing answers during an exam, test or quiz, (4) calling a student on a mobile phone while taking an exam and providing information, (5) providing a student with an advance copy of a test, (6) leaving inappropriate materials behind at the site of an exam or test, or (6) altering outcome results.

Adjudication of Academic Offenses

Jurisdiction
Academic cases resulting from alleged violations of the university's academic integrity code are within the jurisdiction of either a faculty member or the dean of a college or school.

All charges are brought through the university faculty. Faculty members or students wishing to bring charges should do so through the faculty member in whose course or academic activity the alleged code violation occurred. In the case of students bringing charges against other students, the student bringing the charge must identify himself or herself to the faculty member.

The Adjudication Process
One of two procedures may be followed in the adjudication process. The first grants authority to the faculty member to exercise discretion in those cases involving a student's judgmental error rather than willful dishonesty. The second grants jurisdiction to the dean of the school or college in which the alleged violation has occurred.

1. Faculty Authority
If a faculty member is convinced that an alleged offense has resulted from an error in judgment on the student's part rather than from purposeful dishonesty, the faculty member may decide to use the occasion for instructing the student on acceptable standards for academic work. In such cases, the faculty member may, for example, require the student to rewrite or correct the original assignment or to submit a substitute assignment.

When faculty jurisdiction is exercised in the case of an unintentional violation of the "Student Academic Integrity Code", the faculty member shall send written notification of the event to the dean (or appointed designee) of the college in which the offense has occurred. That dean will then notify the student's dean, if the student is enrolled in another college, that the offense has occurred. Through this process, the university can monitor multiple occurrences of such errors of judgment by particular students.

2. Administrative Jurisdiction
In all other circumstances, the following procedures will be observed:

a. Faculty members reporting an allegation of dishonesty must do so within ten (10) working days of the date of discovery of the alleged offense. The report should be supported by such documentation as is appropriate and delivered to the dean (or appointed designee).
b. The dean (or appointed designee) will promptly notify the student of the charge and will arrange to discuss the charge with the student at a preliminary meeting. The dean (or appointed designee) will also notify the chair of the department or unit in which the offense occurred and the student's dean (if the student is a member of another school or college) that an allegation has been made.
c. At the preliminary meeting, the student will be presented with the charge and the evidence submitted by the faculty member. He/she will be advised of the procedures including his/her rights and given the opportunity to respond. The student may respond immediately or respond in writing within ten (10) days. The signed document will become additional evidence in the case. If the student fails to attend this preliminary meeting, the dean may proceed with the process as appropriate.
d. Faculty members, at their discretion, may discuss the alleged case of dishonesty with the student before the case is adjudicated. However, faculty members are not to submit grades for the work in question or for the course until the case has been adjudicated. If the semester grades are due before the adjudication process is complete, a temporary grade of N will be assigned.

e. When appropriate, the dean (or appointed designee) will gather additional evidence from the student, the complainant and other concerned parties before the adjudication process.

f. After reviewing the charges and the evidence, the dean (or appointed designee) may dismiss the case or refer the case to the faculty member bringing the charge. For cases not dismissed or referred, the dean may assign a penalty. The dean may request a meeting with the student at any time.

Other Adjudication Issues

While the assignment of penalties is the province of the dean of the college or school, the faculty member making the charge may recommend a grading penalty or other sanctions.

If the student fails to attend the scheduled meeting, made known in advance to him or her, the college may hear the case in the student's absence or move for a continuance.

Legal counsel is not permitted at any point during the adjudication process.

The standard of proof for any instance of academic dishonesty will be clear and convincing evidence.

Penalties

Students are advised that violations of the "Student Academic Integrity Code" will be treated seriously, with special attention given to repeat offenders.

1. In assigning a penalty, the dean will take into account both the seriousness of the offense and any particular circumstances involved.
2. After a second determination of guilt is established through formal review, a student may be suspended or dismissed.
3. Penalties for an academic offense may include one or more of the following:
   a. Resubmission of the work in question.
   b. Submission of additional work for the course in which the offense occurred.
   c. A lowered grade or loss of credit for the work found to be in violation of the integrity code.
   d. A failing grade of F or WF or denial of credit for the course in which the offense occurred. A notation of the academic integrity code violation will be entered on the student's permanent record.
   e. Suspension for one or more academic terms, including the term in which the offense occurred. A notation of the academic integrity code violation will be entered on the student's permanent record.
   f. Dismissal (for a specified term or permanently) from the university. A notation of the academic integrity code violation will be entered on the student's permanent record.
4. Penalties (a) - (c) are levied by the dean hearing the case only with the concurrence of the faculty member bringing the charge. Penalties (d) - (f) are levied by the dean hearing the case only with the concurrence of the student's dean. If consensus cannot be reached, the vice chancellor for academic affairs, or his/her representative will adjudicate.
5. If the penalty levied is (e) or (f), the dean of the college or school to which the student belongs will take the appropriate academic action. Disciplinary actions (d) - (f) will become a permanent part of the student's academic record, with appropriate notation indicating that there has been a violation of the "Student Academic Integrity Code".
6. The student may not withdraw from a course in which an infraction has been found and a penalty applied. No refund or cancellation of tuition fees will be permitted in such cases.

Notifications and Appeals

1. The dean (or appointed designee) will notify the student in writing of the findings and, as appropriate, the assigned penalty. The faculty member bringing the charge will also be notified in writing of these results, as will the chair of the department in which the case occurred, and the student's dean if the student is a member of another major teaching unit.
2. In cases concerning notation to the permanent record [penalties (d) - (f) in 3. See above], students will be notified in writing of their right of appeal. Appeals must be made in writing within thirty days of the date of notice. Appeals are limited to grounds of excessive sanction, improper procedure and unavailability of relevant evidence at the time of the original administrative or code review panel meeting. Appeals will be reviewed by the vice chancellor for academic affairs who may consult the written record of the case, the appeal request and any person involved in the adjudication process. Following the review, the vice chancellor for academic affairs may deny the appeal or may lower the sanction or remand the matter to the appropriate dean in the event of improper procedure or new evidence.

Suspension and Dismissal

1. The decision as to whether suspension or dismissal is appropriate in a given instance will necessarily depend on the circumstances of each case and usually on the total academic record of the student involved.
2. Suspension is effective for not less than the session in which the sanction is taken or for not more than one calendar year. The length of a suspension is to be specified precisely at the time the action is taken. A student who is suspended is ordinarily entitled to resume studies in the same college or school at the conclusion of the period of suspension, provided he or she has satisfied all requirements imposed by the dean when the original action was implemented.
3. Dismissal is a penalty invoked in cases of serious infractions of rules and regulations, and when circumstances indicate that a student's association with the university should be terminated in the interests of maintaining the standards of behavior and conduct normally expected in a university community. A student, who has been dismissed but who has not been denied the privilege of returning to the university at a later time, may apply for readmission after the expiration of one calendar year. Action will be taken on the application after a total re-evaluation of the record and in accordance with the admission and readmission practices in effect at the time of application. A readmitted student is governed by the academic requirements in effect at the time of readmission.
4. The calendar year which must elapse before an application for readmission may be considered is interpreted as beginning on the final day of the session during which the disciplinary action was taken.

Records of Disciplinary Actions

1. All records pertaining to student infringement of the code will be maintained for a period of five (5) years after the student's last registration at the American University of Sharjah. In the event that the penalties become part of the student's permanent record, the record will be maintained indefinitely. These records are subject to university regulations concerning the confidentiality of student records
2. Upon written request, students have the right to inspect their records of violations of the code.

Graduate Admissions and Academic Regulations

Admissions

The university seeks to attract to its graduate programs excellent students who demonstrate the ability to do creative and original work. A graduate applicant must have an acceptable bachelor's degree with a record at the required level as mentioned below, be proficient in the English language, and perform well on any required entrance examination. Actual acceptance depends upon the overall merit of the applicant's academic record and the number of students that can be accommodated.

The Office of Admissions is responsible for the admission of students to any division of the university. All inquiries, requests for application forms and subsequent correspondence should be addressed to:

American University of Sharjah
Director of Admissions
P.O. Box 26666
Sharjah, United Arab Emirates
E-mail: admission@aus.ac.ae

Admission is valid only for the semester for which a student applies. If an applicant is granted admission for a certain semester and fails to register, the application may be reconsidered, upon request, for the following semester only.

Process of Admission

A graduate applicant must complete an application for admission, including all requested materials such as transcripts, personal statement and medical certificates, among others. A file for each applicant is prepared by the Office of Admissions to ensure that the applicant meets the minimum university requirements as described by the university catalog. The file is then sent to the appropriate department for recommendation. After examining the file, the department forwards it with recommendation to the dean of the school, who sends the file with a decision to the Office of Admissions. The Office of Admissions then informs the applicant of the decision. Those who have been accepted are informed of the dates of advising and registration and of the required fees. The files of those applicants who have been accepted are sent to the Office of the Registrar for processing of the registration steps.

Application Deadlines for Admission

All applications must be on file in the Admissions Office by the following dates:

Fall by August 15
Spring by January 1

Students requiring visas should apply one month before the above deadline.

Criteria for Admission of Graduate Students

The university requires the following minimum standards in admitting graduate students. Actual admissions for any year may be at a higher level.

Academic Record
Applicants for graduate study must have a bachelor's degree with an academic record at a level sufficient to qualify for full or special-status admission as described under "Categories of Admission" below.

English Language Proficiency
An applicant must demonstrate a knowledge of English adequate for graduate study in that language. For full admission to the university, a graduate applicant must attain the required score on the TOEFL (with TWE) examination. The required minimum TOEFL score for each program is indicated in the detailed description of the program. An applicant who does not attain the minimum test score but who is otherwise qualified for admission is placed in an intensive English course for further language study.

Computer and Library Skills
Graduate students may be asked to demonstrate a minimum competency in the use of computers and academic libraries as they relate to graduate study and research.

Entrance Examinations
The department offering the intended program of study may require applicants to sit for a graduate entrance examination, such as the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT), whose results will be considered at the time of admission.

Medical Examination
A recent medical report stating that the student is physically and mentally capable of doing university work should be submitted with the application.

Categories of Admission

1. **Full Admission**
   Full admission may be granted to entering students who have an overall grade point average (GPA) of at least 2.75 or its equivalent, and 3.0 or its equivalent in the relevant major. Additionally, the department of the major may require satisfactory performance on an entrance examination.
2. **Special Status Admission**
   Special status admission may be granted as a preliminary step to graduates holding a bachelor's degree who wish to work towards a graduate degree, but who do not qualify for full admission, if they have a minimum overall grade point average (GPA) of 2.5 or its equivalent, and 2.75 or its equivalent in a relevant major.

A special program of at least four courses, mostly undergraduate prerequisite courses, will be designed by

the department concerned and approved by the school dean. No part of the prescribed program or other courses taken while under special status may be taken for graduate credit. Satisfactory completion of the prescribed program with a B average will entitle the special status student to be considered for full admission.

Graduate Diploma Programs

The university offers several graduate diploma programs in various disciplines. Only applicants holding a bachelor's degree in a relevant major may be accepted for enrollment in the diploma programs. When recommended by program faculty, students may be accepted for diploma programs without commitment to future admission for a master's degree.

Non-degree Admissions

An applicant not seeking an AUS degree but who wishes to take AUS courses for academic credit may be admitted as a nondegree or year-abroad student if he/she meets the minimum requirements for graduate admission. Since AUS is an institution following the American model, students from U.S. universities are usually able to transfer their AUS credits to their home institutions, but they are advised to check in advance. Non-degree applicants follow the same procedures for admission as degree-seeking students and should enclose transcripts of their undergraduate work.

Upon request, the university may approve a change of status from a non-degree to a degree student. If a graduate non-degree student should become a degree candidate, the department of major will consider accepting credit for courses taken under non-degree status. All academic regulations applicable to degree students will apply retroactively with such change of status.

Transfer Credit

Upon the recommendation of the student's department to the school dean, a graduate student may normally receive up to six graduate credits for graduate level work completed at a different university. The course work should not have been used previously to earn another degree. Any request for the acceptance of transfer credit towards an AUS degree shall be carefully considered by the department concerned before submitting a recommendation to the school dean for approval. Relevance to the student's program of study and time lapse since taking the courses for which transfer credit is requested are examples of the factors considered.

Readmission

A student who has withdrawn in good standing and wishes to return to the university after an absence of one or more semesters may apply for readmission. The application must be made before the appropriate application deadline, and the applicant must meet all the admission requirements prevailing at the time of readmission. Readmission is not granted automatically.

Auditing

Those who wish to attend individual classes may apply as auditors; however, they may not sit for final examinations, nor receive academic credit or any university certificate of enrollment. Auditors do not have to meet all requirements for regular admission but must apply to the Office of Admissions by the deadlines indicated on the inside front cover of this catalog. Since permission to audit is on a space-available basis, applicants are not permitted to register until after the registration of regular students has been completed.

Tuition for the Academic year 2001–2002

Except for graduate courses offered by the School of Business andManagement, tuition is charged at the rate of Dhs. 1500 per credit hour. Tuition is Dhs. 5000 per course for courses in the MBA program, and Dhs. 7350 for courses in the EMBA program. All students are charged an activities fee of Dhs. 100 per semester.

Academic Regulations

Academic regulations and requirements govern the relationship between the university and its students. General academic requirements are described here and the additional specific requirements for each degree are shown in the appropriate subject listings.

The following academic regulations are effective at the time of publication. The university reserves the right to modify them, in which case changes will be announced when necessary. The student is responsible for being aware of all academic regulations.

Current university regulations apply regardless of the regulations in effect at the time a student entered the university, except where they specifically state the contrary.

Registration

Students must register during the official registration period at the times announced in the university calendar. They should plan their courses with their advisers prior to registration and follow the instructions contained in bulletins issued by the Office of the Registrar. Those seeking to enroll after the scheduled registration period cannot be guaranteed acceptance. If permitted to register, they will be charged a late registration fee.

Change of Courses

If careful attention is paid to the degree requirements and course offerings, there should be minimal need for course changes after registration has been completed. Any student who desires a change must first obtain a change of course form from the department of major and have it approved by his/her adviser and the chair of the department of major. The student must submit the form personally to the Office of the Registrar.

A course may not be added to the student's schedule after the drop and add period at the beginning of the semester. Students may withdraw from courses without academic penalty until the end of the tenth week of the semester. A grade of W will be assigned to these courses. After the tenth week in an academic semester, students may withdraw from courses but a grade of WF is assigned to the courses. Students will receive a grade of F if they stop attending classes without officially withdrawing from the course.

Credit Hours

Course work is counted in credit hours. In general, a credit hour represents a one-hour class period and at least two hours of individual study each week for one semester. Thus a course of three credit hours would meet for three hours a week and the student would be expected to study for at least six hours outside of class.

Academic Load

The normal academic load of study for a full-time graduate student is nine hours per semester; however, upon the recommendation of the department concerned, a student may register for up to fifteen hours per semester. A graduate student taking a load of less than nine hours is considered a part-time student.

Grades

At the close of the semester students receive a final grade in each course. The grade is the professor's official estimate of the student's achievement as reflected in examinations, assignments, and class participation. The final grades are recorded on the student's permanent record at the Office of the Registrar. The grade may not be removed from the record.

The following grading system is used at the American University of Sharjah:

A	equals 4.00 grade points **Excellent**
A-	equals 3.70 grade points
B+	equals 3.30 grade points
B	equals 3.00 grade points **Meets expectation for graduate courses**
B-	equals 2.70 grade points
C+	equals 2.30 grade points **Below expectation for graduate courses**
C	equals 2.00 grade points
F	equals 0 grade points **Fail**
WF	equals 0 grade points **Administrative Withdrawal Fail**

Grades not calculated in the grade point average (GPA) are

I	Incomplete
IP	In Progress
AUD	Audit
EX	Exempt; no credit
TR	Transfer; credit counted
W	Withdrawal
N	No grade

The grade point average is calculated by multiplying the grade point value of the letter grade by the number of credit hours of the course. The result is the quality points that the student has earned in the course. The sum of the quality points of the courses taken are then divided by their total credit hours to obtain the grade point average. The grades obtained in non-credit courses are not included in the computation of a GPA. Grades of EX, TR, W, and N are not assigned grade point values and are not used in the computation of the GPA.

Incomplete Work

Under some circumstances graduate students who are unable to complete a course may be permitted to continue and complete it in the following semester. In the meantime a grade of "I", meaning that the work is incomplete, is assigned in the course. Students, whether registered or not, are responsible for making arrangements with the professor and the department of the major to complete the course in the following semester; otherwise, a tentative grade estimated on the basis of work already completed will be recorded. Failure to complete the course within the following semester will result in the grade being recorded as F unless a tentative grade has been previously reported. Meanwhile, students are not allowed to register for the same course.

Any instructor submitting an incomplete grade must supplement this submission with a form to the Office of the Registrar (with copies to the instructor and the student) giving the following information:

a. The reason for the incomplete

b. The material that the student has not submitted

c. The action necessary for removal of the incomplete

The instructor will also inform the registrar, on the same form, of the grade the student will receive if the outstanding work is not completed on time. This grade is to be submitted to the registrar at the time of submitting the incomplete grade sheet.

Students who have an incomplete grade are not allowed to carry more than nine credit hours a semester including the incomplete course or courses.

Students on probation who receive an incomplete are not permitted to register the following semester unless they have completed the course work of the previous semester.

Probation, Dismissal and Course Retake

If the student's grade point average falls below B either in graduate work or in prerequisite course requirements, he/she will be placed on probation for one semester, during which time he/she must regain a GPA of 3.0.

Students who receive an F in any course will normally not be allowed to continue in the university. (Please refer to the course repeat policy in the following paragraph.) A student may also be dismissed from the university if he/she does not complete all requirements within the period specified under "Residence".

With the recommendation of the department and the approval of the school dean, a graduate student may be allowed to repeat one course in which a grade of B-, C+, C or F is received. This privilege may be exercised only once. With the recommendation of the department and approval of the school dean, substitution is allowed for an elective or an infrequently offere course. Both the original grade and the new grade will appear in the transcript.

Planned Educational Leave of Absence

Students at the American University of Sharjah may apply for a planned educational leave of absence. A planned educational leave of absence is defined as a planned interruption or pause in a student's regular education during which the student temporarily ceases his or her formal studies at AUS while pursuing other activities that may assist in clarifying the student's educational goals. The request must be for a specific period of time, which should not exceed two regular semesters for students pursuing a graduate program. The student must plan to return to AUS at the conclusion of his or her leave.

Withdrawal from the University

Students who are unable to complete a semester because of illness or other emergency may be given permission to withdraw. They must get a withdrawal form from the Office of the Registrar, obtain signatures as indicated on the form, and return the completed form to the Office of the Registrar. The deadline for withdrawal from the university is one week prior to the last day of classes.

Withdrawal grades will be recorded for each course at the time the student receives permission to withdraw. The grades are either W or WF. No academic credit is given for courses from which a student withdraws.

A student who withdraws from the university and later wishes to return must apply for readmission. Readmission is not granted automatically. (See the "Admissions" section of the catalog.)

Transcripts

Students who graduate or who withdraw from the university in good standing are entitled to one free student transcript of their academic record. No transcript of academic record will be issued during the examination, registration, or graduation periods. Academic transcripts will not be issued when unsatisfied financial obligations to the university exist.

Non-degree Academic Regulations

Since non-degree students are usually seeking credit for transfer to other institutions, not all of the academic regulations in this section are applicable to them. They will be primarily concerned about the academic regulations of their home institutions to ensure that they receive maximum possible credit for their work at AUS.

Non-degree students should note the sections pertaining to registration, change of courses, academic load, grades, warning, incomplete work, class attendance and transcripts in the graduate section, as appropriate.

Fields and Programs of Graduate Studies

The graduate programs currently offered at AUS are

I. College of Arts and Sciences:

* Master of Arts in Translation and Interpreting
* Graduate Diploma in Translation and Interpreting

II. School of Business and Management

* Executive Master of Business Administration (EMBA)
* Master of Business Administration (MBA)

Please refer to the appropriate college /school section in this catalog for full description and details of the graduate programs and courses.

Student Academic Integrity Code

Academic integrity lies at the heart of intellectual life. As members of a diverse community committed to the advancement of knowledge, AUS affirms the importance of respecting the integrity of individual work. The academic integrity code for the American University of Sharjah describes standards for academic conduct, students' rights and responsibilities as members of an academic community and procedures for handling allegations of academic dishonesty. As an institution of higher learning, the American University of Sharjah views academic integrity as an educational as well as a judicial issue. The full text of AUS's Student Academic Integrity Code is included in the previous section.

Office of Student Affairs

Dean
Dr. Abdulmajeed Al Khajah

Associate Dean
Dr. Moza Al Shehi

The primary charge of the Office of Student Affairs (OSA) is to develop and maintain a supportive and enriching environment for AUS students. This goal is achieved through extra-curricular activities and a variety of student services.

The Office of Student Affairs offers a variety of services and programs that are designed to support the academic mission of the university. The OSA guides students in developing and maintaining positive self-esteem, individual assertiveness skills, social awareness and self-discovery. The programs offered by the OSA are designed to meet the needs of AUS students as they learn how to become tomorrow's leaders. This office is also the welcoming center for national as well as international students.

The Office of Student Affairs enforces the rules and regulations concerning student life at the university. This office has the moral and legal responsibilities of upholding and promoting the highest academic and behavioral standards among its students.

Under various departments, the Office of Student Affairs provides the following services and facilities to meet students' needs, including those of students with disabilities.

Student Activities and Services

AUS students take an active role in governing and shaping campus life. The Student Activities Office, located in the Student Center, plays an important part in providing students with extracurricular opportunities to gain experience in leadership and develop their intellectual curiosity.

Under the sponsorship of the Student Activities Office, many events are orchestrated by students and offer entertainment and cultural programs for the entire university community. Programs offered during the academic year include: Global Day, The Charity Festival, Environment Day, Music Festival Concert, Knowledge Contest, Student of the Year, UAE National Day and many more.

Student Center

The Student Center plays a broad role in the extracurricular life of the university. It acts as the central headquarters for the Student Activities Office and is the gathering place for students to relax and meet to discuss academics and campus activities.

The Student Center contains several meeting rooms, student lounges, activity rooms, multi-purpose rooms, an arcade, a student courtyard, the Leopard Mini Mart, an electronics shop, and a Starbuck's coffee shop. All of these areas are furnished in order to provide students with a comfortable, inviting atmosphere where they can unwind.

Student Orientation

At the beginning of each semester, prior to registration, the Office of Student Affairs through the Student Activities Office conducts a one-day orientation program for all new students. The program is aimed at helping new students get acclimated to AUS, meet other new students and speak with returning students who assist with the orientation program. Orientation includes a campus tour, meetings, lectures, and other relevant activities. Incoming freshmen are expected to participate in all activities, as they provide information that is designed to insure a successful first-year experience.

The Student Union

His Highness Sheikh Dr. Sultan Bin Mohammed Al Qassimi, Supreme Council Member, Ruler of Sharjah and President of the American University of Sharjah strongly encouraged AUS students to establish a student government in order to ensure student representation on campus. A Student Union Charter was drafted by students and approved by the Administrative Committee of the Board of Trustees during the 1997-1998 academic year. AUS Student Government is an elected body that articulates student views and interests in the university. The Student Union is a vehicle for ensuring that students can contribute to and have a voice in formulating university priorities and policies. It also provides a structure for greater student involvement on campus.

Student Employment

Opportunities for on-campus employment are available to all AUS students. The maximum number of hours a student may work is 10 hours per week. Students are paid biweekly. Further information on all these employment opportunities is available through the Office of Student Activities. In addition to on-campus employment, the OSA is also the central conduit for AUS students interested in community service.

Community Services

The AUS Community Services is the link between students and the various needs found in our society. Community Services allows students to experience first-hand the value of serving others and the community. It involves them personally in social events, at the community level, which serve to enrich their life experiences.

Community services coordinates a variety of volunteer programs and strongly encourages students to contribute to the development of new ones. Current volunteer programs include:

* Adopt a Grandparent
* School Tutoring
* Adult Literacy Project
* Best Buddies
* Environmental Awareness
* Healthcare

Students who are interested in learning more about any of these programs should visit the Community Services Office located in the Student Center.

Services for Students with Disabilities

The Office of Student Affairs is the primary agent for the provision of access for AUS students with physical disabilities. The office works with persons having temporary or permanent disabilities in order to promote their full participation in academic programs and campus activities. The campus of AUS is designed with ramps and elevators to facilitate the needs of the disabled.

Student Publications

Practical journalism experience is available to AUS students through two student publications, The *Leopard* and *Realms*. Students interested in contributing to or working on these publications are advised to contact the AUS English Department for further information.

The Leopard Newspaper: "A Reason To Roar"

The leopard is the official mascot of AUS and was chosen because the UAE preserves and protects the Arabian leopard that is currently on the brink of extinction. The Leopard is an official biweekly university newspaper and a voice of AUS students. All students are encouraged to contribute articles, poems, features or artwork to this publication.

***Realms*:**
This magazine was founded as a literary outlet for AUS students. Realms gives all students a chance to read the stories, poems and essays of their classmates, as well as to contribute with their creative work. Realms aims to foster an interest in creative writing and in literature and to help students view the English language as a means of expressing their thoughts and feelings, not merely as an academic tool.

Student Clubs

Student-sponsored clubs are an integral part of the learning process at most institutions of higher education. The academic experience is enriched by participation in activities, which allow students to pursue their personal interests outside the classroom.

The Student Activities Office acts as the central support for the numerous clubs and organizations on the AUS campus. Its role includes supervising and providing assistance with program planning and implementation. The clubs at AUS span a wide range of interests that cover: sports, music, literature, recreation, culture and social issues. There are also a broad array of ethnic/national clubs that reflect the varied backgrounds of AUS students. Every club shares a common purpose, ensuring the adjustment to university life by all students.

AUS currently has the following interest-oriented clubs registered with the Office of Student Affairs:

* Accounting Club
* Al Jalsah Club
* Arts Club
* Business Club
* Chess Club

* Cinematixs
* Computer Club
* Cultural Club
* Drama Club
* Engineering Council Club
* Environment Club
* Festivities Club
* Horse Back Riding Club
* Intensive English Program Club
* International Community Club
* International Women's Club
* Islamic Club
* Leopard Club
* MIS Club
* Marshals
* Martial Arts Club
* Music Club
* Photography Club
* Power Hit Radio
* Realms
* Scuba Diving Club
* Sculpture Club
* Traditional Poetry Club
* Ushers Club

The ethnic/national clubs represent the diversity of nationalities and cultures in the AUS community. They organize many cultural activities and play a vital role in presenting their cultures and heritages throughout the academic year.

* Afghanistan Cultural Club
* African Unity Club
* Arabian Club
* Chechnya Cultural Club
* Bahraini Cultural Club
* Egyptian Cultural Club
* Emarati Cultural Club
* Iranian Cultural Club
* Iraqi Cultural Club
* Jordanian Cultural Club
* Kuwaiti Cultural Club
* Lebanese Cultural Club
* Oman Cultural Club
* Palestinian Cultural Club
* Qatari Cultural Club
* Russian Cultural Club
* Saudi Cultural Club
* Sudanese Cultural Club
* Syrian Cultural Club
* Turkish Cultural Club
* Yemeni Cultural Club

Participation in these and other groups is strongly encouraged. All students are also encouraged to form clubs that will promote their interests and hobbies and help shape their extra-curricular activities.

Lost and Found

Located within the Student Center is the Lost and Found desk. Students should check here for any items that they have lost at the university.

AUS Sports and Athletics

The athletic facilities at the American University of Sharjah are designed to benefit the entire university community. The AUS Sports Complex endeavors to foster the continuing development of UAE sports through athletic championships, symposia and training courses. The Sports Complex is open for AUS students, staff and faculty members to practice indoor football, basketball, handball, volleyball, table tennis, tennis, squash, track and field games, self-defense sports and many others.

The university believes that students should be provided with opportunities to develop their talents through a wide variety of sports. To achieve this goal, the staff provides guidance and to help students develop team play, sportsmanship and healthy lifestyles. Over twenty activities are offered,

featuring both team and individual competitions. AUS campus sports offer each student the opportunity to participate regardless of ability.

AUS Sports Teams

Sports Teams offer broad-based competitive and instructional programs for both genders. The teams are:

- **Aerobics**
- **American Football**
- **Badminton**
- **Self Defense**
- **Basketball**
- **Snooker**
- **Billiards**
- **Bowling**
- **Cricket**
- **Football**
- **Horse Back Riding**
- **Running**
- **Scuba Diving**
- **Squash**
- **Swimming**
- **Table Tennis**
- **Tennis**
- **Volleyball**

AUS Sports Complex

The Sports Complex facilities are as follows: Indoor Sports Courts: this large gymnasium features two basketball, two tennis and two volleyball courts for use in both organized sports and recreation.

AUS Pool: a 50-meter indoor pool for lap swimming, diving and instruction.

Fitness Center: the 15m x 15m room features both free weights and a wide range of exercise machines.

Exercise Hall: this room includes aerobics equipment and is also used for self-defense events.

Squash Courts: two courts.

Outdoor Courts: six tennis courts, two volleyball courts, two basketball courts, a football field, plus changing rooms.

Gymnastics Hall: this room includes gymnastic equipment, mats, bars, etc.

Counseling and Educational Services

The Learning and Counseling Center provides individual counseling to students attending AUS. Professional counselors are available to help students address personal, relationship, career or educational concerns. Students are encouraged to develop coping skills, to identify personal goals and to generate solutions to current problems or uncertainties. All counseling sessions are strictly confidential. The Learning and Counseling Center is located in the Student Center. Office hours are 8:00 a.m. to 5:00 p.m., Saturday through Wednesday.

Residence Life

Because residence hall living is seen as a positive educational experience, students are encouraged to live on campus unless they are commuting from home. Students who are on visas sponsored by AUS must live in the residence halls. The AUS residence halls offer a unique, multi-cultural environment in which students from around the globe can live and learn from one another. The residence hall experience will complement the overall learning experience by teaching students independence and tolerance of others.

There are several options with regard to room size and cost in the residence halls. These allow students more choices in deciding their own residence hall experience. All resident rooms have internet and direct telephone connections. The residence halls also offer students a variety of resources and facilities including: study rooms, computer labs, dining areas, recreational areas, laundry facilities, television rooms and fitness centers.

Residence hall living is encouraged because it allows students to make the most of the many on-campus facilities such as the sports complex, dining facilities, libraries and laboratories as well as daily activities and evening programs.

The university offers a convenient bus shuttle service between the residence halls and other areas of campus. Transportation is also available for students from campus to the cities of Sharjah, Dubai, Abu Dhabi and Al Ain.

The residence halls for male and female students are completely separate and both maintain curfew hours that all residents are expected to abide by. All

residents of the halls are expected to spend every night in the halls, unless they have written authorization from their parents or guardian indicating otherwise. To ensure the security of students, all of the residence halls are protected by security patrols. Each hall also has a supervisor on the premises who is responsible for the safety and comfort of all residents.

Student Code of Conduct

The American University of Sharjah is a community of individuals living, working and studying together in order to create the ideal conditions for learning. Mutual respect and responsibility are imperative if each individual is to flourish and grow in this environment.

In order for the purpose of the university and its community to be realized, the rights, responsibilities and reasonable standards of conduct essential to a university community must be delineated. The legally established principles, rules and regulations of the university constitute the basic standards and guidelines for conduct on and off campus. The Office of Student Affairs establishes and enforces those rules and regulations. (The full text of the student code of conduct is in the Student Handbook).

Rights and Responsibilities

PART I

a. No member of the university community shall be deprived of academic freedoms, personal rights and liberties without due and fair processes of applicable university regulations.

b. No disciplinary sanctions may be imposed upon any member of the university community under authority of the university without fair and due process provided.

c. Each student has a duty to understand the rules and regulations set forth by the university. Ignorance of a rule or regulation shall not be an acceptable defense by the Conduct Council Hearing Board.

PART II

Code of Conduct

Misconduct under this code for which students are subject to university discipline is defined as follows:

a. Physical abuse of any person, including, but not limited to, assaults and abuse, on university premises or at university-sponsored events or functions.

b. Physical contact between males and females is strictly prohibited in keeping with the cultural norms of Sharjah and the UAE.

c. Inappropriate dress for both males and females is prohibited; this includes tank tops and clothing that is tight, suggestive or provocative.

d. Conduct that threatens or endangers the health or safety of any person on university premises or at university sponsored events or functions.

e. Theft or unauthorized taking of university property or other property belonging to an AUS student, faculty member, staff member or visitor on university premises.

f. Possession of stolen or unauthorized property on university premises or at university-sponsored events or functions.

g. Willful, wanton or reckless damage to university premises or property.

h. In nonacademic university matters, dishonesty or knowingly furnishing false information.

i. Fraud, forgery, alteration or unauthorized use of documents, university records, or instruments of identification with the intent to defraud or deceive.

j. Possession or sale of fraudulent, forged or altered instruments of identification on university premises or at university-sponsored events or functions.

k. Intentional obstruction or disruption of teaching, research, administration, disciplinary proceedings or other university activities, including public service functions and other authorized activities on university premises.

l. Tampering with or unauthorized or fraudulent use of campus telephones or access codes or falsely using telephone credit cards. This includes accessing the answering machines of any other student, faculty or staff member on campus.

m. Entry or attempting to enter without lawful authority any dwelling, building or facility on university premises, against the will of the lawful occupant or of the person lawfully in charge thereof; or being therein or thereon, without lawful authority to remain, and refusing to quit the same on demand of the lawful occupant or of the person lawfully in charge thereof. Entering or utilizing university academic buildings after official university working hours are over without written permission from the dean of that college or school.

n. Failure to comply with published university policies or regulations including rules governing the residence halls, the residence hall contract or regulations relating to use of university facilities.

o. Alcohol and drug violations as defined by university policy and the laws of Sharjah and the UAE.

p. The keeping, using, possessing, selling or distributing of any firearms, fireworks, explosives or weapons on university premises or at university-sponsored functions; or of any other materials or substances which are prohibited by law, with the sole exception of law enforcement officials duly authorized by law to possess firearms for the performance of their duties.

q. Distributing or posting any printed materials (including in electronic form) in the name of the American University of Sharjah, or from any registered organization on campus without the prior approval of the Office of Public Relations and the Office of the Chancellor.

r. Gambling or other illegal or unauthorized games or contests of chance on university premises and in university residence halls or at university-sponsored functions.

s. Unauthorized soliciting or canvassing by any individual, group or organization on university premises or in university residence halls.

t. Unauthorized use of the university's corporate name, which is the property of the university, by any person, persons or organizations. This includes any off-campus functions, which may not be reserved in the name of the university.

u. Failure to be fully responsible for the behavior of guests during university functions or activities, and on university premises or in university residence halls. A guest is defined as any person who is not a university staff member, student or faculty member.

v. Harassment or intimidation.

w. Abuse of computer equipment, (e.g. computer stalking and harassment, stealing, deleting information, and Internet theft or knowingly introducing a computer virus), or gaining unauthorized access to computer resources on campus. Tampering with or unauthorized or fraudulent use of university computers, network systems or computer files as defined by university policy. (See university policy on the abuse of Internet Technology).

x. Failing to comply with the direction of university officials acting in performance of their duties.

y. Violations of traffic laws including reckless driving and parking in unauthorized spaces.

z. Violations of Sharjah or UAE law.

Regulations for student conduct in the American University of Sharjah residence halls are based on AUS Code of Conduct and are incorporated into the Student Handbook.


PYREX
250ml

College of Arts and Sciences

Dean
Robert D. Cook

Associate Dean
Ibrahim Sadek

Mission Statement

The mission of the College of Arts and Sciences is to provide students with the intellectual, cultural and scientific foundation for academic and professional education and training. Its programs, including the general education programs, are designed to inspire and invigorate the intellectual and creative potential of students and to encourage them to conceptualize, reflect and act. Through the university graduation requirements, including the general education program that is provided by the college, students learn to examine the many varied aspects of Arab, Islamic, Western and non-Western cultures. They also master written and oral expression in English, learn to appreciate quantitative reasoning, scientific inquiry and method and to develop the critical ability to analyze and synthesize data and information. Finally, they build an understanding of moral and ethical dimensions that create a foundation for individual and collective lifelong decision-making.

Graduates of the College of Arts and Sciences at the American University of Sharjah will not only be prepared to achieve their personal and professional aspirations in the short term; they will also be well qualified to pursue their studies and professional training towards a master's or doctoral degree in their chosen fields.

Faculty

The College of Arts and Sciences has distinguished teacher-scholar faculty members who are experts in their fields. They come from all over the world and comprise a group of diverse, multi-cultural academic practitioners. They provide the training and preparation our students need to meet the challenges of living and working in the global community.

Professors

Muhsin Al-Musawi (Arabic)
Fatima Badry (English)
Andy H. Barnett (Economics)
Hichem Ben-El-Mechaiekh (Mathematics)
John Fox (Anthropology)
J. Patrick Gunning (Economics)
Basil Hatim (Translation)
Fawwaz Jumean (Chemistry)
Lynette Lashley (Communications)
Ibrahim Sadek (Mathematics)
Ahmad Suleiman (Chemistry)
Hassan Tayim (Environmental Sciences)
Peter Walker (Mathematics)

Associate Professors

Kamal Abel-Malek (Arabic)
Zayid Abdulhadi (Mathematics)
Yussef Abu-Muhanna (Mathematics)
Hussam Al-Mohamad (Computer Science)
Basim Raif Bulos (Physics)
James Peter Fallon (English)
Dennis Russell (Biology)
Kassem A. Saleh (Computer Science)
Ali Sayfy (Mathematics)
Rodney Tyson (English)
Lawrence T. Woods (International Relations)

Assistant Professors

Mohammad Aassila (Mathematics)
Husein Abdul-Hamid (Statistics)
Bassam Abu Al-Foul (Economics)
Taher Abualrub (Mathematics)
Marwan Abukhaled (Mathematics)
Imad A. Abu-Yousef (Chemistry)
Afaf Badr Al Bataineh (Arabic)
Ahmad Al-Issa (English)
Noretta Andreasian-Thomas (Physics)
Russell Arent (English)
Gassar Auda (Computer Science)
Maher Bahloul (English)
Gerassimos Barlas (Computer Science)
Cathleen Ann Bridgeman (English)
Judith Caesar (English)
Said Faiq (Translation)
Mary Ann Fay (History)
Gregg Frasco (Economics)
William Gallios (History)
Nawar Al-Hassan Golley (English)
Nidhal Guessoum (Physics)
Asad Hasan (Physics)
Dale Holt (Public Administration)
Sameh Kamel (Public Administration)
Suheil A. Khoury (Mathematics)
Nada Mourtada-Sabah (Political Science)
Ghazi Q. Nassir (English)
Said Sakhi (Physics)
John Shannon (English; Intensive English)
Samuel K. Tesumbi (Communications)
Hugo Toledo (Economics)
Mohamed Zayani (English)

Instructors

Khalid Al-Fakih (Computer Science)
Jonathon Aubrey (IEP)
Raja Mallek Bahloul (IEP)
Ann Boddicker (IEP)
Edward Carlstedt (IEP)

Richard Crain (English)
Tina Driscoll (IEP)
Holly L. Fernalld (IEP)
Leslie Giesen (IEP)
Jaswinder Gill (IEP)
Cindy Gunn (IEP)
Patrick Henry (IEP)
John Hicks (IEP)
Christopher Horger (English)
Richard McClane (IEP)
Craig Magee (English)
Amanda Magrath (IEP)
Richard J. Marshall (English)
Robert Mond (IEP)
Daniel Norton (English)
Robert Schorr (IEP)
Pelly Shaw (IEP)
Alona Thaxton Shepard (English)
Israa Rifat Sirri (Physics)
Brian Skelton (IEP)
Douglas Stewart (IEP)
Carol Vlaun (IEP)
Noelle Wallace (IEP)
Michelle Weathers (IEP)
Krystie Wills (IEP)
Deborah Wilson (IEP)
Rita Zsargo (IEP)

The Intensive English Program (IEP)

Mission Statement

English is the medium of instruction at the American University of Sharjah. Competence in English is a prerequisite for student success. The mission of the Intensive English Program (IEP) is to prepare learners to enter the university and excel as students. The main goals of the program are to increase student language proficiency to a level suitable for study in courses taught in English and to enhance their academic skills in order for them to function successfully in first year course work.

Admission and Placement

Students who score below 173 on the Test of English as a Foreign Language (TOEFL) and who otherwise qualify for admission to AUS are eligible for admission into the IEP. Assignment to one of the five proficiency levels of the program is based on placement and standardized proficiency test scores.

Academic Credit

Each level of study in the IEP carries with it three academic credits. These credits are applied in addition to the student's other degree requirements. Only the grades of the last two IEP levels count toward the students' cumulative grade point average once students begin their studies in their majors. IEP credits are not transferable.

Organization of the Program

The IEP consists of five levels and is graded in terms of language proficiency. The aim of instruction is to improve the English language skills of each student in the areas of reading, writing, listening and speaking, and in the use of grammar and vocabulary. The instruction is also tailored to meet the individual academic learning needs of the students. The IEP program levels are detailed in the IEP program organization table on the next page.

Bridge Level: IEP 005

Students who are placed in Level 5 of the IEP may take one course in mathematics, physics, chemistry or business mathematics as determined by placement test results in these subjects.

Pedagogical Format

The focus of instruction at the lower levels is on general English. As language proficiency increases, IEP courses become more academic in nature. By the advanced level, course work begins to simulate full academic, credit-bearing courses. In addition, throughout all of the levels, courses are given in reading and writing. The core skill components of the program are summarized in the text that follows.

Reading
The fundamental goals of the reading skills component are twofold: to improve student reading comprehension and to increase student reading speed. These goals will be met through the extended practice of a variety of reading skills within a diverse range of text forms and genres. Students will also gain an understanding of, and an appreciation for, the importance of reading both inside and outside the academic setting.

Writing
The writing component is designed to lead the student through the different steps of the writing process, from generating and organizing ideas to writing, editing and revising written work. Students will develop a range of skills necessary to produce academic texts, from basic sentences to university papers. The emphasis of instruction will be placed on developing fluency, grammatical accuracy and lexical accuracy by analyzing and practicing in the various rhetorical modes needed for academic writing.

Listening
The primary goal of the listening component is to develop and improve the ability of each student to effectively comprehend English in academic and social settings. This goal will be met through practice in interactive listening activities, which focus on understanding spoken English. The emphasis in lower level courses will be on understanding conversations, determining main ideas and details, and comprehending short lectures. The emphasis for higher level courses will be on improving comprehension of longer and more complex academic lectures, developing clear and accurate methods of taking notes, and organizing information in a useful format

IEP Program Organization				
Level	**Instruction**	**Self-Access**	**Total Time**	**University Credit Courses**
1	20 hours	5 hours	25 hours	0
2	20 hours	5 hours	25 hours	0
3	20 hours	5 hours	25 hours	0
4	20 hours	5 hours	25 hours	0
5	20 hours	5 hours	25 hours	1(by placement)

Speaking
The focus of the speaking component is to prepare students to communicate successfully in the social and academic environments of the university. Improving both fluency and accuracy are the goals of all courses in this area. Instruction will be given in how to express an opinion articulately, agree or disagree effectively and persuade and argue a point convincingly. The emphasis will be on developing the ability of each student to make speeches and oral presentations, to gather information, to participate in classroom and panel discussions, and to use computer technology for research and presentations.

Grammar
The aim of this component is to integrate grammar into four language skills: reading, writing, listening and speaking. The goal is to develop grammatical accuracy within written and oral contexts and to increase comprehension within listening and reading contexts. The emphasis is placed not only on knowing the forms but also on understanding the functions of grammatical structures in order to produce accurate language in appropriate contexts.

Vocabulary
Vocabulary is not specifically associated with a particular skill area; instead it is an integral part of every language skill. Therefore, its development must be integrated into all courses in the Intensive English Program. However, in an effort to best serve the needs of the students, vocabulary instruction will primarily be focused on high frequency survival English at the lower proficiency levels of the program, and gradually move along a continuum toward low frequency academic and technical language at the higher levels. By the time the students are ready to exit the IEP, they will have become familiar with much of the academic vocabulary necessary for success in their university studies.

Instructional Hours

On average, students receive 20 hours of classroom instruction a week. In addition, students are required to participate in a self-access program for five hours each week. This program consists of completing independent learning modules in the computer lab, reading lab and audio-visual lab.

Methods

All instructors are specially trained and experienced in teaching English across the curriculum. The methods, materials and equipment used are all state-of-the art and are targeted to meet student needs. As much individual attention as possible is given to students.

Evaluation

Progress tests are administered regularly. Practice tests, quizzes, midterms and final examinations are given to assess student progress in the English courses. Promotion to freshman status or to a higher level in the program is determined by examination and instructor assessment.

Academic Probation Policy

IEP students will be placed on academic probation at the end of any semester in which their grade point average (GPA) is below (2.0). Students on probation will have one semester in which to achieve a GPA (non-cumulative) of 2.0 or higher. If they do so they will be removed from academic probation. Failure to do so will result in dismissal from the program.

Duration

The length of time required to complete the program varies with the linguistic background and performance of the student. Students who enter with scores below 97 on the TOEFL will most likely require more than two semesters to complete the English language program.

Attendance

Classes meet daily, Saturday through Wednesday. Because of the intensive nature of the program, regular attendance in all courses is expected, and as a matter of policy, students are required to attend at least 85% of all IEP courses. If students miss 15% of

the total classes for the semester, they will be dismissed from the program. Also, an absence, whether excused or unexcused, is still an absence. Therefore, missing class for any reason (e.g., illness, traffic accident, visa problem) will count as an absence from class.

Tardiness

Classes begin on time and students are expected to be in class on time. Students who arrive late disrupt whatever activity is being performed. Three occasions of tardiness count as one absence.

Department of Computer Science, Mathematics and Statistics

The Computer Science Program

The Department of Computer Science, Mathematics and Statistics offers a four-year program leading to a Bachelor of Science in Computer Science. The program is designed to meet the growing needs for computer science experts in the rapidly evolving 21st century economy. Its mission is to provide graduates with a strong computer science base that will enable them to capitalize on the increasing careers opportunities in the information technology sector, to expand the limits of their knowledge by pursuing further studies, and to explore innovative approaches to computer-related problems. A computer science degree from AUS is an extremely valuable commodity. It provides a highly demanded expertise, a great mobility and flexibility, and an impressive range of possible career choices in the information technology industry. The program provides students with a solid exposure to the fundamental concepts of computer science and their applications to solve concrete problems.

The highlights of the program goals are to develop

* An understanding the context and applications of computing and the structure, logic, and organization of modern computers
* Software application development skills involving most aspects of the software development process, including, analysis, design, implementation, testing and maintenance of quality software
* Strong soft skills, including interpersonal and group communication, presentation skills, and writing skills
* An understanding and appreciation of the ethical and social issues involved in the computing field and profession
* An understanding and appreciation of the economics of computing, including software project management and feasibility, and software complexity analysis
* A strong ability to grasp and learn new software and information technologies, and to further develop themselves professionally in their future careers
* Strength in specific areas of computer science through the choice of electives

Admission to the Program

Formal admission to the program in computer science requires a cumulative grade point average (GPA) of 2.0 or higher.

Degree Requirements

A total of at least 130 credit hours, including

* Forty-five credit hours of university requirements (URE)
* A minimum of fifty-four credit hours of core requirements (CRE)
* A minimum of twelve credit hours of major electives (ERE)
* A minimum of four credit hours of additional science electives
* A minimum of fifteen credit hours of free electives (FRE)

Major Requirements
Students majoring in computer science must complete 85 credit hours of major requirements with a grade C- or better in each course. The major requirements are divided as follows:

Core Requirements
Students must take the following 54 credit hours as core requirements:

* MTH 104 Calculus II
* MTH 221 Linear Algebra
* MTH 341 or CMP 341 Computational Methods
* CMP 111 Computing Fundamentals
* CMP 120 Introduction to Computer Science I
* CMP 210 Digital Systems
* CMP 211 Digital Systems Laboratory
* CMP 213 Discrete Structures or MTH 213 Discrete Mathematics
* CMP 220 Introduction to Computer Science II
* CMP 232 Data Structures and Algorithms
* CMP 235 Social and Professional Issues
* CMP 240 Introduction to Computer

Systems
* CMP 310 Introduction to Operating Systems
* CMP 320 Database Systems
* CMP 321 Programming Languages Laboratory
* CMP 340 Design and Analysis of Algorithms
* CMP 350 Introduction to Software Engineering
* CMP 416 Internet and Network Computing
* CMP 490 Project in Computer Science

Elective Requirements
After consultation with their academic advisors, students should take 12 credit hours as computer science elective courses from the following areas:

Computer Systems
* CMP 410 Computer System Architecture
* CMP 411 Performance Evaluation of Computer Systems
* CMP 412 Introduction to Distributed Systems
* CMP 415 Computer Networks
* CMP 417 Parallel Computing Systems
* CMP 418 Introduction to Simulation and Modeling

Information Processing
* CMP 430 Computer Graphics
* CMP 431 File Processing
* CMP 432 Image Processing
* CMP 433 Artificial Intelligence
* CMP 434 Information Theory
* CMP 435 Computer Security
* CMP 436 Introduction to Symbolic Computation
* CMP 437 Introduction to Neural Network

Software Engineering/Programming Languages
* CMP 450 Object-oriented Analysis and Design
* CMP 452 Compiler Construction
* CMP 453 Organization of Programming Languages
* CMP 454 Software Testing and Quality Engineering
* CMP 455 Human Computer Interactions

Theory of Computation
* CMP 470 Formal Languages and Computability I
* CMP 471 Hypermedia Computing
* CMP 472 Multimedia Computing

Others
* CMP 490 Project in Computer Science
* CMP 494 Topics in Computer Science
* CMP 496 Independent Study

Science Elective Requirement
Students must take a four-credit hour science elective course from the biology, chemistry or physics offerings.

Free Elective Requirements
Students must take a minimum of 15 credit hours of free electives.
All the elective courses must be approved by the student's academic advisor.

Minors in Computer Science for Architecture, Business, and Engineering Students

In order to minor in computer science, students of business, engineering, and architecture and design must take 18 credit hours as follow:

Requirements for business students: CMP 220, CMP 232 and CMP 340.

Requirements for engineering students: CMP 111, CMP 120, CMP 220, CMP 235, CMP 320 and CMP 340.

Requirements for architecture and design students: CMP 120, CMP 220, CMP 430 and CMP 471 or CMP 472.

In addition to the above requirements, students of the above majors must choose other courses from the computer science program. Approval of the chair of the Department of Computer Science, Mathematics and Statistics is required.

Proposed Sequence of Study

Bachelor of Science in Computer Science

FIRST YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MTH 103	Calculus I	3	MTH 001/PT	URE
	XXX XXX	Science Elective: Physics, Chemistry or Biology	4	XXX	URE
	COM XXX	Communication I	3		URE
	XXX	Elective	3		URE
	CMP 111	Computing Fundamentals	3		CRE
		Total	**16**		
Spring	MTH 104	Calculus II	3	MTH 103	CRE
	XXX XXX	Science Elective: Physics, Chemistry or Biology	4	XXX	URE
	ARA XXX	Arabic language requirement	3		URE
	COM XXX	Communication II	3		URE
	CMP 120	Introduction to Computer Science I	4	CMP 111	CRE
		Total	**17**		

SECOND YEAR (34 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM XXX	Communication III	3		URE
	MTH 221	Linear Algebra	3	MTH 104	CRE
	CMP 210	Digital Systems	3	CMP 120	CRE
	CMP 211	Digital Systems Laboratory	1	CMP 210 or Co-requisite	CRE
	CMP 213 or MTH 213	Discrete Structures	3	MTH 103	CRE
	CMP 220	Introduction to Computer Science II	3	CMP120	CRE
		Total	**16**		
Spring	COM XXX	Communication IV	3		URE
	THM XXX	Theme course	3	COM 102	URE
	XXX XXX	Science Elective: Physics, Chemistry or Biology	4	XXX	SEL
	STA 201	Introduction to Statistics	4	None	URE
	CMP 232	Data Structures and Algorithms	3	CMP 213 or MTH 213 & CMP 220	CRE
	CMP 235	Social and Professional Issues	1	CMP 120	CRE
		Total	**18**		

THIRD YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	THM XXX	Theme course	3	COM 102	URE
	XXX XXX	Free elective	3		FRE
	CMP 240	Introduction to Computer Systems	3	CMP 210	CRE
	CMP 320	Database Systems	3	CMP 232	CRE
	CMP 321	Programming Languages Laboratory	3	CMP 220	CRE
	CMP 340	Design and Analysis of Algorithms	3	CMP 232	CRE
		Total	**18**		
Spring	THM XXX	Theme course	3	COM 102	URE
	CMP 341 or MTH 341	Computational Methods	3	CMP 120/CI and MTH 104	CRE
	CMP 310	Introduction to Operating System	3	CMP 232 & 240	CRE
	CMP 350	Introduction to Software Engineering	3	CMP 232	CRE
	CMP XXX	Computer elective	3		ERE
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CMP 416	Internet and Network Computing	3	CMP 310	CRE
	CMP XXX	Computer elective	3		ERE
	CMP XXX	Computer elective	3		ERE
	XXX XXX	Free elective	3		FRE
	XXX XXX	Free elective	3		FRE
		Total	**15**		
Spring	THM XXX	Theme course	3	COM 102	URE
	CMP 490	Project in Computer Science	3	SS and CI	CRE
	CMP XXX	Computer elective	3		ERE
	XXX XXX	Free elective	3		FRE
	XXX XXX	Free elective	3		FRE
		Total	**15**		

Abbreviations:

URE: University Requirement, **CRE:** Core Requirement, **FRE:** Free Elective Requirement, **PT:** Placement Test, **EQ:** Equivalent, **ERE:** Elective Requirement, **CI:** Consent of the Instructor, **SS:** Senior Standing.

Note:
XXX XXX represents an elective course that can be taken in any discipline. If an elective course has a prefix (ex. ARA XXX), the course must be taken from the particular discipline specified.

Department of Economics, International Studies and Public Administration

Degrees offered:
B.A. in Economics
B.A. in International Studies
B.A. in Public Administration

The Economics Program

Economics is concerned with the discovery and use of resources to satisfy wants and needs. Governments in every society face the problem of setting up a framework for helping to assure that wants and needs are satisfied as fully as possible. In light of the relative successes of the free market economies vis a vis command economies, economists face the fundamental problem of determining how much a government should rely on the private property system and economic freedom - i.e., the freedom to start and stop businesses, to hire resources, and to seek employment. The opposite of a free market system is a command system, in which government agents decide what the resources will be, which goods and services to produce, how to produce them, and how to distribute them among the different individuals in the society. The economics major will learn the difference between these two extremes. He /she will also learn to analyze the effects of various types of free market intervention on individuals and groups.

Economics also applies logical reasoning to specific economic problems or subjects. Subject areas include international trade, capitalism, market failure, unemployment, inflation, economic growth, pollution, economic development, central banking, government taxing and spending, economic data analysis, utilizing natural resources, conservation of the environment, the effects of law upon economic behavior, collective decision-making, and history of economics.

The student who majors in economics will learn to reason logically and systematically about the problems and subjects described above and to analyze economic data and other information that is relevant. This will enable them to pursue rewarding career paths in private businesses, government agencies, and non-profit organizations. Alternatively, they may go on to graduate school in a number of disciplines, including economics, business administration, public administration, law, and various interdisciplinary fields like international studies and environmental studies.

Bachelor of Arts in Economics

Admission to the Major

New students who apply to the College of Arts and Sciences can declare a major in economics when they apply for admission. A student already in the College of Arts and Sciences may declare a major in economics if he or she has not yet declared a major in a different subject. Other students already in the College of Arts and Sciences must apply to the Department of Economics for admission to the major. Those who have achieved a cumulative GPA of 2.0 or higher will be admitted. Students who have a cumulative GPA of less than 2.0 could be admitted to the major on probation subject to review of their application by the department.

Degree Requirements

A total of at least 120 credit hours, including:

Major Requirements
Students who wish to major in economics must satisfy all of the requirements specified under the three sections that follow below. One requirement is the completion of 39 credit hours (13 courses) of economics, with a grade of C- or better in each course. This is satisfied with required courses and elective courses, as described in the first two sections. Students are also required to complete one course in mathematics, as specified in the first section below.

Required Courses (28 credit hours)

* ECO 201 Principles of Microeconomics
* ECO 202 Principles of Macroeconomics
* ECO 301 Intermediate Microeconomics
* ECO 302 Intermediate Macroeconomics
* ECO 305 International Trade
* ECO 310 Development Economics
* ECO 330 Money and Banking
* STA 202 Introduction to Statistics for Social Sciences
* Either MTH 101 (Mathematics for Business I) or MTH 103 (Calculus I) or their equivalent, if approved by the Department of Economics

Elective Courses within Economics (27 credit hours)
Students who major in economics must achieve a grade of C- or better in at least 27 credit (nine courses) of elective economics courses (300 level or higher). The student is free to choose these courses from among any of the other economics courses (those not already listed under required courses).

Courses in Related Fields or a Minor in Another Field
Most students who major in economics must complete a total of nine credit hours (three courses) from the fields listed below, and must achieve a grade of C- or better in each course; it is not necessary to take all three courses in the same field. Although likely courses are indicated inside the brackets that follow each field, students must obtain the approval of their advisor before selecting courses for the satisfaction of this requirement. The requirement of nine credit hours in related fields is waived only for students who take a minor in any subject outside of economics. Students who take a minor outside of economics must satisfy the requirements set by the other department for its minor.

Related Fields

* Accounting (any course)
* Computer science
* Finance (any course)
* History (any course at the 200 level or higher)
* International Studies

*Management (any course other than MGT 101)

* Management Information Systems (any course)

* Marketing (any course other than MKT 201)

* Mathematics (any course at the 200 level or higher)

* Political Science (any course at the 200 level or higher)

* Psychology (any course at the 200 level or higher)

* Public Administration (any course at the 200 level or higher)

* Statistics (any course other than STA 201 or STA 202)

Free Elective Requirements
Students must take a minimum of 15 credit hours of free electives.

Minor in Economics
Students who minor in economics must take 21 credit hours of Economics (seven courses), and must achieve a grade of C- or better in each course. Twelve of the 21 credit hours consist of the following required courses:

* ECO 201 Principles of Microeconomics

* ECO 202 Principles of Macroeconomics

* ECO 301 Intermediate Microeconomics

* ECO 302 Intermediate Macroeconomics

The remaining nine credit hours (three courses) can be selected from among any of the other economics courses that are at the 300 level or higher.

Proposed Course Sequence of Study

Bachelor of Arts in Economics

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	XXX	Science elective	3		URE
	ARA 101	Readings in Arabic Heritage 1	3		URE
	ECO 201	Principles of Microeconomics	3		MR
	COM 101	Academic Writing	3	EPT Score 4 or COM 001	URE
	MTH 101	Mathematics for Business I	3		URE
		Total	**15**		
Spring	XXX	Social science elective	3		URE
	COM 102	Writing and Reading Across the Curriculum	3	EPT score 5 or COM 101	URE
	ECO 202	Principles of Macroeconomics	3		MR
	ECO 301	Intermediate Microeconomics	3	ECO 201	MR
	XXX	Free Elective	3		ELC
		Total	**15**		

***** *Related Field Requirement. Waived if student is taking a minor in any other discipline.*

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	XXX	Science elective	3		URE
	COM 225	Global Business Communication	3	COM 203 or COM 204	URE
	THM XXX	Theme course	3	COM 102	URE
	ECO 302	Intermediate Macroeconomics	3	ECO 201, ECO 202	MR
	ECO XXX	Economics elective	3		MR
		Total	**15**		
Spring	XXX	Free elective	3		ELC
	COM 208	Public Speaking	3		UR
	ECO 305	International Trade	3	ECO 201, ECO 202	MR
	ECO XXX	Economics elective	3	ECO 201. ECO 202	MR
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	STA 202	Introduction to Statistics for Social Sciences	4		URE
	ECO XXX	Economics elective	3		MR
	THM XXX	Theme course	3	COM 102	URE
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
		Total	**16**		
Spring	ECO 330	Money and Banking	3	ECO 201 and ECO 202	MR
	ECO XXX	Economics elective	3	See catalog	MR
	THM XXX	Theme course	3	COM 102	URE
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ECO 310	Development Economics	3	ECO 201 and EC0 202	MR
	ECO XXX	Economics elective	3		MR
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
		Total	**15**		
Spring	ECO XXX	Economics elective	3		MR
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
		Total	**15**		

Abbreviations:

URE: University Requirement; **ELC:** Elective; **MR:** Major Requirement: **EPT:** English Placement Test

The International Studies Program

Sharjah's history as an important trading center and meeting place of many cultures makes the American University of Sharjah an especially appropriate place for international studies. The AUS interdisciplinary program in international studies offers students a unique opportunity to prepare for an increasingly complex global political and business environment. Weaving together strands from all the social sciences, as well as international law, cultural studies, and literature, into a coherent and comprehensive program, the international studies curriculum assists students in acquiring a broad understanding of world cultures and events. This understanding, supplemented with the specialized study provided in the international relations, international economics, Arab studies and Western studies concentrations produces students who are uniquely well qualified for positions in international business, international agencies, and government service.

Bachelor of Arts in International Studies

Degree Requirements

A total of at least 120 credit hours.

Major Requirements

A major in international studies requires that students take 48 credit hours. All students who major in international studies must take seven core courses, constituting 21 credit hours as well as ECO 201. Students will also take 24 credit hours in one of four concentrations: international relations, international economics, Arab studies or Western studies. Eighteen of these 24 credit hours are required for the selected concentration, and six hours are elective courses for the concentration. The remaining three credit hours are for a program elective, allowing students to take any course in the international studies curriculum that is not otherwise required for the core or for the student's concentration.

I. Core Courses Required for all Concentrations

* ECO 202 Principles of Macroeconomics
* ECO 322 Global Political Economy
* HIS 221 History of Science and Technology
* POL 202 International Relations
* CSC 205 World Cultures
* GEO 201 World Cultural Geography
* HIS 206 World History II

All core courses have COM 102 as a prerequisite except those in Arabic. Students are expected to have completed at least four of the six core courses plus ECO 201 and ECO 202 by the end of the sophomore year.

II. Courses Required for Concentration in International Relations

Students who select the international relations concentration will examine the many ways in which the citizens of nations, each with its own unique history, political system, economic system, social philosophy, and set of policies, interact with each other. The

purpose of this concentration is to provide students with an opportunity to acquire an informed perspective on international policies, public international law, world trade patterns, causes and remedies for conflict between nations, and the social and cultural interactions between nations. Students who select this course of study will be prepared for careers in law and diplomacy, international organizations, government, international business, travel and tourism, and the media.

Required Courses

* POL 200 Globalization
* POL 204 International Organizations
* ECO 305 International Trade
* POL 205 Public International Law
* POL 207 Wars, Conflicts and Diplomacy
* INS 495 Senior Seminar

Students will take two electives from the following:

* POL 300 Comparative Chief Executives of Nation-States
* ECO 310 Development Economics
* ECO 306 International Finance
* INS 494 Special Topics
* INS 497 Internship

Any other relevant course offered in the area of expertise of new faculty as approved by the department chair.

Proposed Course Sequence of Study

Bachelor of Arts in International Studies

Concentration: International Relations

FIRST YEAR (31 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ARA 101	Readings in Arabic Heritage I	3		URE
	SCI XXX	Science Elective	3		URE
	COM 101	Academic Writing	3	EPT 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		URE
	MTH 101	Mathematics for Business I	3		URE
		Total	**15**		
Spring	XXX	Free elective	3		ELC
	COM 102	Writing and Reading Across the Curriculum	3	EPT 5 or COM 101	URE
	ECO 202	Principles of Macroeconomics	3		MR
	STA 202	Introduction to Statistics for Social Science	4		URE
	SCI XXX	Science Elective	3		URE
		Total	**16**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	THM XXX	Theme Course	3	COM 102	URE
	COM 203 or 204	Genre Analysis or Advanced Academic Writing	3	COM 102	URE
	ECO 305	International Trade	3	ECO 201 and 202	MR
	HIS 206	World History II	3	COM 102	MR
	GEO 201	World Cultural Geography	3	COM 102	MR
		Total	**15**		
Spring	ECO 322	Global Political Economy	3	HIS 102, ECO 210, ECO 202	MR
	COM 208	Public Speaking	3	COM 102	URE
	POL 204	International Organizations	3	COM 102	MR
	HIS 221	History of Science and Technology	3	COM 102	MR
	CSC 205	World Cultures	3	COM 102	MR
		Total	**15**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	THM XXX	Theme Course	3	COM 102	URE
	POL 200	Globalization	3	COM 102	MR
	POL 202	International Relations	3	COM 102	MR
	POL 207	Wars, Conflicts and Diplomacy	3	COM 102	MR
	XXX	Free Elective	3		ELC
		Total	**15**		
Spring	THM XXX	Theme Course	3	COM 102	URE
	POL 205	Public International Law	3	COM 102	MR
	XXX	Free Elective	3		ELC
	XXX	Elective Within the International Relations Concentration	3		MR
	XXX	Elective Within the International Relations Concentration	3		MR
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	INS 495	Senior Seminar	3	Senior status	MR
	XXX	Elective Within the International Studies Major	3		MR
	THM XXX	Theme course	3	COM 102	URE
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		
Spring	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		

III. Courses Required for Concentration in International Economics

The international economics concentration offers students a sound foundation in the principles of economics combined with specialized study in international trade, finance, political economy, and economic development. The objective of the program is twofold. First, for terminal degree students, it is to deal with the numerous complex issues raised by a country's economic connections with the rest of the world, with special emphasis on a country that has not yet reached the status of being "developed," as defined by the standards of international economics. Second, for students planning to continue into post-graduate education, the objective is to prepare them for the more rigorous requirements of graduate programs in international economics and related subjects.

Required Courses

* ECO 301 Intermediate Microeconomics
* ECO 302 Intermediate Macroeconomics
* ECO 305 International Trade
* ECO 306 International Finance
* ECO 310 Development Economics
* INS 496 Senior Seminar

Students will take two electives from the following:

* ECO 318 Economics of Water Resources
* ECO 326 Economics and the Law
* ECO 403 Economics of Natural and Energy Resources
* ECO 404 Economics of Environmental and Natural Resources
* POL 204 International Organizations
* POL 200 Globalization
* ECO 405 Introduction to Econometrics
* ECO 325 Public Economics
* POL 205 Public International Law
* INS 494 Special Topics
* INS 497 Internship

Any other relevant course offered in the area of expertise of new faculty as approved by the department chair.

Proposed Course Sequence of Study

Bachelor of Arts in International Studies

Concentration: International Economics

FIRST YEAR (31 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ARA 101	Readings in Arabic Heritage I	3		URE
	SCI XXX	Science Elective	3		URE
	COM 101	Academic Writing	3	EPT 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		URE
	MTH 101	Mathematics for Business I	3		URE
		Total	**15**		
Spring	ACC 201	Fundamentals of Financial Accounting	3		
	COM 102	Writing and Reading Across the Curriculum	3	EPT 5 or COM 101	URE
	ECO 202	Principles of Macroeconomics	3		MR
	STA 202	Introduction to Statistics for Social Sciences	4		URE
	SCI XXX	Science Elective	3		URE
		Total	**16**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	THM XXX	Theme Course	3	COM 102	URE
	COM 203 or 204	Genre Analysis or Advanced Academic Writing	3	COM 102	URE
	HIS 206	World History II	3	COM 102	MR
	CSC 205	World Cultures	3	COM 102	MR
	GEO 201	World Cultural Geography	3	COM 102	MR
		Total	**15**		
Spring	THM XXX	Theme Course	3	COM 102	URE
	COM 208	Public Speaking	3	COM 102	URE
	ECO 322	Global Political Economy	3	HIS 206, ECO 201, ECO 202	MR
	ECO 310	Development Economics	3	ECO 201 and 202	MR
	POL 202	International Relations	3	COM 102	MR
		Total	**15**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	THM XXX	Theme Course	3	COM 102	URE
	ECO 305	International Trade	3	ECO 201 and 202	MR
	XXX	Elective within the International Economics Concentration	3	ECO 201 and 202	MR
	ECO 302	Intermediate Macroeconomics	3	ECO 201 and 202	MR
	XXX	Free Elective	3		ELC
		Total	**15**		
Spring	THM XXX	Theme Course	3	COM 102	URE
	ECO 306	International Finance	3	ECO 201 and 202	MR
	XXX	Elective Within the International Economics Concentration	3	ECO 201 and 202	MR
	ECO 301	Intermediate Microeconomics	3	ECO 201	MR
	XXX	Free Elective	3		ELC
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	INS 495	Senior Seminar	3	Senior status	MR
	HIS 221	History of Science and Technology	3	COM 102	MR
	XXX	Elective Within the International Studies Major	3		MR
	XXX	Free Elective	3		ELC
	XXX	Free elective	3		ELC
		Total	**15**		
Spring	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		

IV. Courses Required for Concentration in Arab Studies in a Global Context

Arab studies in a global context is an interdisciplinary program that aims to enhance understanding, especially among non-native students, of the Arab world, its people, history, economy, social life and culture. Unlike most western programs in Arab studies, this concentration studies the Arab peoples, culture, and institutions from an intellectually oriented Arab perspective. Students who take this concentration will be prepared for careers in journalism and the media, diplomacy, government, international business, and travel and tourism.

Required Courses

* ARA 302 Arab Identity and Thought
* ARA 303 Classical Arab/Islamic Culture
* ARA 213 Contemporary Arabic Literature
* HIS 204 Modern Arab Histories
* ECO 413 Political Economy of the Arab World
* INS 495 Senior Seminar

Students will take two electives from the following:

* ARA 104 Arabic as a Second Language I
* ARA 200 Arabic as a Second Language II
* ARA 305 Arabic Literature of the Gulf
* ARA 306 Arab Images of the West
* ENG 315 East Meets West: Colonial and Post-Colonial Encounters
* HIS 207 History of Modern Palestine
* HIS 210 History of the Modern Arab Gulf
* INS 494 Special Topics
* INS 497 Internship

Any other relevant course offered in the area of expertise of new faculty as approved by the department chair.

Proposed z Sequence of Study

Bachelor of Arts in International Studies

Concentration: Arab Studies in a Global Context

FIRST YEAR (31 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ARA 101	Readings in Arabic Heritage I	3		URE
	SCI XXX	Science Elective	3		URE
	COM 101	Academic Writing	3	EPT 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		MR
	MTH 101	Mathematics for Business I	3		URE
		Total	**15**		
Spring	ARA 102	Readings in Arabic Heritage II	3		
	COM 102	Writing and Reading Across the Curriculum	3	EPT 5 or COM 101	URE
	ECO 202	Principles of Macroeconomics	3	ECO 202	MR
	STA 202	Introduction to Statistics for Social Sciences	4		URE
	SCI XXX	Science Elective	3		
		Total	**16**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	THM XXX	Theme Course	3	COM 102	URE
	CSC 205	World Cultures	3	COM 102	MR
	COM 203 or 204	Genre Analysis or Advanced Academic Writing	3	COM 102	URE
	GEO 201	World Cultural Geography	3	COM 102	MR
	HIS 206	World History II	3	COM 102	MR
		Total	**15**		
Spring	THM XXX	Theme Course	3	COM 102	URE
	COM 208	Public Speaking	3	COM 102	URE
	ARA 303	Classical Arab/Islamic Culture	3		MR
	ECO 322	Global Political Economy	3	HIS 206, ECO 201, ECO 202	MR
	ARA 302	Arab Identity and Thought	3		MR
		Total	**15**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	3THM XXX	Theme Course	3	COM 102	URE
	XXX	Free elective	3		ELC
	POL 202	International Relations	3	COM 102	MR
	ECO 313	Political Economy of the Arab World	3	COM 102, ECO 201, ECO 202	MR
	HIS 204	Modern Arab History	3		MR
		Total	**15**		
Spring	THM XXX	Theme Course	3	COM 102	URE
	ARA 213	Contemporary Arab Literature	3		MR
	HIS 221	History of Science and Technology	3	COM 102	MR
	XXX	Elective within Arab Studies Concentration	3		MR
	XXX	Free elective	3		ELC
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	INS 495	Senior Seminar	3	Senior Status	MR
	XXX	Elective within Arab Studies Concentration	3		MR
	XXX	Elective Within the International Studies Major	3		MR
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		
Spring	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		

V. Courses Required for a Concentration in Western Studies

Despite its importance, there is no institution or academic program in the Arab world devoted to the systematic, scholarly study of the West. This concentration seeks to fill this gap with a course of study focused on the West and its ideologies and systems of belief, history, political and administrative systems, economics, social life, culture and traditions. Designed especially for students from the Arab world, this course of study will give students an understanding of western societies and peoples. Students who select this concentration will be prepared for careers in law and diplomacy, international business, travel and tourism, government and the media. Students will also be prepared for graduate studies in western academic institutions.

Required Courses

* CSC 204 Belief Systems and Ideology in the Western Tradition
* ECO 210 Capitalism in Western Societies
* POL 206 Theories of Democracy
* HIS 220 The Modern History of Europe and North America
* CSC201 Western Cultural Studies I
* INS 495 Senior Seminar

Students will take two electives from the following:

* PBA 302 Comparative Public Administration Systems
* ENG 315 East Meets West: Colonial and Post-Colonial Encounters
* ECO 306 International Finance
* POL 204 International Organizations
* ECO 305 International Trade
* POL 205 Public International Law
* CSC 202 Western Cultural Studies II
* INS 494 Special Topics
* INS 497 Internship

Any other relevant course offered in the area of expertise of new faculty as approved by the department chair.

Proposed Course Sequence of Study

Bachelor of Arts in International Studies

Concentration: Western Studies

FIRST YEAR (31 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ARA 101	Readings in Arabic Heritage I	3		URE
	SCI XXX	Science elective	3		URE
	COM 101	Academic Writing	3	EPT 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		MR
	MTH 101	Mathematics for Business I	3		URE
		Total	**15**		
Spring	XXX	Elective	3		ELC
	COM 102	Writing and Reading Across the Curriculum	3	EPT 5 or COM 101	URE
	ECO 202	Principles of Macroeconomics	3		MR
	STA 202	Introduction to Statistics for	4		URE
	SCI XXX	Science Elective	3		URE
		Total	**16**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	THM XXX	Theme Course	3	COM 102	URE
	COM 203 or 204	Genre Analysis or Advanced Academic Writing	3	COM 102	URE
	CSC 201	Western Cultural Studies I	3	COM 102	MR
	HIS 206	World History II	3	COM 102	MR
	GEO 201	World Cultural Geography	3	COM 102	MR
		Total	**15**		
Spring	THM XXX	Theme Course	3	COM 102	URE
	COM 208	Public Speaking	3	COM 102	URE
	CSC 204	Belief Systems and Ideology in the Western Tradition	3	COM 102	MR
	HIS 221	History of Science and Technology	3	COM 102	MR
	ECO 322	Global Political Economy	3	HIS 206, ECO 201, ECO 202	MR
		Total	**15**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CSC 205	World Cultures		COM 102	MR
	ECO 210	Capitalism in Western Societies	3	COM 102	MR
	POL 202	International Relations	3	COM 102	MR
	THM XXX	Theme course	3	COM 102	URE
	POL 206	Theories of Democracy	3	COM 102	MR
		Total	**15**		
Spring	THM XXX	Theme Course	3		URE
	XXX	Free Elective	3		ELC
	HIS 220	The Modern History of Europe	3	COM 102	MR
	XXX	Elective Within the Western Studies Concentration	3		MR
	XXX	Elective Within the Western Studies Concentration	3		MR
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	INS 495	Senior Seminar	3	Senior status	MR
	XXX	Elective Within the International Studies Major	3		MR
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		

Bachelor of Arts in Public Administration

A Bachelor of Arts in Public Administration provides students with a strong foundation in administration, interpersonal relations, management and leadership skills. AUS offers a generalized Bachelor of Arts in Public Administration, as well as one with a specialized concentration in human resources management. In addition to the program's focus on leadership and management is an orientation on people, productivity, and accomplishing organizational goals. The public administration program emphasizes topics such as skills in leadership, building people-to-people relationships, public budgeting, human resources management, strategic planning, organizational change and responsiveness to public needs. There is a high demand worldwide in government agencies, businesses, and non-profit organizations for applicants who have a familiarity with what it takes to be a successful manager. Hands-on experience in an internship in a public organization is possible for qualified students.

Graduates who have the necessary administrative knowledge, people-skills and management competencies are uniquely qualified. The American University of Sharjah produces graduates who will make a valuable contribution to their communities. Graduates, for example, may improve the capacity of governmental organizations in their public service delivery systems, or they may be instrumental in helping a business optimize its use of human resources. A student who is well prepared in generalized public administration or who is specialized in the management of human resources, can expect to be the beneficiary of a great deal of social prestige.

Degree Requirements

A total of at least 121 credit hours, including

* Forty- three credit hours of university requirements
* Fifty-four credit hours in the major requirements
* Twenty-four credit hours of free electives (taking a minor in another field is highly encouraged)

Designated University Requirements

* STA 202 Introduction to Statistics for Social Sciences
* MTH 101 Mathematics for Business

Core Requirements

The following eight courses (24 credit hours) are the required core:

* PBA 101 Introduction to Public Administration (Cross-listed with MGT 101)
* ECO 201 Principles of Microeconomics
* ECO 202 Principles of Macroeconomics
* POL 201 Introduction to Political Studies
* PBA/ECO 345 Economics of Collective Decision Making
* PBA 306/MGT 302 Managing Human Resources
* PHI 204 Ethics for Professionals
* PBA/ECO 325 Public Economics

Other Requirements for Public Administration Major

(24 credits from the list below and six credits from the list under the human resources management concentration)

* PBA 210 Urban Management
* PBA/MGT 301 Organization Behavior
* PBA 302 Comparative Public Administration
* PBA 310 Research in Public Administration
* PBA 311 Nonprofit Organizational Management and Leadership
* PBA/ECO 326 Economics and the Law
* PBA/ECO 328 Government Regulation of Business
* PBA 410 Public Program Evaluation
* PBA 494 Special Topics in Public Administration
* PBA 495 Seminar in Public Administration
* PBA 497 Internship in a Public Organization

Concentration in Human Resources Management

(24 credit hours from the list below and six credits from the above list under the public administration major)

* PBA 108 Communication, and Mobilization of Interpersonal Relationships in Public Organizations
* PBA 204 Women in Public Management
* PSY 205 Industrial Organization Psychology
* PBA 206 Motivation, Employee Development and Performance Appraisal in Public Organizations
* PBA/MGT 301 Organization Behavior
* PBA 305 Classification, Job Analysis, Compensation and Fringe Benefits in Public Organizations
* PBA 307 Recruitment, Selection, Promotion, Retention and Disciplinary Actions in Public Organizations
* PBA 308 Executive and Middle-Management Training Techniques in Public Organizations
* PBA 310 Research in Public Administration
* PBA/ECO 326 Economics and the Law
* PBA 494 Special Topics in Public Administration
* PBA 495 Seminar in Public Administration
* PBA 497 Internship in a Public Organization

Minor in Public Administration
A total of 18 credit hours, in addition to ECO 201, which is a prerequisite for the minor

Core Courses (A total of 12 credit hours)

* PBA 101 Introduction to Public Administration
* PBA/MGT 302 Managing Human Resources
* PBA/ECO 345 Economics of Collective Decision Making
* PBA/ECO 325 Public Economics

Plus any two PBA courses (six credit hours) from those numbered 200 and above.

Proposed Course Sequence of Study

Bachelor of Arts in Public Administration

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MTH 101	Mathematics for Business I	3	MTH 002 or Placement Test	URE
	COM 101	Academic Writing	3	Placement Test	URE
	PBA 101	Introduction to Public Administration	3		MR
	XXX	Science elective	3		URE
	ECO 201	Principles of Microeconomics	3		MR
		Total	**15**		
	COM 102	Writing and Reading Across the Curriculum	3		URE
	ARA 101	Readings in Arabic Heritage	3		URE
	XXX	Social Science Elective	3		URE
	PBA XXX	PBA Elective (PA)	3		MR
	ECO 202	Principles of Macroeconomics	3		MR
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 203 or COM 204	General Analysis or Advanced Academic Writing	3		URE
	XXX	Science Elective	3		URE
	STA 202	Introduction to Statistics for Social Sciences	4		MR
	PBA XXX	PBA Elective (PA)	3		MR
	THM XXX	Theme Course	3	COM 102	URE
		Total	**16**		
Spring	POL 201	Introduction to Political Studies	3		MR
	XXX	Social Science Elective	3	COM 102	URE
	THM XXX	Theme Course	3	COM 102	URE
	PBA XXX PBA 306 or	PBA Elective (PA)	3	PBA 101 or MGT 201	MR
	MGT 302	Human Resources Mgt. In Public Org. or Managing Human Resources	3	PBA 101/MGT 201	MR
		Total	**15**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 228	Public Speaking	3	COM 102	URE
	PHI 204	Ethics for Professional	3	COM 102	MR
	PBA XXX	PBA Elective (PA)	3	PBA 101 or MGT 201	MR
	PBA/ECO 325	Public Economics	3	ECO 201, ECO 202	MR
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		
Spring	PBA XXX	PBA Elective (PA)	3		MR
	PBA XXX	PBA Elective (PA)	3		MR
	XXX	Free Elective	3		ELC
	PBA/ECO 345	Economics of Collective Decision-Making	3	ECO 201, 202	MR
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	PBA XXX	PBA Elective	3		MR
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		
Spring	PBA XXX	PBA Elective (PA)	3		MR
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		

Abbreviations:

URE: University Requirement; **ELC:** Elective; **MR:** Major Requirement; **EPT:** English Placement Test

Proposed Course Sequence of Study

Bachelor of Arts in Public Administration

Concentration: Human Resources Management

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MTH 101	Mathematics for Business I	3	MTH 002 or Placement Test	URE
	COM 101	Academic Writing	3	Placement Test	URE
	PBA 101	Introduction to Public Administration	3		MR
	XXX	Science Elective	3		URE
	ECO 201	Principles of Microeconomics	3		MR
		Total	**15**		
Spring	COM 102	Writing and Reading Across the Curriculum	3		URE
	ARA 101	Readings in Arabic Heritage	3		URE
	XXX	Social Science Elective	3		URE
	PBA XXX	PBA Elective (HR)	3		MR
	ECO 202	Principles of Macroeconomics	3		MR
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 203 or COM 204	General Analysis or Advanced Academic Writing	3		URE
	XXX	Science Elective	3		URE
	STA 202	Introduction to Statistics for Social Sciences	4		MR
	PBA XXX	PBA Elective (HR)	3		MR
	THM XXX	Theme Course	3	COM 102	URE
		Total	**16**		
Spring	POL 201	Introduction to Political Studies	3	COM 102	MR
	XXX	Social Science Elective	3		URE
	THM XXX	Theme Course	3	COM 102	URE
	PBA XXX	PBA Elective (HR)	3	PBA 101	MR
	PBA 306 or MGT 302	Human Resources Mgt. In Public Org. or Managing Human Resources	3	PBA 101	MR
		TOTAL	**15**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 228	Public Speaking	3	COM 102	URE
	PHI 204	Ethics for Professional	3	COM 102	MR
	PBA XXX	PBA Elective (HR)	3	PBA 101	MR
	PBA/ECO 325	Public Economics	3	ECO 201 and ECO 202	MR
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		
Spring	PBA XXX	PBA Elective (HR)	3		MR
	PBA XXX	PBA Elective (HR)	3		MR
	XXX	Free Elective	3		ELC
	PBA/ECO 345	Economics of Collective Decision- Making	3	ECO 201 and ECO 202	MR
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Spring	XXX	Free Elective	3		ELC
	PBA XXX	PBA Elective (HR)	3		MR
	XXX	Social Science Elective	3		URE
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		
Spring	PBA XXX	PBA Elective (HR)	3		MR
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
	XXX	Free Elective	3		ELC
		Total	**15**		

Abbreviations:
URE: University Requirement; **ELC:** Elective; **MR:** Major Requirement: **EPT:** English Placement Test

Arabic, Humanities and Social Sciences Programs
The Arabic and humanities and social sciences programs provide the student with courses in several disciplines that enrich his/her general education and professional training. These courses also satisfy the three credit hours of Arabic and 15 credit hours of humanities and social sciences that are part of the university graduation requirement.

Department of English

Mission Statement

The mission of the Department of English at the American University of Sharjah is to cultivate student mastery and creative use of English, to develop an understanding of its structure and functions, to foster an appreciation for its literary tradition and to equip future graduates with the knowledge and skills required for communication. This is enhanced by the provision of highly specialized training in English/Arabic translation and interpreting. Our goal is to become the premier program in the area, in the Gulf and in the Middle East in preparing students to become active, participatory members of the English-speaking global society.

Bachelor of Arts in English Language and Literature

Program Description

The four-year program in English language and literature provides a comprehensive knowledge of the structure and use of English. Furthermore, it enables the student to understand English within its historical and cultural context, without which one cannot fully understand the literature or the society of the present English-speaking world. Above all, the program teaches students the research tools, critical processes and analytic skills necessary for functioning effectively in today's English based information environment.

The courses required for the major are arranged in a sequence of increasing depth and complexity. The forty eight (48) specialized credit hours required for the major in the English language and literature program consist of a balanced foundation in both language and literature studies (18 credits in each), 12 credits in core departmental courses and 18 credits in either literature or language.

The language component of the major helps students understand the history and structure of English and the interrelationship between society and language. This is particularly helpful to non-native speakers of English, who can compare English formations with those in their native language and gain insights into the reasons for these differences.

The language component includes courses which address underlying fundamental issues in language and linguistics studies, such as Introduction to Language Study, Development of the English Language, Phonetics, Phonology, and Morphology, Structure and Function of English, Semantics and Pragmatics, Discourse Analysis, Second Language Acquisition, Language in Society and Psycholinguistics. The language program is thus designed not only to provide proficiency in the structure of English, but also to lead the student to explore the way in which language shapes thought and affects society.

In the literature concentration, the texts studied are written primarily in English, with the major focus on British and American literature. However, because literature does not exist in isolation, the program also includes translations of major writers who have influenced literature in English. Through this program, students come to understand the change of ideas from one time period to another, and the exchange of ideas from one society to another.

Students begin their study of literature by learning the literary history of the United States or Great Britain, the styles and elements of a particular genre, and the basic elements of critical and creative writing. They learn to use the English language as the medium for expressing their own thoughts and feelings, and they come to understand its richness and nuances. They also explore the philosophical and critical theories that underlie both the understanding of literature and the writing of literature itself.

Objectives

An English language concentration prepares its graduates for further studies in linguistics, and for careers in communication, a fast growing sector in today's societies. Also, by receiving a solid grounding in the English language, graduates are well prepared to become teachers of English as a foreign language. All these outlets are current growth areas in the region and will be increasingly useful as the educational and communications systems in the UAE become more Emiratized.

A literature concentration prepares the student for professions requiring the highest levels of English language skills, research skills, and critical and analytical abilities. Moreover, it prepares students for any position requiring interaction with educated native speakers of English. Some of the specific professions for which the English literature major is qualified are in media, publishing, editing, research, teaching and diplomacy. A major in English literature is also an excellent preparation for graduate work in an English speaking country.

Admission to the Program

Formal admission to the English language and literature program by the Department of English requires a cumulative GPA of 2.0 or higher.

Degree Requirements

A total of at least 120 credit hours, including:

* University requirements (URE): forty-two to forty-six credit hours
* Major requirements (MRE): forty-eight credit hours
* Advised electives: twenty-one credit hours
* Free electives: nine credit hours

Requirements for the major in English language and literature

Both concentrations within the English language and literature major require students to take 48 credit hours of coursework. All students in this major will take thirty common credit hours as follows:

* Twelve credit hours of departmental core courses
* Nine credit hours of courses in language
* Nine credit hours of courses in literature

In addition, eighteen credit hours of concentration must be taken in language or literature.

Departmental core requirements (12 credit hours)

* ENG 105 or ENG 108 Contemporary World Literature or Introduction to Genre
* COM 123 Introduction to Language Study
* ENG 420 Seminar: Bridging the Disciplines
* COM 220 Intercultural Communication

Common required courses language and literature (18 credit hours)

* ENG 126 Development of the English Language
* ENG 201or ENG 203 Creative Writing or Introduction to Literary Theory
* ENG 209 Survey of English Literature I
* ENG 219 Survey of American Literature I
* ENG 224 Structure and Function of English
* ENG 234 Language in Society

Language concentration (18 credit hours)

* ENG 222 Phonetics, Phonology and Morphology
* ENG 334 Semantics and Pragmatics
* ENG 336 Discourse Analysis
* ENG 338 or ENG 400 Psycholinguistics or Second Language Acquisition
* ENG 401 or ENG 406 Advanced English Grammar or Survey of Topics in Linguistics and Communication
* ENG 495 Seminar in English Language

Language conentration (18 credit hours)

* ENG 222 Phonetics, Phonology and Morphology
* ENG 334 Semantics and Pragmatics
* ENG 336 Discourse and Analysis
* ENG 338 or ENG 400 Psycholinguistics or Second Language Acquisition
* ENG 401 or ENG 406 Advanced English Grammer or Survey of Topics in Linguistics and Communication
* ENG 495 Seminar in English Language

Literature concentration (18 credit hours)

* ENG 213 or ENG 205 Survey of English Literature II or Modern Drama and Beyond
* ENG 315 East Meets West: Colonial and Post Colonial Encounters
* ENG 303 Shakespeare and his Contemporaries
* ENG 309 or ENG 311 or ENG 313 The American Novel or Early English Novel or Modern British Novel
* ENG 411 or ENG 413 or ENG 415 Seminar in English Literature or Seminar in American Literature or Seminar in Post Colonial Literature
* ENG 490 Senior Research Project

Minor in Literature (21 credits)

Not available for majors in English language and literature.

* ENG 105 or ENG 108 Contemporary World Literature or Introduction to Genres
* ENG 201 or ENG 203 Creative Writing or Introduction to Literary Theory
* ENG 209 Survey of English Literature I
* ENG 219 Survey of American Literature I
* ENG 213 or ENG 205 Survey of English Literature II or Modern Drama and Beyond
* ENG 303 or ENG 315 Shakespeare and his Contemporaries or East Meets West: Colonial and Post-Colonial Encounters
* ENG 309 or ENG 311 or ENG 313 The American Novel or Early English Novel or Modern British Novel

Minor in Language (21 credits)

Not available for majors in English language and literature.

* ENG 123 Introduction to Language Study
* ENG 126 Development of the English Language
* ENG 222 or ENG 336 Phonetics, Phonology and Morphology or Discourse Analysis
* ENG 224 Structure and Function of English
* ENG 234 or ENG 334 Language in Society or Semantics and Pragmatics
* ENG 400 or ENG 338 Second Language Acquisition or Psycholinguistics
* ENG 402 Applied Linguistics

Minor in ESL/TEFL (21 credits)

* ENG 123 or ENG 224 Introduction to Language Study or Structure and Function of English
* ENG 234 or ENG 336 Language in Society or Discourse Analysis
* ENG 400 Second Language Acquisition
* ENG 404 or ENG 406 Using Literary Texts in TEFL Classrooms or Survey of Topics in Linguistics and Communication
* ENG 401 or 408 Advanced English Grammar or Reading and Writing in ESL/TEFL
* ENG 410 Language Teaching Methodology
* ENG 412 Curriculum Development

Proposed Sequence of Study

Bachelor of Arts in English Language and Literature

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 101	Academic Writing	3	EPT 4	URE
	MATH 100	Fundamentals of Logic and Geometry	3		URE
	XXX	Advised elective	3		ELC
	XXX	Science requirement	3		URE
	XXX	Arabic requirement	3		URE
		Total	**15**		
Spring	COM 102	Writing and Reading	3	EPT 5/COM 101	URE
	XXX	Computer requirement	3		URE
	XXX	Free elective	3		ELC
	XXX	Science requirement	3		URE
	STA 201	Introduction to Statistics	3		URE
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 208/209	Public Speaking/Dramatic Expression	3	COM 102	URE
	ENG 123	Introduction to Language Study	3	COM 203 or COM 204 or COM 231 or COM 235	MRE
	THM XXX	Theme course	3	COM 102	URE
	XXX	Free elective	3		ELC
	XXX	Advised elective	3		ELC
		Total	**15**		
Spring	COM 203/ 204	Genre Analysis/ Advanced Academic English	3	COM 102	URE
	ENG 105/ 107	Contemporary World Literature/ Introduction to Genre	3	COM 203/COM 204	MRE
	COM 220	Intercultural Communication	3	COM 203/204	MRE
	THM XXX	Theme course	3	COM 102	URE
	XXX	Advised elective	3		ELC
		Total	**15**		

THIRD YEAR (30 credit hours)-*Literature Concentration*					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ENG 201 or ENG 203	Creative Writing orIntroduction to Literary Theory	3	COM 203/204 ENG 105 or 108	MR
	ENG 224	Structure & Function of Language	3	COM 203/204	MR
	ENG 209	Survey of English Literature	3	ENG 105 or 108 or equivalent	MR
	ENG 126	Development of the English Language	3	COM 203/204	MR
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		
Spring	ENG 234	Language in Society	3	ENG 123	MR
	ENG 219	Survey of American Literature	3	ENG 105 or 108 or equivalent	MR
	ENG 213 or ENG 205	Survey of English Literature or Modern Drama and Beyond	3	ENG 105 or 108	MR
	THM XXX	Theme course	3	COM 102	URE
	XXX	Elective	3		ELC
		Total	**15**		

THIRD YEAR (30 credit hours)-*Language Concentration*					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ENG 201 or ENG 203	Creative Writing or Introduction to Literary Theory	3	COM 203 or 204 ENG 106 or 108	MR
	ENG 224	Structure & Function of Language	3	COM 203/204	MR
	ENG 209	Survey of English Literature	3	ENG 105 or 108	MR
	ENG 126	Development of the English Language	3	COM 203/204	MR
	XXX	Elective	3		ELC
		Total	**15**		
Spring	ENG 234	Language in Society	3	ENG 123	MR
	ENG 219	Survey of American Literature	3	ENG 105 or 108	MR
	ENG 222	Phonology and Morphology	3	ENG 123	MR
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		

FOURTH YEAR (30 credit hours)-*Literature Concentration*					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ENG 303	Shakespeare and his Contemporaries	3	ENG 209	MR
	ENG 309 or ENG 311 or ENG 313	The American Novel or Early English Novel or Modern British Novel	3	ENG 219 or 209	MR
	ENG 315	East Meets West: Colonial and Post Colonial Literature	3	ENG 209 or 213	MR
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		
Spring	ENG 411 or ENG 413 or ENG 415	Seminar in English Literature	3	ENG 311 or 313 ENG 30 ENG 315	MR
	ENG 490	Senior Research Project	3	ENG 411 or ENG 413 or ENG 415	MR
	ENG 420	Seminar: Bridging the Disciplines	3	Consent of instructor	MR
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		

FOURTH YEAR (30 credit hours)-*Language Concentration*					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ENG 336	Discourse Analysis	3	ENG 224	MR
	ENG 400 or ENG 338	Second Language Acquisition or Psycholinguistics	3	ENG 224 or consent of instructor	MR
	ENG 406	Survey of Topics in Linguistics and Communication	3	ENG 334	ELC
	XXX	Elective	3		ELC
	XXX	Elective	3		
		Total	**15**		
Spring	ENG 334	Semantics and Pragmatics	3	ENG 224	MR
	ENG 495	Seminar in English Language	3	Consent of instructor and GPA of at least 3.0 in the major	MR
	ENG 420	Seminar: Bridging the Disciplines	3	Consent of instructor	MR
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		

Bachelor of Arts in Communications

Mission Statement

The Department of English at AUS offers a B.A. degree in communications. The aim of the communications program is to provide students with the principles and practice necessary for careers in advertising, public relations, and mass communication. Emphasis will be placed on oral and written communication, which will enable students to acquire the skills essential for being critical and creative thinkers. Students will acquire proficiencies in the understanding and pragmatic application of the dynamics of the communication process, as it relates to the ethical and socio-cultural imperatives of mass media. The program will also equip students with the basic technical skills that are required in any mass media-related field, such as advertising copywriters, public relations practitioners, writers, journalists, speechwriters or editors.

Communications majors will be able to select from three distinct tracks, advertising, public relations, and mass communication, each of which emphasizes highly developed communication skills.

1. Advertising

The advertising track includes specially designed courses in communications complemented by courses in marketing and graphic design. It emphasizes creativity, originality and individuality. Through theoretical preparation and professional application, graduates in advertising will acquire the skills and tools to design effective advertising campaigns and apply a variety of problem-solving skills to achieve a broad range of goals. Classroom work is supplemented by both internships and participation in Ad Lab. Graduates of this program can pursue careers in ad copywriting, ad design, media planning, production, and professional sales in contexts such as corporations, advertising agencies, media firms, and production companies.

2. Public Relations

A concentration in public relations offers courses that will provide the student with the theoretical and practical knowledge for the practice of public relations. The student will acquire knowledge of the principles of public relations, desktop publishing and design, ethics, research, and campaigns, with a strong emphasis on writing and management skills. The student will apply these skills in the production of press releases, brochures, and in a wide variety of publicity and promotional materials through the use of contemporary computer technology. This practice will simulate what is done in the real work world of public relations. The student will be required to do an internship which will allow him/her to practice these skills within a professional environment, after his/her junior year.

Graduates of the public relations program can pursue careers in all areas of public relations, (e.g. community relations, consumer relations, government relations, integrated marketing, etc.), in the communications business, as well as in the broader private, public, and non-profit organizations. The field of public relations has become stronger and more respected over the years, and in the United States, employment of public relations specialists is expected to increase as fast as the average for all occupations combined through the year 2005 *(1996/97 Occupational Outlook Handbook).*

3. Mass Communication

The Mass Communication track includes specially designed courses in communications complemented by courses in multimedia design. The track emphasizes critical appraisal of communications situations, the ability to transfer basic rhetorical principles of goal-specific formats and needs, and rhetorical sophistication with concept, planning, and implementation of media-specific writing tasks. Theoretical background provides students with ways of seeing, i.e. de facto creative vision. In addition, familiarity with the conventions of each medium (print, radio, broadcast) enables students to produce both satisfying, effective prose and marketable visual text. Graduates of this program can pursue writing and publishing careers in magazine, radio, television and film, newspapers and new media, as well as careers in media relations and management.

Admission to Program

Formal admission to the communication program by the Department of English requires a cumulative GPA of 2.00 or higher.

Degree Requirements

A total of at least 120 credit hours, including:
Forty-two credit hours of university requirements (URE)
Fifty-seven to sixty-one credit hours of major and concentration requirements (MRE)
Three to six credit hours of advised electives
Fifteen credit hours of free electives

Required Core Courses (33 credits)

PHI 204 Ethics for professionals
ENG 123 Introduction to Language Study
ENG 420 Seminar: Bridging the Disciplines
COM 220 Intercultural Communications
CMM 223 Survey of Mass Communication
COM 225 Global Business Communication
CMM 229 Mass Communication and Culture
COM 231 Writing for Visual Media
MKT 201 Fundamentals of Marketing
DES 100 Digital Media in Design
DES 200 Communication Design

Required Courses for a Concentration in the Advertising track (28 credits)

COM 235 Communication in Advertising
DES 230 Digital Media in Communication
CMM 351 Advertising Copywriting and Design
CMM 353 Case Studies in Advertising
CMM 451 Advertising Campaign

Research and Design
CMM 453 Advertising Media Management
CMM 455 Advertising Campaign Management and Portfolio
CMM 459 Advertising Internship
DES 310 Sound and Video for Communication

Required Courses for a Concentration in the Public Relations Track (24 credits)
CMM 227 Principles of Public Relations
CMM 269 Public Relations Writing
CMM 361 Case Studies in Public Relations
CMM 363 Organizational Communication
CMM 461 International Mass Communication
CMM 463 International Public Relations
CMM 465 Public Relations Campaign Strategies
CMM 469 Public Relations Internship

Required Courses for a Concentration in the Mass Communications track (27 credits)
DES 230 Digital Media in Communication
CMM 277 Film Criticism
CMM 371 Hard News and Feature Writing
CMM 373 Scriptwriting for Television and Film
CMM 473 Writing for Multimedia
CMM 475 Writing and Producing Documentaries
CMM 477 Media Project Management
CMM 479 Mass Communication Internship
DES 310 Sound and Video for Communication

Proposed Sequence of Study

Bachelor of Arts in Communications

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 101	Academic Writing	3	EPT 4	URE
	MATH 100	Fundamentals of Logic and Geometry	3		URE
	XXX	Advised elective	3		ELC
	XXX	Science requirement	3		URE
	XXX	Arabic requirement	3	COM 102	URE
		Total	**15**		
Spring	COM 102	Writing and Reading	3	EPT 5/COM 101	URE
	DES 100	Digital Media in Design	3		MR
	XXX	Advised elective	3		ELC
	XXX	Science requirement	3		URE
	STA 201	Introduction to Statistics	3		URE
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 204	Advanced Academic English	3	COM 102	URE
	CMM 231	Writing for Visual Media	3		MR
	CMM 223	Survey of Mass Communication	3		MR
	ENG 123	Introduction to Language Study	3	Any COM 200 level course	URE
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		
Spring	COM 235/ CMM 227/ CMM 277	Communication in Advertising/ Principles of Public Relations/ Film Criticism	3		MR
	COM 208	Public Speaking	3	COM 102	URE
	COM 220	Intercultural Communication	3	COM 102	URE
	PHI 204	Ethics for Professionals	3	COM 203/204	URE
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 225	Global Business Communication	3	COM 203/204	URE
	CMM 229	Mass Communication and Culture	3		MR
	CMM 351/ CMM 269/ CMM 371	Advertising Copywriting and Design/ Public Relations Writing/Hard News and Feature Writing	3		MR
	DES 200	Communication Design	3		MR
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		
Spring	CMM 353/ CMM 361/ CMM 373	Case Studies in Advertising/Case Studies in Public Relations/ Scriptwriting for Television/Film	3		MR
	MKT 201	Fundamentals of Marketing	3		MR
	DES 230	Digital Media in Communication	3	DES 200	MR
	XXX	Advised elective	3		ELC
	THM XXX	Theme course	3	COM 102	URE
		Total	**15**		

FOURTH YEAR (30 credit hours) *Advertising Track*					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CMM 451	Advertising Campaign Research and Design	3		MR
	CMM 453	Advertising Media Management	3		MR
	DES 310	Sound and Video for Communication	3		MR
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		
Spring	CMM 455	Advertising Campaign Management and Portfolio	3		MR
	CMM 459	Advertising Internship	3		MR
	ENG 420	Seminar : Bridging the Disciplines	3		MR
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		

FOURTH YEAR (30 credit hours) *Public Relations Track*					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CMM 461	International Mass Communication	3		MR
	CMM 465	Public Relations Campaign Strategies	3		MR
	XXX	Advised elective	3		ELC
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		
Spring	CMM 463	International Public Relations	3		MR
	CMM 469	Public Relations Internship	3		MR
	ENG 420	Seminar: Bridging the Disciplines	3		MR
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		

FOURTH YEAR (30 credit hours) *Communication Track*					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CMM 473	Writing for Multimedia	3		MR
	CMM 475	Writing and Producing Documentaries	3		MR
	DES 310	Sound and Video for Communication	3		MR
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		
Spring	CMM 477	Media Project Management	3		MR
	CMM 479	Mass Communication Internship	3		MR
	ENG 420	Seminar: Bridging the Disciplines	3		MR
	XXX	Elective	3		ELC
	XXX	Elective	3		ELC
		Total	**15**		

Bachelor of Arts in English/Arabic Translation and Interpreting

Program Description

To qualify for the Bachelor of Arts in English/Arabic Translation and Interpreting degree program, students must demonstrate fluency in English and Arabic. In tandem with a solid grounding offered by the Department of English in communicative skills, linguistic analysis and literary appreciation, the translation track focuses on basic written translation skills in a variety of settings such as government, private sector and international organizations and across a diverse range of fields (commercial and economic, scientific and technical, political and legal). Throughout the program, students are provided with relevant theoretical input that establishes a framework for the study of translation and offers the tools to identify, analyze and resolve translation problems. Interpreting is another track pursued in the degree program. Practice in interpreting emphasizes the development of professional skills in liaison interpreting in the community, the courts and so forth. Readings in translation and interpreting research are an important part of the overall training. To fulfill the requirements of the degree program, students must undertake large-scale translation or interpreting projects through in-depth research on a subject in the field.

Admission to the Program

Formal admission to the translation and interpreting program by the Department of English requires demonstrated language skills in Arabic and English and a cumulative GPA of 2.0 or higher.

Degree Requirements

A total of at least 120 credit hours, including

* University Requirements (URE): forty-two to forty-six credit hours
* Major Requirements (MRE): forty-eight credit hours
* Advised electives: twenty-one credit hours
* Free electives: nine credit hours

Department Core Requirements (12 credits)

* ENG 123 Introduction to Language Study
* ENG 105 or ENG 108 Contemporary World Literature or Introduction to Genre
* COM 220 Intercultural Communication
* ENG 420 Seminar: Bridging the Disciplines

Major Requirements (30 credits)

* TRA 101 Introduction to Translation
* TRA 102 Practical Issues in Translation
* TRA 201 Theoretical and Practical Issues in Translation
* TRA 203 Modern Media Translation and Interpreting
* TRA 302 Contrastive Analysis
* TRA 303 Interpreting I: Focus on the Community
* TRA 305 Interpreting II: Focus on the Profession
* TRA 401 Translation Evaluation and History
* TRA 494 Special Topics in Translation
* TRA 498 Applied Research

Related Requirements (6 credits)

* ARA 103 Composition for Native Speakers of Arabic
* ARA 308 Introduction to Stylistics and Metrics
* ARA 407 Advanced Studies in Arabic Grammar/Rhetoric
* ENG 236 Semantics and Pragmatics
* ENG 224 Structure and Function of English
* ENG 301 Modern Drama
* ENG 309 American Novel
* CMM 371 Hard News and Feature Writing

Minor in Translation (21 credits)

* TRA 101 Introduction to Translation
* TRA 102 Practical Issues in Translation
* TRA 201 Theoretical and Practical Issues in Translation
* TRA 203 Modern Media Translation and Interpreting
* TRA 302 Contrastive Analysis
* TRA 303 Interpreting II: Focus on the Profession
* TRA 401 Translation Evaluation and History

The English Communication Competency Program

The English communication competency program is designed to help all matriculated students improve their English language proficiency, written and oral, in order to succeed in their university course work. The program consists of a sequence of three academic English courses (COM 001, 101, 102), seven specialized courses (COM 203, 204, 207, 225, 231 and 235) and two oral communication courses (COM 208 and 209). See course descriptions at the end of the catalog for further information.

All new matriculated students, regardless of their scores on the TOEFL or any other acceptable standardized test, must take the English Placement Test (EPT) at the beginning of their first semester at AUS, to determine their placement in the sequence of English communication courses.

All students are required to complete four courses in the Department of English (COM 101, COM 102 and two other COM courses) with a grade of C- or better in order to satisfy their English language competency requirement. Students may be exempted from one or two courses based on their EPT score or transferred English/communication credits. The English language competency requirement should be completed by the end of the sophomore year.

The Master of Arts in Translation & Interpreting (Arabic/English)

Mission Statement: Goals and Objectives
Translation and interpreting services are in demand now more than ever as the world market expands and the trend towards globalization increases. The vital role that English continues to play in international communication, and the growing impact of the Arab World on world affairs combine to create a demand for highly trained English/Arabic translators and interpreters. The Master in Translation and Interpreting at AUS is designed to respond to these demands. It is committed to the idea of offering individuals in the Gulf region the opportunity of acquiring the necessary skills in this new field of training.

The Master program aims to equip graduates from a variety of disciplines with specialized translation and interpreting skills in English and Arabic. The program also addresses the need for upgrading amongst those professionals that are already working as translators and interpreters in the region. The courses are intended to produce graduates conversant with the various forms of deriving texts required in modern communication systems. This diverse range of skills is placed within a general theoretical framework, which provides the student with the conceptual tools to identify, analyze and resolve problems and develop a reflective approach to translation.

Degree Requirements

Preamble
The Master Program comprises three levels: the Graduate Certificate Level (3 courses, 9 credit hours), the Graduate Diploma Level (4 additional courses, 12 credits) and the Master Level (4 additional courses, 15 credits).The program may be terminated at the completion of the Graduate Certificate level or the Diploma level, in which case a Graduate Certificate of Competence or a Graduate Diploma will be conferred respectively. The courses at the three levels must be taken in the sequence set out, and students may qualify to waive up to 9 credits from the Certificate-level courses only. A course may be waived if the student has completed comparable course work at the undergraduate or postgraduate level (with a minimum grade of 3.0). Applicants must request that their file be reviewed for waivers at the time of application.

Entry Requirements
Applicants to the Master Program in English/Arabic Translation and Interpreting are required to hold a B.A. from an accredited institution, with a grade point average of 3.0 or above. Satisfactory performance in a test of competence in the use of English and/or Arabic, and in an assessment of translation and/or interpreting potential is a basic requirement.

The Master Program

Level One: The Graduate Certificate of Competence in Translation and Interpreting is a comprehensive, sequenced and integrated series of three courses designed to provide the student with the basic techniques and strategies, together with the necessary research skills required of a professional translator and interpreter between English and Arabic. The Graduate Certificate is conferred upon those candidates who successfully complete an approved program of study consisting of at least 9 semester hours of graduate credit. Only those candidates who score a GPA of 3.0 or above may proceed to the Graduate Diploma level.

Level Two: The Graduate Diploma in Translation and Interpreting is a comprehensive, sequenced and integrated series of seven courses designed to provide the student with the advanced techniques, strategies and research skills required of a professional translator and interpreter between English and Arabic. In addition, the Diploma course provides the student with the necessary theoretical background relating both to translation studies and linguistics. The Graduate Diploma is conferred upon those candidates who successfully complete an approved program of study consisting of at least 21 semester hours of graduate credit. Only those candidates who score a GPA of 3.0 or above may proceed to the Master level.

Level Three: The Master of Arts is a comprehensive, sequenced and integrated series of 11 courses and a research thesis designed to provide the student with the competencies, techniques, and advanced research skills required of a professional translator and interpreter between English and Arabic. In addition, the Master program provides students with the necessary

background both to translation studies and linguistics. The latter element includes high-level training in discourse analysis, Arabic rhetoric and contrastive linguistics. The Master degree is conferred upon those candidates who successfully complete an approved program of study consisting of at least 36 semester hours of graduate credit with a cumulative GPA of 3.0 including a thesis.

Sequence of Courses

Level 1: The Graduate Certificate of Competence (9 credits)
TRA 500 Principles and Strategies in Translation & Interpreting (3 credits)
TRA 501 Professional Trends in the Practice of Translation (3 credits)
TRA 502 Translation Research & Academic Writing (3 credits)
[Possible Exit with a Graduate Certificate of Competence]

Level 2: The Graduate Diploma (12 credits)
TRA 503 Theoretical Models of Translation (3 credits)
TRA 504 Discourse Semantics & Pragmatics in Translation (3 credits)
TRA 505 Interpreting & the Profession (3 credits)
(Plus 1 Advised Elective)
[Possible Exit with a Diploma]

Level 3: The Master of Arts (15 credits)
TRA 556 Arabic Rhetoric for Translators (3 credits)
TRA 600 Area Studies & Translation Practicums (3 credits)
TRA 602 Translation Research Seminar (3 credits)
TRA 699 MA Thesis (3 credits)
(Plus 1 Advised Elective)

Advised Electives
Students may select two of the following courses to satisfy program requirements:

TRA 558 Contrastive Arabic- English Linguistics (3 credits)
ENG 501 Advanced English Grammar (3 credits)
TRA 506 Theoretical Perspectives on Translation Quality Assessment (3 credits)
ENG 511 Linguistics for ESL (3 credits)

Department of Sciences

B.S. in Environmental Sciences

The mission of this program is to provide graduates with qualifications for meaningful employment in the ever-expanding environmental field. It utilizes a holistic approach to environmental science so that students are prepared to deal with a wide range of environmental concerns as they receive their on-the-job training and perform tasks specific to their professions. The overall organization of this program reflects this philosophy with a broad core curriculum, a concentration area, and the opportunity to perform a senior research project providing advanced, hands-on experience. Students may choose to specialize in any one of three concentrations: ecosystems, chemistry and analysis, and physics.

Recent events and current issues have raised major concerns related to the preservation of the environment. Local governments and private industries have begun to recognize the importance of conservation, recycling, and environmental awareness. The environmental sciences major at the American University of Sharjah will give students an understanding of these issues, the skills needed to function as an environmental science professional, and the necessary undergraduate education to pursue a graduate program in environmental science.

Career opportunities

Environmental scientists can work in four general areas:

* Environmental protection targets air, water and land quality and often has a human and environmental health and safety perspective
* Conservation and protection of natural resources deals both with park, fisheries and wildlife management and the operation of resource-based industries such as oil, mining, forestry and agriculture
* Environmental education and communications is relevant to both public and private sectors
* Environmental research includes developing analytical methods for detecting environmental pollutants and improving prediction of environmental and geophysical changes. This field is available in public and academic supported research facilities

Employers of environmental scientists include government, the natural resources sector, utilities, manufacturers and industry as well as small business. Governments at all levels need environmental scientists in the area of enforcing regulations, writing public information, writing and researching regulations, and ensuring government departmental compliance with existing regulations. The natural resource/utility sector (i.e. oil, mining, forestry, agriculture, and hydro) is interested in having environmental scientists consult on the sustainability of their operations, monitor and mitigate environmental effects on wildlife, fisheries, the watershed and natural beauty, and advise them on liability issues. Manufacturers (particularly those involved in the production of chemicals, plastics, paints, pesticides etc.) employ environmental scientists due to concerns that include smokestack specifications and volatile emissions, wastewater quality, minimization and disposal of hazardous waste, and health and safety issues. The service sector, including banks, real estate companies, lawyers, and insurance companies also relies on environmental scientists to accurately describe environmental risk so that they can assess potential liability. Businesses have been formed that service all these sectors in such areas as environmental impact consulting, compliances, recycling and waste management.

Currently, most work in the environmental sector is responsive to existing or anticipated problems such as treating or monitoring effluent or gaseous emissions, preparing environmental impact statements, assessments and audits as required by law, conducting land reclamation and remediation, and completing public consultations. People with an

entrepreneurial inclination to take a proactive approach to environmental stewardship and sustainable development have the opportunity to innovate current practices. There are ample prospects for individuals to generate inventions and ideas that would fundamentally change the way business, society and technology function and through the creation of realistic alternatives to environmentally hazardous practices.

Degree Requirements

A total of 128 credit hours divided as follows:

* Forty-five credits in university graduation requirements
* Fifteen credits of additional basic science and mathematics requirements
* Twenty-four credits in core requirements
* Twenty-three credits in concentration required courses
* Six credits in advised electives
* Fifteen credits in free electives

Basic Science and Mathematics Requirements

* BIO 101 General Biology I
* CHM 101 General Chemistry I
* CHM 102 General Chemistry II
* MTH 103 Calculus I
* MTH 104 Calculus II
* PHY 101 General Physics I
* PHY 102 General Physics II
* STA 201 Introduction to Statistics

Core Requirements (24 credits)

* ENV 101 Introduction to Environmental Science
* GEO 202 Physical Geography of the Global Environment
* CHM 251 Environmental Chemistry
* ENV 311 Environmental Modeling
* ENV 351 Environmental Monitoring and Analysis Techniques
* ENV 411 Environmental Assessment and Management
* CHM 445 Instrumental Analysis
* ENV 491 Senior Project I

Environmental Ecosystems Concentration (23 credits)

* BIO 102 General Biology II
* CHM 215 Organic Chemistry I
* CHM 215L Organic Chemistry Lab I
* BIO 230 Plant Adaptation
* BIO 251 Environmental Ecology
* BIO 260 Genetics
* BIO 331 General Microbiology
* ENV 361 Evolution and Biodiversity

b. Advised Electives (at least six credits)

To be chosen from the following:

* PHI 204 Ethics for Professionals
* CHM 241 Analytical Chemistry
* PHY 301 Energy Sources
* ENV 335 Microbial Environments
* ENV 421 Marine Aquatic Environments
* ENV 430 Environmental Systems in the Arabian Peninsula
* ENV 451 Waste Treatment
* ENV 492 Senior Project II

Free electives (at least 15 credits)

Students are encouraged to use the free elective credits to obtain knowledge and skills in a minor field. This would broaden their knowledge and expand their employment opportunities.

Proposed Sequence of Study

Bachelor of Science in Environmental Sciences

Concentration: Environmental Ecosystems

FIRST YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MTH 103	Calculus I	3	MTH 001	MR
	BIO 101	General Biology I	4		MR
	COM XXX	Communication I	3	URE	
	ENV 101	Introduction to Environmental Sciences	4		CORE
	CHM 101	General Chemistry I	4		MR
		Total	**17**		
Spring	MTH 104	Calculus II	3		MR
	PHY 101	General Physics I	4	PHY 001 or Placement Test	MR
	COM XXX	Communication II	3		URE
	CHM 102	General Chemistry II	4	CHM 101	MR
		Total	**14**		

SECOND YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	BIO 102	General Biology II	4	MTH 103	MR
	CHM 215	Organic Chemistry I	3	CHM 102	MR
	CHM 251	Environmental Chemistry	3	CHM 102	CORE
	GEO 202	Physical Geography of the Middle East	3		CORE
	COM XXX	Communication III	3		URE
		Total	**16**		
Spring	BIO 251	Environmental Ecology	3	CHM 102	MR
	PHY 102	General Physics II	4	PHY 101	MR
	CHM 215L	Organic Chemistry Lab I	1	CHM 215	MR
	BIO 230	Plant Adaptation	3	BIO 102	MR
	COM XXX	Communication IV	3		URE
	ARA XXX	Arabic language requirement	3		URE
		Total	**17**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	STA 201	Introduction to Statistics	4		URE
	XXX	Advised elective	3		MR
	THM XXX	Theme course	3	COM 102	URE
	BIO 260	Genetics	3	BIO 102	MR
	ENV 311	Environmental Modeling	3	MTH 104	CORE
		Total	**16**		
Spring	ENV 361	Evolution and Biodiversity	3	BIO 260	MR
	ENV 351	Environmental Monitoring and Analysis Techniques	3	CHM 251	CORE
	XXX	Free elective	3		ELC
	CHM 445	Instrumental Analysis	3	CHM 102	CORE
	THM XXX	Theme course	3		URE
		Total	**15**		

FOURTH YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ENV 491	Senior Project I	3		CORE
	BIO 331	General Microbiology	3	BIO 102	MR
	THM XXX	Theme course	3		URE
	SOC XXX or ECO XXX	Social science requirement	3		URE
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
		Total	**18**		
Spring	XXX	Advised elective	3		MR
	ENV 411	Environmental Assessment and Management	3		CORE
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
	THM XXX	Theme course	3		URE
		Total	**15**		

Environmental Chemistry and Analysis Concentration

Required Courses (23 credits)

* CHM 215 Organic Chemistry I
* CHM 215L Organic Chemistry Lab I
* CHM 216 Organic Chemistry II
* CHM 216L Organic Chemistry Lab II
* CHM 231 Physical Chemistry I
* CHM 241 Analytical Chemistry
* CHM 331 Physical Chemistry II
* ENV 451 Waste Treatment
* ENV 452 Soil and Water Chemistry

Advised Electives (at least six credits)

* PHI 204 Ethics for Professionals
* PHY 251 Meteorology
* PHY 303 Atmospheric Physics
* CHM 335 Physical Chemistry Lab
* ENV 421 Marine Aquatic Environments
* CHE 442 Corrosion
* ENV 492 Senior Project II

Proposed Sequence of Study

Bachelor of Science in Environmental Sciences

Concentration: Environmental Chemistry and Analysis

FIRST YEAR (31 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MTH 103	Calculus I	3	MTH 001	MR
	BIO 101	General Biology I	4		MR
	COM XXX	Communication I	3		URE
	ENV 101	Introduction to Environmental Sciences	3		CORE
	CHM 101	General Chemistry I	4		MR
		Total	**17**		
Spring	MTH 104	Calculus II	3	MTH 103	MR
	PHY 101	General Physics I	4	PHY 001 or Placement MTH 103	MR
	COM XXX	Communication II	3		URE
	CHM 102	General Chemistry II	4	CHM 101	MR
		Total	**14**		

SECOND YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	PHY 102	General Physics II	4	PHY 101	MR
	CHM 215	Organic Chemistry I	3	CHM 102 (co-requisite)	MR
	CHM 251	Environmental Chemistry	3	CHM 102	CORE
	GEO 202	Physical Geography of the Global Environment	3		CORE
	COM XXX	Communication III	3		URE
		Total	**16**		
Spring	CHM 241	Analytical Chemistry	3	CHM 102	MR
	CHM 216	Organic Chemistry II	3	CHM 215	MR
	CHM 215L	Organic Chemistry Lab I	1	CHM 215	MR
	XXX	Free elective	3		ELC
	COM XXX	Communication IV	3		URE
	ARA XXX	Arabic language requirement	3		URE
		Total	**16**		

THIRD YEAR (31 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	STA 201	Introduction to Statistics	4		MR
	CHM 231	Physical Chemistry I	3	CHM 102, MTH 104	MR
	THM XXX	Theme course	3	COM 102	URE
	XXX	Free elective	3		ELC
	CHM 216L	Organic Chemistry lab II	1	CHM 215L CHM 216	MR
	ENV 311	Environmental Modeling	3	MTH 104	CORE
		Total	**17**		
Spring	ENV 351	Environmental Monitoring and Analysis Techniques	3	CHM 251	CORE
	CHM 331	Physical Chemistry II	3	CHM 231	MR
	CHM 445	Instrumental Analysis	3	CHM 102	CORE
	THM XXX	Theme course	3		URE
	XXX	Free elective	3		URE
		Total	**15**		

FOURTH YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ENV 491	Senior Project I	3		CORE
	CHM 451	Waste Treatment	3	CHM 251	MR
	XXX	Advised elective	3		ELC
	XXX	Free elective	3		ELC
	THM XXX	Theme course	3		URE
	XXX	Advised elective	3		ELC
		Total	**18**		
Spring	CHM 452	Soil and Water Chemistry	3	CHM 251	MR
	ENV 411	Environmental Assessment and Management	3		CORE
	THM XXX	Theme course	3		URE
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
		Total	**15**		

Environmental Physics Concentration

a. Required Courses (23 credits)

* PHY 201 Modern Physics
* MTH 203 Calculus III
* CHE 204 Chemical Engineering Thermodynamics I
* PHY 251 Meteorology
* PHY 301 Energy Sources
* PHY 304 Issues in Environmental Physics
* PHY 351 Analytical Techniques

b. Advised Electives (at least six credits)

To be chosen from the following list:

* PHI 204 Ethics for Professionals
* CVE 231 Environmental Geology
* PHY 303 Atmospheric Physics
* CHM 331 Physical Chemistry II
* ECO 403 Economics of Oil and Gas
* ECO 404 Economics of Energy, Resources and Environment
* ENV 451 Waste Treatment
* ENV 492 Senior Project II

Proposed Sequence of Study

Bachelor of Science in Environmental Sciences

Concentration: Environmental Physics

FIRST YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MTH 103	Calculus I	3	MTH 001	MR
	PHY 101	General Physics I	4	PHY 001 or Placement	MR
	COM XXX	Communication I	3		URE
	ENV 101	Introduction to Environmental Sciences	3		CORE
	CHM 101	General Chemistry I	4		MR
		Total	**17**		
Spring	PHY102	General Physics II	4	PHY 101	MR
	MTH 104	Calculus II	3	MTH 103	MR
	CHM 102	General Chemistry II	4	CHM 101	MR
	COM XXX	Communication II	3		URE
		Total	**14**		

SECOND YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM XXX	Communication III	3		URE
	BIO 101	General Biology I	4		MR
	CHM 251	Environmental Chemistry	3	CHM 102	CORE
	GEO 202	Physical Geography of the Global Environment	3		CORE
	XXX	Free elective	3		ELC
		Total	**16**		
Spring	PHY 251	Meteorology	3	PHY 102	MR
	PHY 201	Modern Physics	4	PHY 102	MR
	COM XXX	Communication IV	3		URE
	MTH 203	Calculus III	3	MTH 104	MR
	ARA XXX	Arabic language requirement	3		URE
		Total	**16**		

THIRD YEAR (31 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	STA 201	Introduction to Statistics	4		MR
	THM XXX	Theme course	3		URE
	PHY 301	Energy Sources	3		MR
	ENV 311	Environmental Modeling	3		MR
	CHE 204	Chemical Engineering Thermodynamics I	3		MR
		Total	**16**		
Spring	PHY 351	Analytical Techniques	4	PHY 251	MR
	PHY 304	Issues in Environmental Physics	3	MTH 203, PHY 201	MR
	CHM 445	Instrumental Analysis	3	CHM 102	CORE
	THM XXX	Theme course	3		URE
	ENV 351	Environmental Monitoring and Analysis Techniques	3	CHM 251	CORE
		Total	**16**		

FOURTH YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	XXX	Free elective	3		ELC
	ENV 491	Senior Project I	3		CORE
	XXX	Social science requirement	3		URE
	XXX	Advised elective	3		ELC
	XXX	Free elective	3		ELC
	THM XXX	Theme course	3		URE
		Total	**18**		
Spring	XXX	Advised elective	3		ELC
	ENV 411	Environmental Assessment and Management	3		CORE
	XXX	Free elective	3		ELC
	XXX	Free elective	3		ELC
	THM XXX	Theme course	3		URE
		Total	**15**		

Science Programs

The science faculty provides the courses in the environmental sciences program and the foundation courses in biology, chemistry and physics needed by engineering students. They also provide science courses to all students in order that they may fulfill their university graduation requirement in science.

School of Architecture and Design

Dean
Dr. Martin Giesen
Associate Dean
Professor Jay Randle

Mission Statement

Our mission is to educate architects and designers who will advance the world of built environment and visual culture with consideration, creativity and skill.

The School of Architecture and Design (SA&D) grounds its curriculum in the conviction that good design results from a combination of a deep understanding of culture, ethical engagement in society and a respect for the creative skills needed to build a sustainable material culture.

Against this background, the school is committed to the primary objective of providing its students with relevant, professional instruction in the fields of architecture, interior design, visual communication, multimedia design, heritage management and design management.

The school is dedicated to inquiry and to the development of hands-on technical skills and competence in digital and other advanced media. SA&D also fosters in its students a regional and cultural awareness and the responsibility for creating humane environments. The school seeks to contribute to the development of professional standards and innovation in architecture and design.

The School of Architecture and Design meets its objectives through a program that features the following:

* An environment that encourages achievement and personal growth
* A faculty of professionals who balance continuing scholarship and creative work with their desire for excellence in teaching
* A comprehensive advisement and student counseling system that tracks student development and progress
* A general education curriculum that offers a solid foundation
* A clear and consistent philosophy that is evident throughout the curriculum
* A variety of courses that are continually updated to reflect rapidly changing design practices and the growing role of digital communication
* A respect for the limits imposed by feasibility, culture, traditions and needs of society

Faculty

The faculty members serving in the School of Architecture and Design have been selected on the basis of their familiarity with a university education based on the American model. All members of the teaching staff combine mastery in teaching with continuing growth in their respective disciplines and thus are well equipped to serve as role models for students in their quest for an empowering and professional education.

Professors
Martin Giesen (Dean)
Harry St. Ours (Design, Chair)

Associate Professors
Nadia Alhasani (Architecture, Chair)
Mustafa Kanishka (Architecture, Interior Design)
Amer Moustafa (Architecture)
Jay Randle (Architecture, Associate Dean)
Mehdi Sabet (Architecture, Interior Design)
Dirk Van Wyk (Visual Communication)
Gregor Weiss (Architecture)

Assistant Professors
Tarek Al Ghoussein (Photography)
Antonio Castela (Interior Design, Design Management)
Anthony Collins (Multimedia Design)
Matthew Egan (Foundations, Printmaking)
David Hewitt (Foundations, Visual Communication)
George Katodrytis (Architecture, Interior Design)
Muqeem Khan (Digital Design)
Chris Kienke (Foundations, Visual Communication)
Dinah Lazor (Interior Design)
Kimberley Lund (Printmaking)
Kevin Mitchell (Architecture)
Ahmed Mokhtar (Architecture)
David Parker (Architecture)
Mark Pilkington (Design)
Samia Rab (Architecture, Heritage Management)
Phil Sheil (Visual Communication, Foundations Coordinator)
Florian Techel (Architecture, Digital Design)

Instructors
Paul Bantey (Visual Communication)
Karl Byas (Digital Media)
Masood Khan (Digital Design)

Career Opportunities

The SA&D prepares students for careers in a wide variety of fields:

* Architecture, environmental design, landscape architecture, interior design, urban design
* Graphic design, advertising, packaging design, illustration, digital media, animation, computer simulations, video
* Art, culture and heritage management, exhibition design and publicity, general design consulting

Special Notes

Space Availability (Studio Majors)
Admission to the School of Architecture

and Design is competitive and limited to 140 students in first-year studio courses. The number of available places in second-year studio majors in architecture, interior design, multimedia design and visual communication is limited to the following:

* Architecture 32
* Interior design 16
* Multimedia design 16
* Visual communication 16

The number of available places in the following non-studio majors is not limited:

* Design management
* Heritage management

Selection for Promotion
Selection for promotion to second-year studios is competitive. Criteria for promotion include an assessment of students' work:

* GPA in the foundations studio sequence
* GPA in non-studio first-year courses including mathematics, communication / English, history and digital design
* Portfolio review

Computer Requirements
At the beginning of the third year, all students of architecture, interior design, multimedia design and visual communication are required to have available for their use a laptop computer. Students are urged to purchase a particular computer model configured specifically following recommendations by the School of Architecture and Design.

Course Selection
Students are cautioned that the specific selection of courses required for a chosen major at the time of initial registration is subject to change. The School of Architecture and Design will make every effort to monitor student progress through the advisement process. Students are encouraged to make course selections based on the stated degree requirements, subject to the listed prerequisites.

Studio Supplies
Supply expenses for studio courses are additional to tuition cost. Students are given a limited account for printing. Lab fees apply for multiples and photography courses.

Accreditation and Ownership of Student Work
Accreditation is achieved and maintained through periodic review by professional accreditation agencies. Each program must maintain an archive of student work representative of actual performance in every component of the curriculum. To that end, the School of Architecture and Design reserves the right to retain, indefinitely, selected examples of student work.

Liability
The School of Architecture and Design provides an extensive range of digital and electronic equipment for student use. For some courses, school equipment is checked out to a student or a group of students for use on or off campus. Students are expected to treat school equipment with care and will be held financially responsible for breakage, damage, or loss.

Programs Offered

The school of Architecture and Design offers the following degrees:

* Bachelor of Architecture
* Bachelor of Science in Architectural Studies
* Bachelor of Science in Design Management
* Bachelor of Science in Heritage Management
* Bachelor of Interior Design
* Bachelor of Science in Multimedia Design
* Bachelor of Science in Visual Communication

Foundations Year
The foundations year is an autonomous one-year program that supports the common educational requirements for all fields of study within the School of Architecture and Design. As such, the program provides the basic design education that will enable students to function on appropriate practical, theoretical and critical levels in their sophomore (second) year. All students in the School of Architecture and Design are required to successfully complete this first year to be considered for advancement to the second year of their chosen major.

The foundations year aims to achieve three instructional objectives:

* Students will demonstrate competence in the fundamental skills and concepts of design analysis, representation and presentation through studio-based exercises and projects
* Students will develop familiarity with the historical implications and chronology of design conventions through in-class lectures and written assignments
* Students will demonstrate a basic proficiency in computer-aided design technology through exercises and project work in an information technology lab setting

The foundations year utilizes three distinct teaching formats in order to provide a broad and inclusive introduction to design methods and practice.

Studio courses, which form the core of the foundations program, encourage one-on-one student/professor interaction and allow the student to develop individual and creative responses to design problem solving.

History courses are taught in a lecture context where information and ideas are disseminated in a classroom setting using visual images to support academic discourse.

Digital courses are taught using a combination of class lectures and information technology. Professors interact with students on various levels through the use of traditional lectures, digital projectors, network software and digital storage systems.

Within the foundations year, students are encouraged to develop a basic practical and critical understanding of design principles. Experimentation and exploration with materials, tools and techniques are fostered in the realization of two and three dimensional concepts and ideas.

Although some faculty specialize as foundations professors, the majority of the teaching load in foundations is shared by professors from various majors including architecture, interior design, multimedia design, and visual communication. This professional collaboration between disciplines at the foundations level initiates early student dialogue with senior level faculty and provides the program with a healthy influx of cross-disciplinary expertise and discourse. It is this important aspect of the foundations program that ensures a balanced response to the needs of the various degree programs it supports.

Architecture

Architecture arises from the same well-spring of civilization as other universal manifestations of material culture: arts, histories, letters, religion and commerce. Still, the artifacts we designate as architecture possess a scale, permanence and a pervasive influence unique among human endeavors. These qualities endow the discipline with a cultural prominence few other professions enjoy.

In its contemporary university setting, the study of architecture is naturally concerned with complex, interdisciplinary issues. Some matters are primarily individual and practical: the basic human need for shelter and the desire to contrive efficient, adequate forms for the patterns of daily life. Architecture, in this sense, may concern aspirations and meanings, but its primary intent is to attain a practical advantage for us, here and now.

Architecture also has a transcendent motive, arising from an imperative to articulate, physically and spatially, the social, ceremonial and environmental choices a given culture makes within a given setting. Architecture expresses our living values. It gives abiding form, order and proportion to our activities. Architecture is a message to the world about our certainties and doubts, our values and beliefs, our preoccupations and our neglects. It both expresses and reveals.

The practice of architecture today, as in the past, requires coordinated contributions from a multiplicity of fields. The craft of the architect runs a gamut of expertise and awareness: technical, environmental, aesthetic, cultural, historical and commercial.

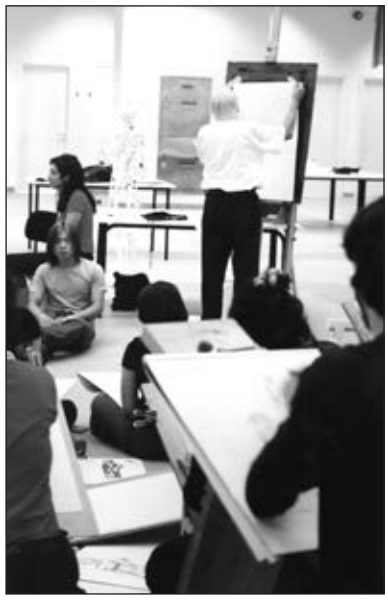
Consequently, the study of architecture inquires into principles and applications of technology, art, humanities, engineering, physical and social sciences, business and management. Architectural design, finally, is the synthetic practice that links and gives significant form to these interdisciplinary contributions.

Bachelor of Architecture (B. Arch.)

The Bachelor of Architecture (B. Arch.) degree (five-year professional program) is intended for the student seeking a professional career in architecture. The program entails a minimum of five years of university studies plus professional training. One hundred seventy two (172) credit hours comprise the degree program, including one hundred twenty-one (121) credit hours of required coursework in architecture and closely associated fields. These courses represent the irreducible core of the discipline of architecture.

Each student is required to extend the core curriculum with twelve (12) credit hours of elective coursework in the major field. The intent is to balance the concern for in-depth professional competence with another for the individual's interest and aptitude. These courses should be selected in consultation with the student's advisor.

The specialized professional curriculum is supported by forty two (42) credit hours of university requirements. Designed to ensure a broad educational foundation, this base is held in common among all graduates of the American University of Sharjah.



University studies present a unique opportunity to explore other fields of interest. Based solely on individual interests, each architecture student must select nine (9) credit hours of open electives from general university offerings.

The curriculum is designed to meet the requirements for licensure that prevail in the United Arab Emirates and to prepare the graduate for professional practice throughout the region. Some students may aspire either to advanced study in the field or to practice in a broader global setting. Accordingly, the curriculum follows the criteria established by the National Architectural Accrediting Board (NAAB) of the United States for a first professional degree in architecture.

Admission to the Professional Degree Program

The number of seats in architecture is limited. Formal admission is competitive. Only the most highly qualified foundations students are accepted. To be considered for admission to the Bachelor of

Architecture program a student must successfully complete the foundations year in the School of Architecture and Design.

The minimum foundations requirements include

* All four foundations studio courses (DES 111, 112, 131, 132) with a minimum grade point average (GPA) of 2.0 out of 4.0 in each sequence (design and drawing)
* At least one course in history of material culture (DES 121 or DES 122)
* Digital Media in Design (DES 100)
* Mathematics for Architects (MTH 111) or its prerequisite (MTH 003)
* At least one course in the university communication sequence
* A minimum of twenty-seven (27) semester hours of university credit (including the above courses)
* An overall grade point average (GPA) of 2.0

Formal notification of acceptance to the program will be announced in mid-June.

In the event that there are more students who qualify for the program than available spaces, candidates with the highest overall GPA will be admitted to each major, and a wait-list will be established. In the event of a tie, students with the highest GPA in all four foundations studio courses (DES 111, 112, 131, 132) will advance to second year. In the event of a second tie, students with the highest GPA in history of material culture and Mathematics for Architects will advance to the second year.

Retention Reviews in Architecture

As an extension of the regular advisement process, the performance of each architecture student is reviewed following the completion of the second, third and fourth years in the program. A student must pass each review to continue in the major and must:

* Have attained a minimum grade point average (GPA) of (2.3) in each architectural design studio course sequence
* Have attained a minimum grade point average (GPA) of (2.5) in all university courses

If the review has a negative outcome, the department will assist an unsuccessful candidate in transferring to a field that holds better promise for the student.

Degree Requirements

A total of one hundred seventy two (172) credit hours, including the following:

* Forty two (42) credit hours of university requirements
* One hundred twenty-one (121) credit hours of architecture and architecture-related courses in the core curriculum
* Twelve (12) credit hours of approved Architecture electives
* Nine (9) credit hours of open electives
* Fourteen weeks of approved professional training

Please see the proposed sequence of study for a specific strategy for completing these graduation requirements in five years

Bachelor of Science in Architectural Studies (B.S.A.S.)

The four-year non-professional degree program in architectural studies is planned and formulated as a subset of the five-year professional degree in architecture. Accordingly, both programs share the first three years of study, both in terms of course offerings and curricula requirements. Students graduating with a non-professional degree will be able to practice architecture but do not qualify for professional licensing.

Proposed Sequence of Study

Bachelor of Architecture

(B. Arch.)

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite**	**Credit Hours(s)**	**Fulfills**
Fall	COM 101	Academic Writing	EPT4	3	URE Comm 1 of 4
	DES 111	Descriptive Drawing		3	MR
	DES 121	History of Material Culture I		3	MR/URE Humanities 1 of 2
	DES 131	Design Foundations I		3	MR
	MTH 111	Mathematics for Architects	MTH 003 or MPT	4	MR/URE Math-Logic 1 of 2
		Total		**16**	
Spring	COM 102	Writing and Reading Across the Curriculum	EPT score 5 or COM 101	3	URE Communication 2 of 4
	DES 100	Digital Media in Design		3	
	DES 112	Descriptive Drawing II	DES 111	3	MR
	DES 122	History of Material Culture II		3	MR/URE Humanities 2of 2
	DES 132	Design Foundations II	DES 131	3	MR
		Total		**15**	

SECOND YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite**	**Credit Hours(s)**	**Fulfills**
Fall	ARC 201	Architectural and Interior Design Studio I	DES 100, 112, 121 or 122, 132, MTH 003 or 111	6	MR
	ARC 213	Analysis and Methods in Architecture	DES 100 & admission	3	MR
	COM XXX	Advised Elective		3	URE Comm. 3 of 4
	PHY 104	Physics for Architects	MTH101, or 103 or 111	3	MR/URE Science 1of 2
	ARC XXX	Major (Architectural) Elective		3	ME 1 of 4
		Total		**18**	
Spring	ARC 202	Architectural and Interior Design Studio II	ARC 201	6	MR
	ARC 224	Modern Foundations of Art and Architecture	DES 121, 122	3	MR
	ARC 232	Survey of Mat'ls and Prac.in Constr.		3	MR
	COM XXX	Advised Elective		3	URE Comm. 4 of 4
	ARC 242 / CVE 272	Structural Principles: Statics and Strength of Materials	PHY 104	3	MR
		Total		**18**	

THIRD YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite**	**Credit Hours(s)**	**Fulfills**
Fall	ARC 301	Architectural Design Studio III	ARC 202, 224, PHY 104	6	MR
	ARC 325	Ideas in Architecture	ARC 224	3	MR
	ARC 333	Rough Construction Processes	ARC 232	3	MR
	ARC 343/ CVE 371	Structural Analysis: Conceiving Forces in Buildings	ARC 242/ CVE 272	3	MR
	THMXXX	Advised Elective	COM 102	3	URE Theme1 of 4/ Arabic 1 of 1
		Total		**18**	
Spring	ARC 302	Architectural Design Studio IV	ARC 301, 213	6	MR
	ARC 397	Internship I (6 weeks Summer Training)	ARC 302	0	MR
	ARC 344 / CVE 372	Structural Design: Concrete, Steel and Wood	ARC 343/ CVE 371	3	MR
	ARC 352	Environmental Energies and Building Form	PHY 104	3	MR
	ARC XXX	Major (Architectural) Elective		3	ME 2 of 4
	THM XXX	Advised Elective		3	URE Theme 2 of 4
		Total		**18**	

FOURTH YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite**	**Credit Hours(s)**	**Fulfills**
Fall	ARC 401	Architectural Design Studio V	ARC 302, 224, 232, 242	6	MR
	ARC 453	Environmental Control Systems	ARC 352	3	MR
	ARC 461	Professional Practice I: Project Management	ARC 397 or IDE 397 or HRM 397	3	MR
		Open Elective		3	OE 1 of 3
	THM XXX	Advised Elective		3	URE Theme 3 of 4
		Total		**18**	
Spring	ARC 402	Architectural Design Studio VI	ARC 401, 325, 333, 397	3	MR
	ARC 434	Finish Construction Processes	ARC 333	3	MR
	ARC 462	Professional Practice II: Design Management	ARC 461	3	MR
	ARC 497	Internship II (8 weeks Summer Training)	ARC 402	0	MR
	ARC XXX	Major (Architectural) Elective		3	ME 3 of 4
	THM XXX	Advised Elective		3	URE Theme 4 of 4
		Total		**18**	

FIFTH YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite**	**Credit Hours(s)**	**Fulfills**
Fall	ARC 590	Final Project Research	ARC 402, 344, 434, 453	3	MR
	ARC 501	Architectural Design Studio VII	ARC 402, 344	6	MR
	ARC 563/ CVE 561	Professional Practice III: Construction Management	ARC 397 or IDE 397 or HRM 397, ARC 461	3	MR
	ARC XXX	Major (Architectural) Elective		3	ME 4 of 4
	STA XXX	Advised Elective		3	URE Math-Logic 2 of 2
		Total		**18**	
Spring	ARC 591	Final Project Design	ARC 51, 590, 497	6	MR
	SCI XXX	Advised Elective		3	URE Science 2 of 2
		Open Elective		3	OE 2 of 3
		Open Elective		3	OE 3 of 3
	Total			**15**	
	Total for the degree			**172**	

Abbreviations:

OE: Open Elective, **MR:** Major Requirement, **URE**: University Requirement, **ME:** Major Elective, **EPT:** English Placement Test, **MPT:** Math Placement Test

Proposed Sequence of Study

Bachelor of Science in Architectural Studies
(B.S.A.S.)

FIRST YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	COM 101N	Academic Writing	EPT 4	3	URE English I
	DES 111	Descriptive Drawing I		3	MR
	DES 121	History of Material Culture I		3	MR/URE Humanities
	DES 131	Design Foundations I		3	MR
	MTH 111	Mathematics for Architects	MTH 003 or MPT	4	MR/URE Math I
		Tota		**15**	
Spring	COM 102N	Writing and Reading Across the Curriculum	EPT 5 or COM 101	3	URE English II
	DES 100	Digital Media in Design		3	
	DES 112	Descriptive Drawing II	DES 111	3	MR
	DES 122	History of Material Culture II		3	MR/URE Humanities
	DES 132	Design Foundations II	DES 131	3	MR
		Total		**16**	

SECOND YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	ARC 201	Architectural and Interior Design Studio I	DES 100, 112, 121 or 122, 131 132 MTH 003 or 111	6	MR
	ARC 213	Analysis & Methods in Architecture	DES 100	3	MR
	PHY 104	Physics for Architects	MTH 111	3	MR/URE Science I
	COM XXX	Advised Elective		3	URE English III
		Major Elective		3	ME I
		Total		**18**	
Spring	ARC 202	Architectural and Interior Design Studio II	ARC 201	6	MR
	ARC 224	Modern Foundations of Art & Architecture	DES 121, 122	3	MR
	ARC 232	Survey of Materials & Practices in Construction		3	MR
	ARC 242/ CVE 272	Structural Principles: Statics & Strength of Materials	PHY 104	3	MR
	COM XXX	Advised Elective		3	URE English IV
		Total		**18**	

THIRD YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	ARC 301	Architectural Design Studio III	ARC 202, 224, PHY 104	6	MR
	ARC 325	Seminar: Ideas in Architecture	ARC 224	3	MR
	ARC 333	Materials & Practices of Concrete Construction	ARC 232	3	MR
	ARC 343/ CVE 371	Structural Analysis: Conceiving Forces in Buildings	ARC 242/ CVE 272	3	MR
		Major Elective		3	ME II
		Total		**18**	
Spring	ARC 302	Architectural Design Studio IV	ARC 301	6	MR
	ARC 352	Environmental Energies & Building Form	PHY 104	3	MR
	CVE 372	Structural Design: Concrete, Steel & Wood	ARC 343/ CVE 272	3	MR
		Major Elective		3	ME III
		Advised Elective		3	URE Social Science I
		Total		**18**	
Summer	ARC 397	Professional Training		0	MR

FOURTH YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	ARC 401	Architectural Design StudioV	ARC 302, 333, 242, 352, 397	6	MR
	ARC 453	Environmental Control Systems in Architecture	ARC 352	3	MR
		Advised Elective		3	URE Science II
		Advised Elective		3	URE Arabic I
		Open Elective		3	OE I
		Total		**18**	
Spring	ARC 402	Architectural Design Studio VI		6	MR
	ARC 434	Finish Construction Processes	ARC 333	3	MR
		Advised Elective		3	URE Math II
	COM 208	Public Speaking	COM 102	3	URE English V
		Advised Elective		3	URE Social Science II
		Total		**18**	
Summer		Open Elective		3	OE II
		Open Elective		3	OE III
		Total		**6**	

Design Management

The Bachelor of Science in Design Management (B.S.Des.M.) at AUS provides students with the opportunity to engage in a design-based program with an entrepreneurial component. Design management as a discipline integrates visual design and business studies. This discipline allows graduates to position themselves as entry-level managers, directors or coordinators in the ever-changing field of design in its broadest definition.

Bachelor of Science in Design Management (B.S.Des.M.)

The program in design management provides broad insights into the foundations, theory and application of design and business studies. On the one hand, it offers a balanced combination of studio, design technologies, culture and media courses. On the other hand, the program complements design courses with a solid introduction to management, marketing, information systems and other business related courses. The aim is to prepare individuals to operate within the specific cultural and economic context of the UAE. Moreover, it provides its graduates with the knowledge to relate to and excel in the global market.

A degree in design management allows for independent or cooperative career paths. These range from industry-based communication businesses to market research analysis to fine-art-oriented facilities. Career paths include, but are not limited to administrative and managerial careers in media and service industries, product design, furnishings, project management, advertisement, fine arts and culture management, and administration.

Admission to the Program

Admission to the B.S.Des.M. degree requires the fulfillment of the general university admission requirements.

Degree Requirements

The B.S.Des.M. requires a minimum of 120 credit hours of coursework, a minimum of forty-two (42) of which are taken in architecture and/or design, including a minimum of twelve (12) credit hours at the 300 level or above. All students are required to complete the common architecture and design foundations courses. An additional twenty-one (21) credit hours are taken in business and management, along with forty-two (42) credit hours of university and general education requirements and nine (9) credit hours of electives. Some credit hours overlap among the sets of requirements. In addition, professional training is required of all students.

Please see proposed sequence of study for a specific strategy for completing these graduation requirements in four years.

Proposed Sequence of Study

Bachelor of Science in Design Management

(B. S. Des. M.)

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	COM 101	Academic Writing	EPT 4	3	URE English
	DES 111	Descriptive Drawing I		3	MR
	DES 121	History of Material Culture I		3	MR/URE Humanities
	DES 131	Design Foundations I		3	MR
	MTH 101	Mathematics for Business	MTH 002 or MPT	3	MR/URE Math
		Total		**15**	
Spring	COM 102	Writing and Reading Across the Curriculum	EPT score 5 or COM 101	3	URE English
	DES 100	Digital Media in Design		3	MR
	DES 112	Descriptive Drawing II	DES 111	3	MR
	DES 122	History of Material Culture II		3	MR/URE Humanities
	DES 132	Design Foundations II	DES 131	3	MR
		Total		**15**	

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	COM 235	Communication in Advertising	COM 102	3	URE English
	STA 201	Introduction to Statistics		4	URE Statistics
	PHY 100	Conceptual Physics		3	MR/URE Science
	BIS 201	Business Information Systems		3	MR
		Major elective		3	ME
		Total		**16**	
Spring	COM XXX	Advised Elective	COM 102	3	URE Oral Comm.
	DES 320	Interactive Web Design	CMP 101N, or 110, or DES 100	3	MR
	MGT 201	Introduction to Management		3	MR
	SOC XXX	Advised Elective		3	MR/URE Social Science
		Advised elective		3	URE Science
		Total		**15**	

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	ECO 201	Principles of Microeconomics		3	MR/URE Soc Sci
	VIS 360	Fundamentals of Media Theory	DES 112, 132	3	MR
		Major elective		3	ME
	COM 231	Writing for Visual Media	COM 102	3	MR/URE English
	ACC 201	Fundamentals of Financial Accounting		3	MR
		Total		**15**	
Spring	ARA XXX	Advised elective		3	URE Arabic
		Major elective		3	ME
	VIS 361 or ARC 562	The Media Industry or Professional Practice III: Building Law	DES 112/ DES 132	3	MR
	MKT 201	Fundamentals of Marketing	ECO 210 and 202	3	MR
	Open elective			3	OE
	DES 397	Internship		0	MR
		Total		**15**	

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	ACC 202	Fundamentals of Managerial Accounting		3	MR
	BLW 301	Legal Issues in Business	Junior standing	3	MR
		Major elective		3	ME
		Major elective		3	ME
		Open elective		3	OE
		Total		**15**	
Spring	DES 400Z	Final Project	DES 400X	3	MR
	FIN 201	Fundamentals of Financial Management	ACC 202, MTH 101	3	MR
	MGT 403	Entrepreneurship	ACC202	3	MR
		Major elective		3	ME
		Open elective		3	OE
		Total		**15**	

Abbreviations:
OE: Open Elective; **MR:** Major Requirement; **URE:** University Requirement;
ME: Major Elective; **EPT:** English Placement Test

Heritage Management

Even if we are unaware of it, every step we take is in the footsteps of our ancestors. They leave with us the material remains of their presence, objects and buildings that, although often hidden, nonetheless surround us. It is important to uncover, understand, preserve and promote this material legacy if we are to maintain a sense of continuity with our cultural traditions and heritage.

Heritage management is an interdisciplinary approach to the study, preservation and display of material history, with specific emphasis on the movable and immovable cultural property of the Arabian Gulf region. Students apply their training in documentation, assessment, research, preservation, conservation, restoration and display to projects of historical and cultural significance to the United Arab Emirates.

Bachelor of Science in Heritage Management (B.S.H.M.)

The heritage management degree program is intended for students seeking professional careers in governmental offices of heritage, culture, tourism, planning, museums, art galleries and other public or private agencies specializing in heritage marketing and education, building and object preservation, conservation, restoration and display.

The B.S.H.M. degree requires one hundred twenty (120) credit hours, sixty-nine (69) of which consist of heritage management and closely associated fields. Each student is required to extend the core curriculum with nine (9) credit hours of elective coursework in the major field. Students are encouraged to complete related courses in the multimedia and interior design programs to enhance the visual communication skills necessary for museum and gallery work. The specialized curriculum is supported by forty-two (42) credit hours of university requirements. Designed to ensure a broad educational foundation, this base is held common among all graduates of the American University of Sharjah. University studies present a unique opportunity to explore other fields of interest. Based solely on individual interests, each student must select nine (9) credit hours of open electives from general university offerings. In addition, six weeks of approved professional training is required of all students.

Admission to the Program

Formal admission to the B.S.H.M. degree requires the fulfillment of the general university admission requirements.

Degree Requirements

A total of one hundred and twenty (120) credit hours, including the following:

* Forty-two (42) credit hours of university requirements
* Sixty-nine (69) credit hours of heritage management and related courses in the core curriculum
* Nine (9) credit hours of approved heritage management electives
* Nine (9) credit hours of open electives
* Six weeks of approved professional training

Proposed Sequence of Study

Bachelor of Science in Heritage Management

(B.S.H.M.)

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	COM 101	Academic Writing	EPT 4	3	URE Comm. 1 of 4
	DES 100	Digital Media in Design		3	MR 1 of 1
	DES 111	Descriptive Drawing I		3	MR
	DES 121	History of Material Culture I		3	MR/URE Humanities 1 of 1
	DES 131	Design Foundations I		3	MR
		Total		**15**	
Spring	COM 102	Writing and Reading Across the Curriculum	EPT score 5 or COM 101	3	URE Comm. 2 of 4
	DES 112	Descriptive Drawing II	DES 111	3	MR
	DES 122	History of Material Culture II		3	MR/URE Humanities 1 of 1
	DES 132	Design Foundations II	DES 131	3	MR
	MTH xxx	Advised Elective	MPT	3	MR/URE Math-Logic 1 of 2
		Total		**15**	

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	COM 235	Communication in Advertising	COM 102	3	URE Comm. 3 of 4
	SCI XXX	Advised Elective		3	URE Science1 of 2
	HRM 201	History of Material Culture in the Arabian Gulf I	DES 121, 122, 132	3	MR
	THM XXX	Advised Elective		3	URE Theme 1 of 4/Arabic 1 of 1
	VIS 221	Photography Basics	DES 100, 112, 132, 121 or 122, MTH 001 or higher		
		Total		**15**	
Sprig	COM 231	Writing for Visual Media	COM 102	3	URE Comm. 4 of 4
	VIS 213	Illustration Drawing	DES 112, 132	3	MR
	HRM 202	History of Material Culture in the Arabian Gulf II	HRM 201	3	MR
	THM XXX	Advised Elective		3	URE Theme 2 of 4
	HRM XXX	Major (Heritage Management) Elective		3	ME 1 of 3
		Total		**15**	

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	HRM 321	Introduction to Issues in Heritage Management I	HRM 202	3	MR
	HRM 331	Traditional Regional Material and Climate		3	MR
	STA XXX	Advised Elective		3	URE Math-Logic 2 of 2
	HRM XXX	Major (Heritage Management) Elective		3	ME 2 of 3
	THM XXX	Advised Elective		3	URE Theme 3 of 4
		Total		**15**	
Spring	HRM 322	Introduction to Issues in Heritage Management II	HRM 321	3	MR
	HRM 332	Theory and Practice of Building Restoration	HRM 331	3	MR
	HRM 333	Exhibition Design		3	MR
	HIS XXX	History of UAE		3	MR
	THM XXX	Advised Elective		3	URE Theme 4 of 4
	HRM 397	Internship		0	MR
		Total		**15**	

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	HRM 490	Final Project Research	HRM 322, 332	3	MR
	HRM 401	Topical Practicum in Heritage Management I	HRM 322, 332	3	MR
		Open Elective		3	OE 1 of 3
	HRM XXX	Major (Heritage Management) Elective		3	ME 3 of 3
	SCIXXX	Advised Elective		3	URE Science 2 of 2
		Total		**15**	
Spring	HRM 491	Final Project Design	HRM 490, 397	6	MR
	HRM 402	Topical Practicum in Heritage Management II	HRM 401	3	MR
		Open Elective		3	OE 2 of 3
		Open Elective		3	OE 3 of 3
		Total		**15**	

Abbreviations:
OE: Open Elective, **MR**: Major Requirement, **URE:** University Requirement,
ME: Major Elective, **EPT:** English Placement Test, **MPT:** Math Placement Test

Interior Design

The profession of interior design lies between interior decoration and architecture. The interior designer must be competent to operate in both professions, with an intimate knowledge of material selection, construction methods, and furnishings as well as technical skills and construction expertise.

Interior designers usually work as part of a design team, including architects, structural and mechanical engineers and specialty consultants. They must possess a broad base of knowledge and skills.

Interior designers create, and are responsible for all aspects of the interior environment-program, design, construction documents, supervision, lighting, material and furniture selection. Like architects, they create interiors using space itself as a creative material, molded by architectural elements. They know intimately the materials of interior construction and finishing, decoration and lighting, and how to use these in innovative designs that support an overall spatial and formal idea.

Interior design services encompass research, development and implementation of plans and designs of interior environments. The objective is to improve the quality of life, increase productivity and protect the health, safety and welfare of the public. The professional interior designer must be able to see projects through from concept to physical completion.

Potential career options for persons majoring in interior design include interior designer, space planner, programmer, adaptive reuse designer, facilities planner, project manager, design journalist, educator, researcher, salesperson, renderer, healthcare designer, office planner and hospital designer.

The interior design program at AUS emphasizes creativity and innovation in the art of interior design while giving students a strong background in technique and practical knowledge. The

program core is comprised of six rigorous design studios following the common foundations year. Interior design studios encourage the development of analytical and reasoning skills, as well as the ability to conceptualize, develop and present designs. Architecture and interior design share a common second year studio to heighten students' awareness and technical capabilities regarding primary formal, structural and tectonic issues. The interior design studios are supplemented by technical courses ranging from furniture design and materials and methods of interior construction to specific training in color and light.

The program prepares students for responsible design careers, and is firmly committed to graduating individuals that can join the regional or international workforce as competent and creative entry-level professionals. The American University of Sharjah is committed to providing students in interior design with traditional, as well as digital, design presentation skills to broaden their marketability and design capabilities.

The program emphasizes topics critical to the sustainable development of society and the quality of life in the region, with an emphasis on the United Arab Emirates. Professional training and internships solidify the student's contact and involvement with local practice. Interior design and architecture faculty members serve as both professional and academic mentors.

Bachelor of Interior Design (B.I.D.)

The Bachelor of Interior Design (B.I.D.) degree is intended for the student seeking a professional career in interior design. The program entails a minimum of four years of university studies plus professional training. One hundred thirty-nine (139) semester credit hours comprise the degree program, including ninety-one (91) credit hours of required coursework in interior design and closely associated fields. These courses represent the core of the interior design discipline.

Each student is required to extend the core curriculum with nine (9) credit hours of elective coursework in the major field. The intent is to balance the concern for in-depth professional competence with the concern for the individual's interest and aptitude. These courses should be selected in consultation with the student's advisor.

The specialized professional curriculum is supported by forty-two (42) credit hours of university requirements. Designed to ensure a broad educational foundation, this base is held in common

among all graduates of the American University of Sharjah.

University studies represent a unique opportunity to explore other areas of interest. Based solely on individual interests, each interior design student must select nine (9) additional credit hours of open electives from general university offerings.

The curriculum is designed to meet requirements for licensure that prevail in the United Arab Emirates, and to prepare the graduate for professional practice throughout the region. Some students may aspire either to advanced study in the field or to practice in a broader global setting. Accordingly, the curriculum follows criteria established by the Foundation of Interior Design Research (FIDER) of the United States for a first professional degree in interior design.

Admission to the Program

The number of seats in interior design is limited. Formal admission to the program is competitive. Only the most highly qualified foundations students are accepted.

The minimum foundations requirements include

* All four foundations studio courses (DES 111, 112, 131, 132) with a minimum grade point average (GPA) of 2.0 in each sequence (design and drawing)
* At least one course in history of material culture (DES 121 or DES 122)
* Digital Media in Design (DES 100)
* Mathematics for Architects (MTH 111) or its prerequisite (MTH 003)
* At least one course in the university communication sequence
* A minimum of twenty-seven (27) semester hours of university credit (including the above courses)
* An overall grade point average (GPA) of 2.0

Formal notification of acceptance to the program will be announced in mid-June. In the event that there are more students who qualify for the program than available spaces, candidates with the highest overall GPA will be admitted to each major, and a wait-list will be established. In the event of a tie, students with the highest GPA in all four foundations studio courses will advance to second year. In the event of a second tie, students with the highest GPA in history of material culture and Mathematics for Architects will advance to the second year.

Retention Review in Interior Design

As an extension of the regular advisement process, the performance of each interior design student is reviewed following the completion of the second and third years in the program. A student must pass each review to continue in the major and must

* Have attained a minimum grade point average (GPA) of (2.3) in each architectural design studio course sequence
* Have attained a minimum grade point average (GPA) of (2.5) in all university courses

If the review has a negative outcome, the department will assist an unsuccessful candidate in transferring to a field that holds better promise.

Degree Requirements

A total of one hundred thirty-nine (139) credit hours, including the following:

* Forty-two (42) credit hours of university requirements
* Ninety-one (91) credit hours of interior design and related courses in the core curriculum
* Nine (9) credit hours of approved interior design electives
* Nine (9) credit hours of open electives.
* Six weeks of approved professional training

Please see proposed sequence of study for a specific strategy for completing these graduation requirements in four years.

Proposed Sequence of Study

Bachelor of Interior Design

(B. I. D.)

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	COM 101	Academic Writing	EPT 4	3	URE Communication 1 of 4
	DES 111	Descriptive Drawing I		3	MR
	DES 121	History of Material Culture I		3	MR/URE Humanities 1 of 2
	DES 131	Design Foundations I		3	MR
	MTH 111	Mathematics for Architects	MTH 003 or MPT	4	MR/URE Math-Logic1 of 2
		Total		**15**	
Spring	COM 102	Writing and Reading across the Curriculum	EPT score 5 or COM 101	3	URE Communication 2 of 4
	DES 100	Digital Media in Design		3	MR
	DES 112	Descriptive Drawing II	DES 111	3	MR
	DES 122	History of Material Culture II		3	MR/URE Humanities 2 of 2
	DES 132	Design Foundations II	DES 131	3	MR
		Total		**16**	

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	IDE 201	Architectural and Interior Design Studio I	DES 100, 112, 121 or 122, 132, MTH 003 or 111	6	MR
	COM XXX	Advised Elective		3	URE Commu nication 3 of 4
	IDE 223	History of Interior Design	DES 121, 122	3	MR
	IDE 233	Interior Construction		3	MR
	PHY 104	Physics for Architects	MTH101, 103 or 111	3	MR/ URE Science 1 of 2
		Total		**18**	
Spring	COM XXX	Advised Elective		3	URE Communication 4 of 4
	IDE 202	Architectural and Interior Design Studio II	IDE 201	6	MR
	IDE 234	Soft Furnishings	IDE 233	3	MR
	IDE 251	Color and Light	PHY 104	3	MR
	STA XXX	Advised Elective		3	URE Math-Logic 2 of 2
		Total		**18**	

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	IDE 301	Interior Design Studio III	IDE 202, 223	6	MR
	IDE 335	Furniture Design	IDE 234	3	MR
	IDE XXX	Major (Interior Design) Elective		3	ME 1 of 3
	THM XXX	Advised Elective	COM 102	3	URE Theme 1 of 4
		Open Elective			OE 1 of 3
		Total		**18**	
Spring	IDE 302	Interior Design Studio IV	IDE 301	6	MR
	IDE 397	Internship (6 weeks summer training)	IDE 302	0	MR
	IDE 352	Environmental Control Systems in Interiors	PHY 104	3	MR
	IDE XXX	Major (Interior Design) Elective		3	ME 2 of 3
	THM XXX	Advised Elective		3	URE Theme 2 of 4
	SCI XXX	Advised Elective		3	URE Science 2 of 2
		Total		**18**	

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	IDE 401	Interior Design Studio V	IDE 302	6	MR
	IDE 461	Professional Practice I: Project Management	IDE 397	3	MR
	IDE 490	Final Project Research	IDE 302, 335, 352, 397	3	MR
	THEM xxx	Advised Elective		3	URE Theme 3 of 4
		Open Elective		3	OE 2 of 3
		Total		**18**	
Spring	IDE 491	Final Project Design	IDE 401, 490	6	MR
	IDE 462	Professional Practice II: Design Management	IDE 461	3	MR
	IDE XXX	Major (Interior Design) Elective		3	ME 3 of 3
	THM XXX	Advised Elective		3	URE Theme 4 of 4
		Open Elective		3	OE 3 of 3
		Total		**18**	
		Total for the degree		**139**	

Abbreviations:
OE: Open Elective, **MR:** Major Requirement, **URE:** University Requirement,
ME: Major Elective, **EPT:** English Placement Test; **MPT:** Math Placement Test

Multimedia Design

Multimedia design studies span a number of disciplines, including technology, communications, the arts, writing, photography, video, advertising and design. This major engages students with broad-ranging interests in graphic and 3-D design, digital technology and time-based media. To meet the challenges of this rapidly changing field, AUS offers the Bachelor of Science in Multimedia Design degree.

Bachelor of Science in Multimedia Design (B.S.M.D.)

The B.S.M.D. requires a minimum of four years (122 credit hours) of coursework, sixty-eight (68) of which are in multimedia related studies, including sound, video, text, computer graphics, advertising and theory courses. The specialization is supported by forty-two (42) credit hours of university and general education requirements and nine (9) credit hours of free electives. Students in the Department of Design must take the thematic option with Arabic content. Some credit hours overlap among the sets of requirements. In addition, professional training (internship) is required of all students.

The B.S.M.D. is a professional program designed for those who seek careers in the modern media industries. The curriculum follows standards of professional North American practice and is conceived to meet or exceed the requirements of multimedia industries in the United Arab Emirates.

Admission to the Program

Admission to the B.S.M.D. requires the fulfillment of the general university admission requirements.

Degree Requirements (B.S.M.D.)

General education requirements (UREs):	**42 cr.**
Major requirements (MRs - minus six credits of URE crossovers):	**47 cr.**
Major electives (MEs):	**24 cr.**
Free electives (FEs):	**9 cr.**
Total	**122 cr.**

Major requirements (53 credits):

* DES 100 Digital Media in Design
* DES 111 Descriptive Drawing I
* DES 112 Descriptive Drawing II
* DES 121 Hist. of Material Culture I (URE crossover)
* DES 122 Hist. of Material Culture II (URE crossover)
* DES 131 Design Foundations I
* DES 132 Design Foundations II
* VIS 201 Graphic Design Studio I
* VIS 221 Photography Basics
* VIS 230 Digital Media in Visual Communication
* VIS 202 Graphic Design Studio II
* VIS 213 Illustration Drawing
* VIS 360 Fundamentals of Media Theory
* MUM 301 Multimedia Studio
* MUM 397 Internship
* MUM 401 Senior Multimedia Studio
* MUM 402 Senior Multimedia Portfolio

Major Electives (24 credits from the following):

* MUM 310 Sound and Video I
* MUM 312 Sound and Video II
* MUM 320 Web Design
* MUM 321 Photo Journalism
* MUM 330 Interactive Design
* MUM 331 Modeling & Animation
* MUM 410 Advanced Sound & Video
* VIS 311 Illustration Design
* VIS 312 Illustration Genres
* VIS 320 Multiples I
* VIS 322 Multiples II
* VIS 323 Photography for Communication
* VIS 361 The Media Industry

Please see the proposed sequence of study for a specific strategy for completing these graduation requirements in four years.

Retention Review in Multimedia Design

First Year Review

The number of seats in multimedia design is limited. Admission to the program is competitive. Only the most highly qualified foundations students are accepted.

To be considered for admission to the Bachelor of Science in Multimedia Design a student must successfully complete the foundations year in the School of Architecture and Design. Additional entry restrictions to the program may also apply.
The minimum foundations requirements include:

* All four foundations studio courses (DES 111, 112, 131, 132) with a minimum grade point average (GPA) of C (2.0) in each sequence (design and drawing)
* At least one course in history of material culture (DES 121 or DES 122)
* Digital Media in Design (DES 100)
* Mathematics (MTH xxx) or its prerequisite (MTH 001) for students who failed the Math placement test
* At least one course in the university communication sequence (COM 101)
* A minimum of twenty-seven (27) semester hours of university credit (including the above courses)
* An overall grade point average (GPA) of C (2.0)

Formal notification of acceptance to the program will be announced in mid-June. A wait-list will be maintained and the enrollment will be adjusted during the fall registration period. In the event of a tie, students with the higher combined GPA in history of material culture and mathematics will advance to the second year.

Second Year Review

As an extension of the regular advisement process, the performance of all students in multimedia design will be reviewed after the fourth semester for retention in the program. To successfully pass this review, a combined grade point average (GPA) of C+ (2.3) must be attained in VIS 201 and VIS 202, with a minimum grade of C- (1.7) in each class. If the review has a negative outcome, the department will assist an unsuccessful candidate in transferring to a field that holds better promise.

Proposed Sequence of Study

Bachelor of Science in Multimedia Design

(B.S.M.D.)

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	COM 101	Academic Writing	EPT 4	3	URE
	DES 111	Descriptive Drawing I		3	MR
	DES 121	History of Material Culture I		3	MR/URE
	DES 131	Design Foundations I		3	MR
	DES 100	Digital Media in Design		4	MR
		Total		**15**	
Spring	COM 102	Writing and Reading across the Curriculum	EPT score 5 or COM 101	3	URE
	MTH XXX	Mathematics Requirement		3	MR/URE
	DES 112	Descriptive Drawing II	DES 111	3	MR
	DES 122	History of Material Culture II		3	MR/URE
	DES 132	Design Foundations II	DES 131	3	MR
		Total		**15**	

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	VIS 201	Graphic Design Studio I	DES 100, 112 and 132; DES 121 or 122; MTH XXX; and COM 101 or 102	3	MR
	VIS 221	Photography Basics	DES 100, 112 and 132; DES 121 or 122; MTH XXX; and COM 101 or 102	3	MR
	VIS 230	Digital Media in VisCom	DES 100, 112 and 132; DES 121 or 122; MTH XXX; and COM 101 or 102	3	MR
	MTH XXX	Mathematics Requirement		3	URE
	THM XXX	Thematic Option Course 1		3	URE
		Total		**15**	
Spring	VIS 202	Graphic Design Studio II	VIS 201, 221 and 230	3	MR
	VIS 213	Illustration Drawing	VIS 201, 221 and 230	3	MR
	VIS 360	Fundamentals of Media Theory	DES 112, DES 132	3	MR
	COM 231	Writing for Visual Media	COM 102	3	URE
	THM XXX	Thematic Option Course II		3	URE
		Total		**15**	

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	MUM 301	Multimedia Studio I	VIS 202, 213 and 360	3	MR
	MUM XXX	Advised electives (at least two of the following for a total of 6 credits)			
		MUM 310 Sound and Video I or	VIS 202, 213 and 360	3	ME
		MUM 320 Web Design or	VIS 202, 213 and 360	3	ME
		MUM 321 Photo Journalism	VIS 202, 213 and 360	3	ME
	SCI XXX	Science Requirement		3	URE
	THM XXX	Thematic Option Course III		3	URE
		Total		**15**	
Spring	MUM XXX	Advised electives (at least two of the following for a total of 6 credits)			
		MUM 312 Sound and Video II	VIS 202, 213 and 360	3	ME
		MUM 330 Interactive Design	VIS 202, 213 and 360	3	ME
		MUM 331 Modeling & Animation	VIS 202, 213 and 360	3	ME
	MUM 397	Internship	MUM 301	3	MR
	SCI XXX	Science Requirement		3	URE
	THM XXX	Thematic Option Course IV		3	URE
		Total		**15**	

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	MUM 401	Senior Multimedia Studio	MUM 301	4	MR
	MUM 410	Advanced Sound & Video	MUM 310 or 312	3	ME
	VIS 361	The Media Industry	COM 101 or 102	3	ME
	COM 235	Communication in Advertising	COM 102	3	URE
		Open Elective		3	OE
		Total		**16**	
Spring	MUM 402	Senior Multimedia Portfolio	MUM 401	4	MR
	MUM/VIS XXX	Major Elective	VIS 202, 213 and 360	3	ME
	MUM/VIS XXX	Major Elective	VIS 202, 213 and 360	3	ME
		Open Elective		3	OE
		Open Elective		3	OE
		Total		**16**	

Abbreviations:
OE: Open Elective, **MR:** Major Requirement, **URE:** University Requirement,
ME: Major Elective, **EPT**: English Placement Test; **MPT:** Math Placement Test

Visual Communication

The creation, manipulation and production of visual images and text are at the core of this major. Visual communication is influenced to a large degree by fast changing worldwide technologies. Apart from broad technical, computer and artistic training, visual communication experts require an understanding of human nature, ethical boundaries and societal needs. Visual communicators aim to inform, persuade and influence behavior. To meet those and related objectives, AUS offers the Bachelor of Science in Visual Communication (B.S.V.C.) degree. Bachelor of Science in Visual Communication (B.S.V.C.)

The Bachelor of Science in Visual Communication (B.S.V.C)

The B.S.V.C degree requires a minimum of four (4) years of university studies. The foundations year of visual communication (VisCom) consists of a basic education in the applied arts, training in computer applications and courses in the history and relevance of design and visual expression. In the following years, elements of advertising, package design and marketing are explored in individual, hands-on studio projects. The graphic design sequence is the program core that integrates practical, cultural and contextual aspects of visual communication.

The B.S.V.C. is a professional program. The one hundred twenty-two (122) credit hours required for the degree comprise sixty-eight (68) credit hours in visual communication, digital applications and visual design related subjects. This specialization is supported by forty-two (42) credit hours of university requirements and nine (9) credit hours in elective courses. Students in the Department of Design must take the thematic option with Arabic content. Some credit hours overlap among the sets of requirements. In addition, professional training (internship) is required of all students.

The B.S.V.C. is configured to prepare those who seek careers as designers in advertising, publishing and related visual communication media. The curriculum follows standards of professional North American organizations such as the National Association of Schools of Art and Design and is conceived to meet or exceed requirements for visual communication experts in the United Arab Emirates.

Admission to the Program

Admission to the B.S.V.C. program requires the fulfillment of general university admission requirements.

Degree Requirements (B.S.V.C.)

General education requirements (UREs):	**42 cr.**
Major requirements (MRs - minus six credits of URE crossovers):	**53cr.**
Major electives (MEs):	**18 cr.**
Free electives (FEs):	**9 cr.**
Total	**122 cr.**

Major requirements (59 credits):

DES 100 Digital Media in Design

DES 111 Descriptive Drawing I

DES 112 Descriptive Drawing II

DES 121 Hist. of Material Culture I (URE crossover)

DES 122 Hist. of Material Culture II (URE crossover)

DES 131 Design Foundations I

DES 132 Design Foundations II

VIS 201 Graphic Design Studio I

VIS 221 Photography Basics

VIS 230 Digital Media in VisCom

VIS 202 Graphic Design Studio II

VIS 213 Illustration Drawing

VIS 301 Graphic Design Studio III

VIS 360 Fundamentals of Media Theory

VIS 397 Internship

VIS 401 Senior Graphic Design Studio

VIS 402 Senior Graphic Design Portfolio

VIS 410 Senior VisCom Studio

VIS 420 Senior VisCom Portfolio

Major Electives (18 credits from the following):

VIS 311 Illustration Design

VIS 312 Illustration Genres

VIS 320 Multiples I

VIS 322 Multiples II

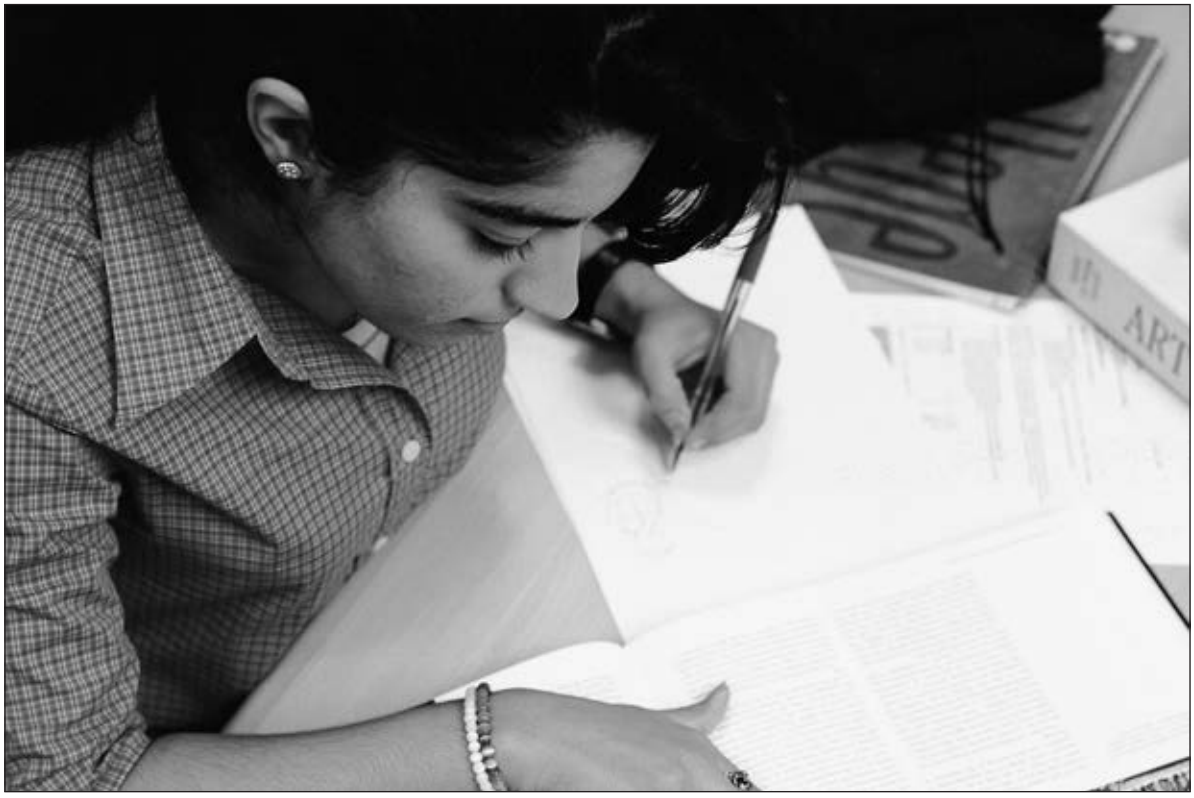
VIS 323 Photography for Communication

VIS 361 The Media Industry

MUM 310 Sound and Video I

MUM 312 Sound and Video II

MUM 320 Web Design



MUM 321 Photo Journalism

MUM 330 Interactive Design

MUM 331 Modeling & Animation

MUM 410 Advanced Sound & Video

Please see the proposed sequence of study for a specific strategy for completing these graduation requirements in four years.

Retention Review in Visual Communication

First Year Review

The number of seats in visual communication is limited. Admission to the program is competitive. Only the most highly qualified foundations students are accepted.

To be considered for admission to the Bachelor of Science in Visual Communication program, a student must successfully complete the foundations year in the School of Architecture and Design. Additional entry restrictions to the program may also apply.

The minimum foundations requirements include

* All four foundations studio courses (DES 111, 112, 131, 132) with a minimum grade point average (GPA) of C (2.0) in each sequence (design and drawing)
* At least one course in history of material culture (DES 121 or DES 122)
* Digital Media in Design (DES 100)
* Mathematics (MTH xxx) or its prerequisite (MTH 00x) for students who failed the Math placement test
* At least one course in the university communication sequence (COM 101)
* A minimum of twenty-seven (27) semester hours of university credit (including the above courses)
* An overall grade point average (GPA) of C (2.0)

Formal notification of acceptance to the program will be announced in mid-June. A wait-list will be maintained and the enrollment will be adjusted during the fall registration period In the event of a tie, students with the higher combined GPA in history of material culture and mathematics will advance to the second year.

Second Year Review

As an extension of the regular advisement process, the performance of all students in visual communication will be reviewed after the fourth semester for retention in the program. To successfully pass this review, a combined grade point average (GPA) of C+ (2.3) must be attained in VIS 201 and VIS 202, with a minimum grade of C- (1.7) in each class. If the review has a negative outcome, the department will assist an unsuccessful candidate in transferring to a field that holds better-promise.

Proposed Sequence of Study

Bachelor of Science in Visual Communication

(B.S.V.C.)

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	COM 101	Academic Writing	EPT 4	3	URE
	DES 111	Descriptive Drawing I		3	MR
	DES 121	History of Material Culture I		3	MR/URE
	DES 131	Design Foundations I		3	MR
	DES 100	Digital Media in Design		4	MR
		Total		**15**	
Spring	COM 102	Writing and Reading across the Curriculum	EPT score 5 or COM 101	3	URE
	MTH XXX	Mathematics Requirement		3	MR/URE
	DES 112	Descriptive Drawing II	DES 111	3	MR
	DES 122	History of Material Culture II		3	MR/URE
	DES 132	Design Foundations II	DES 131	3	MR
		Total		**15**	

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	VIS 201	Graphic Design Studio I	DES 100, 112 and 132; DES 121 or 122; MTH XXX; and COM 101 or 102	3	MR
	VIS 221	Photography Basics	DES 100, 112 and 132; DES 121 or 122; MTH XXX; and COM 101 or 102	3	MR
	VIS 230	Digital Media in VisCom	DES 100, 112 and 132; DES 121 or 122; MTH XXX; and COM 101 or 102	3	MR
	MTH XXX	Mathematics Requirement		3	URE
	THM XXX	Thematic Option Course I		3	URE
		Total		**15**	
Spring	VIS 202	Graphic Design Studio II	VIS 201, 221 and 230	3	MR
	VIS 213	Illustration Drawing	VIS 201, 221 and 230	3	MR
	VIS 360	Fundamentals of Media Theory	DES 112, DES 132	3	MR
	COM 231	Writing for Visual Media	COM 102	3	URE
	THM XXX	Thematic Option Course II		3	URE
		Total		**15**	

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	VIS 301	Graphic Design Studio I	VIS 202, 213 and 360	3	MR
	VIS XXX	Advised electives (at least two of the following for a total of 6 credits)			
		VIS 311 Illustration Design or	VIS 202, 213 and 360	3	ME
		VIS 320 Multiples I or	VIS 202, 213 and 360	3	ME
		VIS 321 Photo Journalism	VIS 202, 213 and 360	3	ME
	SCI XXX	Science Requirement		3	URE
	THM XXX	Thematic Option Course III		3	URE
		Total		**15**	
Spring	VIS XXX	Advised electives (at least two of the following for a total of 6 credits)			
		VIS 312 Illustration Genres	VIS 202, 213 and 360	3	ME
		VIS 322 Multiples II	VIS 202, 213 and 360	3	ME
		VIS 323 Photography for Comm.	VIS 202, 213 and 360	3	ME
	VIS 397	Internship	VIS 301	3	MR
	SCI XXX	Science Requirement		3	URE
	THM XXX	Thematic Option Course IV		3	URE
		Total		**15**	

FOURTH YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Prerequisite(s)**	**Credit Hours**	**Fulfills**
Fall	VIS 401	Senior Graphic Design Studio	VIS 301	4	MR
	VIS 410	Senior VisCom Studio	Any 4 of: VIS 311, 312, 320, 321, 322, 323	3	ME
	VIS 361	The Media Industry	COM 101 or 102	3	ME
	COM 235	Communication in Advertising	COM 102	3	URE
		Open Elective		3	OE
		Total		**16**	
Spring	VIS 402	Senior Graphic Design Portfolio	VIS 401	4	MR
	VIS 420	Senior VisCom Portfolio	VIS 410	3	
	MUM/VIS XXX	Major Elective	VIS 202, 213 and 360	3	ME
		Open Elective		3	OE
		Open Elective		3	OE
		Total		**16**	

Abbreviations:
OE: Open Elective, **MR:** Major Requirement, **URE:** University Requirement,
ME: Major Elective, **EPT:** English Placement Test; **MPT**: Math Placement Test


WELCOME TO AUS

School of Business and Management

Dean
Wadiah Atiyah

Associate Dean
Zeinab Karake-Shalhoub

The American University of Sharjah School of Business and Management provides a high quality professional educational experience. The effective business professional of today must have competence in many disciplines, an understanding of a wide variety of relationships and the ability to analyze evolving business requirements. Regardless of the specialty area, the business professional must be an effective leader who knows how to organize and motivate groups to serve the goals of the organization. Effectively adapting business practices to emerging conditions, such as the accelerating growth of technology, communications and the internationalization of the business world, demands a thorough grasp of current business processes, theory and application. Through its pedagogy, the School of Business and Management

* Prepares individuals to identify, analyze and understand the interrelationships among business organizations and international and domestic institutions in the Emirates, the Gulf States, and throughout the world
* Develops individuals who can lead organizations toward economic success and social and environmental responsibility in the global marketplace of the twenty-first century
* Prepares individuals to integrate information resources and technology to enable them to anticipate and manage change
* Advances students' knowledge of issues and practices affecting business organizations, international and domestic institutions and governments
* Develops an awareness of societal and environmental needs and concerns as they relate to ethical, professional and socially responsible business practices

Furthermore, the School of Business and Management provides its students with a solid core business education that emphasizes the following teaching methodologies:

* Cutting-edge business education, utilizing the latest American business methods, techniques and technologies
* Integrated multidisciplinary approaches to teaching and learning, utilizing the latest business theories coupled with real world business data analysis and presentations
* Multimedia computer based instruction integrated throughout the business curriculum to assist students in learning the latest techniques in business and management
* Research conducted using on-line electronic libraries with thousands of up-to-date business journals and databases

Faculty

The faculty of the School of Business and Management combine a scholarly record of research in the business field with years of practical corporate work experience. The faculty blend their academic and professional experience to create a class environment that is challenging, stimulating and applicable to the business world in the Gulf region and internationally.

Professors
James Grant (Marketing)
Zeinab Karake-Shalhoub (Information Systems)
George Kostopoulos (Information Systems)
Dennis Olson (Finance)

Associate Professors
Stephen Blythe (Accounting)
Ralph Kuehn (Information Systems)
Reagan McLaurin (Management)
Louis Mottola (Quantitative Methods)
Gayle Russell (Finance)
Lewis Tucker (Marketing)

Assistant Professors
Osamah Al Khazali (Finance)
Jorg Bley (Finance)
Abdelkader Daghfous (Information Systems)
Christo El Morr (Information Systems)
Daniel George (Management)
Dennis Huber (Accounting)
Mike Knudstrup (Management)
Kermit Kuehn (Management)
Brent McCallum (Accounting)
Ralph Palliam (Finance)
Sofiane Sahraoui (Information Systems)

Instructors
Peter Birks (Information Systems)
Wadad Cook (Marketing)
Dene Ekholm (Management)
Anthony Farah (Information Systems)
Ronald Williams (Accounting)

Adjunct Faculty
Alexander Abdennur (Management)
Fadi Khlat (Accounting)
Romila Palliam (Accounting)
Joan Shams (Business Law)

Senior Administrative Staff
Gayatri Chandru (Student Advisor)
Siham Doughman (Graduate Programs Coordinator)
Carol Houser (Director of Community Relations)

Admission and Requirements

Students who qualify for admission to AUS as freshmen, may enroll in the School of Business and Management. Due to the quantitative emphasis of the business administration curriculum, students admitted into the Bachelor of Science in Business Administration, Bachelor of Science in Management Information Systems or Bachelor of Science in Finance programs are required to take the Mathematics and

Computer Literacy Placement Examinations. Initially all business students are enrolled in the B.S.B.A. program. Upon completion of at least sixty credit hours of study with a grade point average of 2.5 or higher a student may apply for acceptance to the Bachelor of Science in Management Information Systems or the Bachelor of Science in Finance program.

Transfer students may be given credits for courses completed in the institution from which they are transferring. A grade of B or better must be achieved in business and related courses in order for them to be considered as transfer credits to the School of Business and Management. General university requirements may be transferred with a grade of C or better.
Students wishing to transfer from other schools at AUS may be considered for admission to the School of Business and Management only if they meet the school's minimum academic standards.

All B.S.B.A., B.S.M.I.S. and B.S. in finance transfer students are required to take Business Policy and Strategy and at least thirty upper-level credits towards their concentration requirements. Transfer credits for upper-division business courses are subject to approval by the appropriate School of Business department. Transfer credit may be conditional upon the successful completion of a more advanced course at the American University of Sharjah.

Degree Requirements

A minimum of 123 credit hours as follows:

* Fifteen (15) credit hours of English communication courses
* Six (6) credit hours of science requirement
* Eighteen (18) credit hours of general education requirements as follows:
* One sequence of two theme courses (six credit hours)
* Two other theme courses (six credit hours)
* Two Economics courses designated by SBM as social science requirements (six credit hours)
* Twelve (12) credit hours of mathematics and quantitative methods requirements
* Thirty-three (33) credit hours of core business courses
* Thirty (30) credit hours of business concentration requirements(*)
* Nine (9) credit hours of free electives

Designated Requirements

All School of Business and Management students must take the courses listed below as part of their university or school requirements:

* COM 225 Global Business Communication (formerly COM 206) satisfies a university English requirement
* COM 208 Public Speaking satisfies the school oral communication requirement
* ECO 201 Principles of Microeconomics satisfies a university general education social science requirement
* ECO 202 Principles of Macroeconomics satisfies a university general education social science requirement
* MTH 101 Math for Business I satisfies the university math requirement
* MTH 102 Math for Business II satisfies the school requirement
* THM 201 & THM 202 Andalusian Symbiosis I & II satisfy a university general education theme course sequence requirement

Business Administration Programs

The business administration program provides students with a business core that offers a broad knowledge of business functions while emphasizing the global business environment. In addition to the business core, the student must also complete a major area of specialization in finance or MIS or any combination of two areas of concentration from accounting, finance, management, marketing, and MIS. For non-SBM students, SBM also offers a minor in business administration.

Bachelor of Science in Business Administration (B.S.B.A.)

The objectives of the B.S.B.A. program are to

* Develop an understanding of the UAE, American and international economic systems and the important relationship between business and society
* Develop a global perspective on business operations
* Provide a background in concepts, processes and institutions used in the production and marketing of goods and services and also in the financing of business organizations
* Provide a foundation in concepts and applications of accounting, quantitative methods and information technology
* Stimulate the students' intellectual curiosity, develop their ability to think creatively and reason logically and encourage their consideration of demographic diversity and ethical principles
* Allow students to concentrate in two areas of business they are most interested in (i.e. accounting, finance, management, marketing, MIS)

Business Core

All School of Business and Management students must complete the following thirty-three credits (11 courses) of business core courses with a grade of C- or better, regardless of their areas of concentration:

* ACC 201 Fundamentals of Financial Accounting
* ACC 202 Fundamentals of Managerial Accounting
* BLW 301 Business Law
* BIS 201 Business Information Systems
* FIN 201 Fundamentals of Financial Management
* FIN 301 Financial Statement Analysis
* MGT 201 Fundamentals of Management

* MGT 360 Business Ethics & Social Responsibility
* MGT 406 Business Policy and Strategy
* MIS 201 Fundamentals of Management Information Systems
* MKT 201 Fundamentals of Marketing

Areas of Concentration

The School of Business and Management provides its students with the opportunity to pursue a concentration in two out of five areas of business specialization: accounting, finance, marketing, management, and management information systems.

Accounting

The accounting concentration is designed to prepare graduates for management careers in the fields of accounting, financial management and consulting. Students who pursue this concentration will develop specific business competencies dealing with the financial management of private and public corporations. Furthermore, this concentration is designed to enable students who wish to continue with graduate study to qualify for professional certification, such as the CPA certificate (Certified Public Accountant) in the United States. Courses required for the accounting concentration are

* ACC 301 Intermediate Financial Accounting I
* ACC 302 Intermediate Financial Accounting II
* ACC 303 Cost Accounting
* ACC 304 Auditing
* ACC 401 Advanced Financial Accounting

Finance

This concentration offers students an integrative approach to the fields of banking and finance. Students will develop the analytical tools and theoretical framework necessary to analyze and understand the financial and banking sectors. Furthermore, this concentration provides the essential tools for understanding investments, capital markets, financial management and financial institutions. Students will also develop competencies in the banking sector with regard to management of financial instruments, markets and risk management. Courses required for the finance concentration are

* FIN 302 Financial Markets and Institutions
* FIN 303 Investment Analysis
* FIN 403 Commercial Banking
* FIN 404 Portfolio Management
* FIN 405 Advanced Financial Management

Management

The management concentration offers professional training in the complex art of human management as it relates to corporate and organizational behavior in the business world. The field of management requires knowledge of individual and group behavior, the processes of perception and how people select and interpret information. This concentration provides the tools and skills necessary to manage simultaneous complex tasks and objectives through rigorous project management training and project simulations. Students will gain an understanding of the importance of management to society and organizations, and how management can be a force for positive change in a rapidly changing business environment. Courses required for the management concentration are

* MGT 301 Organizational Behavior
* MGT 302 Managing Human Resources
* MGT 303 Management and Leadership Development
* MGT 403 Entrepreneurship
* MGT 380 Project Management Marketing

Marketing

Students in this concentration study the practical application of marketing concepts such as procedures for developing promotions, pricing of products, distribution channels and sales management strategies. Furthermore, heavy emphasis is placed on market research utilizing statistical analytical techniques, consumer behavior and a variety of market programming methodologies. Particular emphasis is placed on interpersonal communication techniques and on the practical application of marketing concepts as they relate to sales management. Courses required for the marketing concentration are

* MKT 301 Consumer Behavior
* MKT 302 Marketing Research
* MKT xxx Marketing Elective
* MKT xxx Marketing Elective
* MKT 401 Marketing Strategy

Management Information Systems

Managers and non-managers alike depend upon information for decision-making. To be useful, information must be understandable, timely, thorough, focused and distributed to the appropriate individual. Accomplishing all this is the challenge of management information systems. In this concentration, students will acquire professional skills in the areas of computer systems, networks, communications, data analysis and other skills needed by this expanding field of technology. Courses required for the management information systems concentration are

* MIS 301 Fundamentals of Database Management
* MIS 302 Advanced Database Management
* MIS 303 Introduction to Systems Analysis
* MIS 403 Applied Systems Design
* MIS 404 Internet Business Applications

Proposed Sequence of Study

Bachelor of Science in Business Administration

Concentration in Accounting & Finance

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 101	Academic Writing	3	EPT score 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		URE
	MTH 101	Math for Business I	3	Pass Placement Test or MTH 002	URE
	BIS 201	Business Information Systems	3	Pass Placement Test or BIS 001	CRE
	XXX	Science Elective	3		URE
		Total	**15**		
Spring	COM102	Writing and Reading Across the Curriculum	3	COM101	URE
	ECO 202	Principles of Macroeconomics	3		URE
	MTH 102	Math for Business II	3	MTH 101	URE
	QAN 201	Introduction to Statistics	3		URE
	XXX	Science Elective			URE
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 204	Advanced Academic English	3	COM 102	URE
	MGT 201	Fundamentals of Management	3	Second Semester (12 credits min.)	CRE
	ACC 201	Fundamentals of Financial Accounting	3	Second Semester	CRE
	QAN 202	Quant. Analysis for Decision Making	3	QAN 201	CRE
	THM 201	The Andalusian Symbiosis I	3	COM102	URE
		Total	**15**		
Spring	ACC 202	Fundamentals of Managerial Accounting	3	ACC 201	CRE
	FIN 201	Fundamentals of Financial Management	3	ACC 201, QAN 201	CRE
	MKT 201	Fundamentals of Marketing	3	ECO 201, ECO 202	CRE
	MIS 201	Fundamentals of MIS	3	BIS 201	CRE
	THM 202	The Andalusian Symbiosis II	3	THM 201	URE
		Total	**15**		

THIRD YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	FIN 301	Financial Statement Analysis	3	ACC 202, FIN 201	CRE
	COM 208	Public Speaking	3	COM 102	CRE
	FIN 302	Financial markets and institutions	3	FIN 201	MRE
	ACC 301	Intermediate Financial Accounting I	3	ACC 202	MRE
	ACC 303	Cost Accounting	3	ACC 202	MRE
		Total	**15**		
Spring	MGT360	Business Ethics & Social Responsibility	3	MGT201, junior standing	CRE
	COM 225	Global Business Communications	3	COM 204	URE
	ACC 302	Intermediate Financial Accounting II	3	ACC 301	MRE
	FIN 303	Investment Analysis	3	FIN 201	MRE
	ACC 304	Auditing	3	ACC 202	MRE
	XXX	Theme Course	3		URE
		Total	**18**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	FIN 404	Portfolio Management	3	FIN 303, QAN 202	MRE
	FIN 403	Commercial Banking	3	FIN 302	MRE
	BLW 301	Business Law	3	3rd year junior standing	CRE
	THMXXX	Theme Course	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		
Spring	ACC 401*	Advanced Financial Accounting	3	ACC 302	MRE
	FIN 405*	Advanced Financial Management	3	FIN 303, QAN 202	MRE
	MGT 406	Business Policy & Strategy - Capstone	3	Senior Standing	CRE
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		

* Substitutions are possible.

Proposed Sequence of Study

Bachelor of Science in Business Administration

Concentration in Marketing & Management

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 101	Academic Writing	3	EPT score 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		URE
	MTH 101	Math for Business I	3	Pass Placement Test or MTH 002	URE
	BIS 201	Business Information Systems	3	Pass Placement Test or BIS 001	CRE
	XXX	Science Elective	3		URE
		Total	**15**		
Spring	COM102	Writing and Reading Across the Curriculum	3	COM101	URE
	ECO 202	Principles of Macroeconomics	3		URE
	MTH 102	Math for Business II	3	MTH 101	URE
	QAN 201	Introduction to Statistics	3		URE
	XXX	Science Elective	3		URE
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 204	Advanced Academic English	3	COM 102	URE
	MGT 201	Fundamentals of Management	3	Second Semester (12 credits min.)	CRE
	ACC 201	Fundamentals of Financial Accounting	3	Second Semester	CRE
	QAN 202	Quant. Analysis for Decision Making	3	QAN 201	CRE
	THM 201	The Andalusian Symbiosis I	3	COM102	URE
		Total	**15**		
Spring	ACC 202	Fundamentals of Managerial Accounting	3	ACC 201	CRE
	FIN 201	Fundamentals of Financial Management	3	ACC 201, QAN 201	CRE
	MKT 201	Fundamentals of Marketing	3	ECO 201, ECO 202	CRE
	MIS 201	Fundamentals of MIS	3	BIS 201	CRE
	THM 202	The Andalusian Symbiosis II	3	THM 201	URE
		Total	**15**		

THIRD YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MKT 301	Consumer Behavior	3	MKT 201	MRE
	MGT 301	Organizational Behavior	3	MGT 201	MRE
	MKT xxx	Marketing Elective	3		MRE
	FIN 301	Financial Statement Analysis	3	ACC 202, FIN 201	CRE
	COM 208	Public Speaking	3	COM 102	CRE
		Total	**15**		
Spring	MGT 302	Managing Human Resources	3	MGT 201	MRE
	MKT 302	Marketing Research	3	MKT 201, QAN 201	MRE
	MGT 380	Project Management	3	ACC 202, MIS 201, MGT 301	MRE
	MGT 360	Business Ethics & Social Responsibility	3	MGT 201, 3rd year junior standing	CRE
	COM 225	Global Business Communications	3	COM 204	URE
	THM xxx	Theme Course	3		URE
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MGT 303	Mgt & Leadership Development	3	MGT 301	MRE
	MGT 403	Entrepreneurship	3	University Senior Standing	MRE
	BLW 301	Business Law	3	3rd year junior standing	CRE
	THM XXX	Theme Course	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		
Spring	MKT xxx	Marketing Elective	3		MRE
	MKT 401	Marketing Strategy	3	MKT 301, MKT 302, MIS 201	MRE
	GT 406	Business Policy & Strategy	3	Senior Business Standing	CRE
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		

Underlined courses are typically offered only in the Fall semester.

Proposed Sequence of Study

Bachelor of Science in Business Administration

Concentration in Accounting & MIS

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 101	Academic Writing	3	EPT score 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		URE
	MTH 101	Math for Business I	3	Pass Placement Test or MTH 002	URE
	BIS 201	Business Information Systems	3	Pass Placement Test or BIS 001	CRE
	XXX	Science Elective	3		URE
		Total	**15**		
	COM102	Writing and Reading Across the Curriculum	3		URE
	ECO 202	Principles of Macroeconomics	3		URE
	MTH 102	Math for Business II	3		URE
	QAN 201	Introduction to Statistics	3		URE
	XXX	Science Elective			URE
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 204	Advanced Academic English	3	COM 102	URE
	MGT 201	Fundamentals of Management	3	Second Semester (12 credits min.)	CRE
	ACC 201	Fundamentals of Financial Accounting	3	Second Semester	CRE
	QAN 202	Quant. Analysis for Decision Making	3	QAN 201	CRE
	THM 201	The Andalusian Symbiosis I	3	COM102	URE
		Total	**15**		
Spring	ACC 202	Fundamentals of Managerial Accounting	3	ACC 201	CRE
	FIN 201	Fundamentals of Financial Management	3	ACC 201, QAN 201	CRE
	MKT 201	Fundamentals of Marketing	3	ECO 201, ECO 202	CRE
	MIS 201	Fundamentals of MIS	3	BIS 201	CRE
	THM 202	The Andalusian Symbiosis II	3	THM 201	URE
		Total	**15**		

THIRD YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	FIN 301	Financial Statement Analysis	3	ACC 202, FIN 201	CRE
	COM 208	Public Speaking	3	COM 102	CRE
	MIS 301	Fundamentals of Database Management	3	MIS 201	MRE
	MIS 303	Introduction to Systems Analysis	3	MIS 201	MRE
	ACC 301	Intermediate Financial Accounting I	3	ACC 202	MRE
		Total	**15**		
Spring	MGT360	Business Ethics & Social Responsibility	3	MGT201, junior standing	CRE
	COM 225	Global Business Communications	3	COM 204	URE
	MIS 302	Advanced Database Management	3	MIS 301	MRE
	MIS 403	Applied Systems Design	3	MIS 303	MRE
	ACC 303	Cost Accounting	3	ACC 202	MRE
	XXX	Theme Course	3		URE
		Total	**18**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ACC 302	Intermediate Financial Accounting II	3	ACC 301	MRE
	ACC 304	Auditing	3	ACC 202	MRE
	BLW 301	Business Law	3	3rd year junior standing	CRE
	THMXXX	Theme Course	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		
Spring	MIS 404*	Internet Business Applications	3	MIS 201	MRE
	ACC 401*	Advanced Financial Accounting	3	ACC 302	MRE
	MGT 406	Business Policy & Strategy	3	Senior Business Standing	CRE
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		

* Substitutions are possible.

Proposed Sequence of Study

Bachelor of Science in Business Administration

Concentration in MIS & Marketing

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 101	Academic Writing	3	EPT score 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		URE
	MTH 101	Math for Business I	3	Pass Placement Test or MTH 002	URE
	BIS 201	Business Information Systems	3	Pass Placement Test or BIS 001	CRE
	XXX	Science Elective	3		URE
		Total	**15**		
Spring	COM102	Writing and Reading Across the Curriculum	3	COM101	URE
	ECO 202	Principles of Macroeconomics	3		URE
	MTH 102	Math for Business II	3	MTH 101	URE
	QAN 201	Introduction to Statistics	3	Introduction to Statistics	URE
	XXX	Science Elective			URE
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 204	Advanced Academic English	3	COM 102	URE
	MGT 201	Fundamentals of Management	3	Second Semester (12 credits min.)	CRE
	ACC 201	Fundamentals of Financial Accounting	3	Second Semester	CRE
	QAN 202	Quant. Analysis for Decision Making	3	QAN 201	CRE
	THM 201	The Andalusian Symbiosis I	3	COM 102	URE
		Total	**15**		
Spring	ACC 202	Fundamentals of Managerial Accounting	3	ACC 201	CRE
	FIN 201	Fundamentals of Financial Management	3	ACC 201, QAN 201	CRE
	MKT 201	Fundamentals of Marketing	3	ECO 201, ECO 202	CRE
	MIS 201	Fundamentals of MIS	3	BIS 201	CRE
	THM 202	The Andalusian Symbiosis II	3	THM 201	URE
		Total	**15**		

THIRD YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	FIN 301	Financial Statement Analysis	3	ACC 202, FIN 201	CRE
	COM 208	Public Speaking	3	COM 102	CRE
	MIS 301	Fundamentals of Database Management	3	MIS 201	MRE
	MIS 303	Introduction to Systems Analysis	3	MIS 201	MRE
	MKT 301	Consumer Behavior	3	MKT 201	MRE
		Total	**15**		
Spring	MGT360	Business Ethics & Social Responsibility	3	MGT201, junior standing	CRE
	COM 225	Global Business Communications	3	COM 204	URE
	MIS 302	Advanced Database Management	3	MIS 301	MRE
	MIS 403	Applied Systems Design	3	MIS 303	MRE
	MKT 302	Marketing Research	3	MKT 201, QAN 201	MRE
	XXX	Theme Course	3		URE
		Total	**18**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MKT xxx	Marketing Elective	3		MRE
	MKT xxx	Marketing Elective	3		MRE
	BLW 301	Business Law	3	3rd year junior standing	CRE
	THM XXX	Theme Course	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		
Spring	MIS 404*	Internet Business Applications	3		MRE
	MKT 401	Marketing Strategy	3		MRE
	MGT 406	Business Policy & Strategy	3	Senior Business Standing	CRE
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		

* Substitution is possible.

Bachelor of Science in Finance (B.S.FIN.)

Description

Finance is the art and science of obtaining, administering and managing money. Along with management and marketing, finance is one of the basic business functions of the free enterprise system. Every organization must perform the finance function and almost every decision that organizations make has financial implications. Students majoring in finance are introduced to the theory, concepts, applications, institutional environment and analytical tools essential for proper decision-making.

The finance program develops the analytical and behavioral skills necessary for success in dynamic domestic and global financial environments. Courses are designed to provide students with an understanding of the relationship between business finance and the economic system in the context of the management decision-making process. The appropriate use of technology, new organizational structures, entrepreneurial thinking and international awareness is integrated throughout the program. The goal of the finance program is to impart knowledge and competence in finance that will prepare students for entry-level and leadership positions in private and public sector organizations. Students seeking careers in real estate, corporate control, treasury functions and investments will find the finance major well suited for their needs.

Mission

The mission of the Bachelor of Science in Finance degree program is to provide students with a strong undergraduate foundation in the theory and application of finance, building upon a liberal arts and science education. The finance program is intended to prepare students for graduate study in finance as well as to provide them with the financial concepts and tools necessary for positions in government, business and industry, both nationally and internationally.

The finance department provides courses for students in the School of Business and Management and the university that are appropriate for the business core requirements and for students seeking general knowledge of the application of finance in business. The finance program is also committed to excellence in teaching. In a discipline that constantly evolves, it is important for the faculty and the curriculum to remain current. As such, the program encourages applied research and business consulting as methods of remaining current and bringing new thought and developing practices to the classroom.

The program recognizes the importance of having faculty with diverse interests and talents. Each faculty member is encouraged to use his or her strengths to contribute to the university, professional community, larger community and discipline.

Objectives of the Finance Program

The objectives of the program are to

* Provide a quality education to students that will prepare them for leadership positions within the finance profession. Students acquire financial knowledge and skills that can be applied in a variety of environments
* Help students understand the process of integration and applying core competencies and skills in business or business-related environments and/or situations
* Allow students to prepare and take the examinations of Chartered Financial Analyst (CFA) and Certified Financial Planner (CFP)
* Provide students with knowledge of the problems and opportunities that confront entities in the specific field of finance
* Provide students with an education that emphasizes the concepts of financial management, investment problems, capital markets, business ethics and decision making strategies
* Prepare students to be productive professionals who can make responsible decisions in a changing world
* Create students who are able to focus on the challenges found in an educational environment that emphasizes high quality teaching and learning
* Enhance students' learning processes through applied research and instructional development while recognizing the contribution of basic research

The required curriculum in finance provides students with a basic foundation in financial management and exposure to the nature and operations of the financial markets. Building upon this foundation, students may expand their knowledge with courses in banking, international finance, portfolio management, intermediate accounting, intermediate economics, calculus and statistics.

Unique Features of a B.S. in Finance at AUS

The Bachelor of Science in Finance degree program at AUS has a number of distinctive features that provide AUS graduates a competitive advantage in today's business world:

* Analytical tools to handle a variety of finance and business functions are developed throughout the program. Courses are designed to provide students with an understanding of the relationship between business finance and the economic system in the context of the management decision-making process
* The appropriate use of technology, new organizational structures, entrepreneurial thinking and international awareness are integrated into the majority of courses
* The finance curriculum is integrated with other business courses and non-business courses such as mathematics, statistics, English, psychology and economics
* Critical thinking is developed through

an active learning process. The curriculum in finance helps the students acquire good analytical and communication skills and keep abreast of current economic and political developments

* The required curriculum in finance provides students with a basic foundation in finance and an exposure to the nature and operations of the financial markets. Building upon this foundation, students may expand their knowledge by electing courses in banking, international finance, portfolio management and more
* Faculty research findings are integrated into the curriculum. The School of Business and Management encourages scholarly work because it helps the faculty member update his or her knowledge and is incorporated into the classroom
* The program, with its partnerships in the business world, encourages faculty members to engage in applied research and business consulting as methods of remaining current and bringing new thought and developing practices to the classroom

Competencies at Time of Graduation

Below is a sample of the skills students will take away with them to utilize in their careers in finance:

* Solving problems
* Making decisions
* Developing budgets
* Preparing financial reports and projections
* Assessing risk
* Defining problems and designing solutions
* Interpreting accounting and financial data
* Presenting reports and proposals to groups
* Utilizing computer software for analysis and reports

Professional Outlook for Finance Graduates

Finance consists of three interrelated areas where graduates can practice: (1) financial management, which involves decisions within firms, (2) investment, which focuses on the decisions made by both individual and institutional investors as they choose securities for their investment portfolios, and (3) money and capital markets, which deals with securities markets and financial institutions.

Curriculum Design Philosophy

Finance, as an area of study, is designed to promote an analytical appreciation of the financial system and the financial decision-making process as determinants of the economic wealth of individuals, business firms, governments and countries.

The finance curriculum works in tandem with the broad university requirements. The university's emphasis of general requirements mirrors the School of Business and Management philosophy that the purpose of higher education is to create a well-rounded individual who is conversant not only in his or her specialty, but who also has a broad understanding of the humanities as well as natural and social sciences. The emphasis on the common body of knowledge for business students ensures that future finance professionals understand the concepts of assets' evaluation, investment and raising funds.

Admission and Requirements

Students must meet university general admission requirements and complete the common prerequisite courses listed in the catalog. Students can declare a major in finance at the end of their sophomore year after they complete the business foundation courses. A grade point average of 2.5 or better is required in the business foundation courses for the student to be considered for this major.

All B.S. finance transfer students are required to take at least thirty upper-level credits towards their major requirements. Transfer credits for upper-division business courses are subject to approval by the appropriate School of Business department.

Program for Students Majoring in Finance

In addition to university and School of Business and Management requirements, the following finance and economics courses are required for finance majors:

Required Finance Core

* FIN 302 Financial Markets and Institutions
* FIN 303 Investment Analysis
* FIN 402 Futures and Options
* FIN 404 Portfolio Management
* FIN 405 Advanced Financial Management

Finance Electives (Choose at least five courses from the following list with a minimum of three courses in finance and up to two courses in economics based on SBM approval.)

* FIN 304 Real Estate Finance
* FIN 306 Insurance and Financial Planning
* FIN 394 Special Topics-Finance
* FIN 401 International Finance
* FIN 403 Commercial Banking
* ECO 301 Intermediate Microeconomics
* ECO 302 Intermediate Macroeconomics
* ECO 305 International Trade
* ECO 325 Public Economics
* ECO 405 Introduction to Econometrics
* ECO 495 Senior Seminar in Economics

A recommended sequence of study is shown below for a representative student's four-year schedule.

Proposed Sequence of Study

Bachelor of Science in Finance

(B.S.FIN.)

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 101	Academic Writing	3	EPT score 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		URE
	MTH 101	Math for Business I	3	Pass Placement Test or MTH 002	URE
	BIS 201	Business Information Systems	3	Pass Placement Test or BIS 001	CRE
	XXX	Science Elective	3		URE
		Total	**15**		
Spring	COM 102	Writing and Reading Across the Curriculum	3	COM101	URE
	ECO 202	Principles of Macroeconomics	3		URE
	MTH 102	Math for Business II	3	MTH 101	URE
	QAN 201	Introduction to Statistics	3		URE
	XXX	Science Elective			URE
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 204	Advanced Academic English	3	COM 102	URE
	MGT 201	Fundamentals of Management	3	Second Semester (12 credits min.)	CRE
	ACC 201	Fundamentals of Financial Accounting	3	Second Semester	CRE
	QAN 202	Quant. Analysis for Decision Making	3	QAN 201	CRE
	THM 201	The Andalusian Symbiosis I	3	COM102	URE
		Total	**15**		
Spring	ACC 202	Fundamentals of Managerial Accounting	3	ACC 201	CRE
	FIN 201	Fundamentals of Financial Management	3	ACC 201, QAN 201	CRE
	MKT 201	Fundamentals of Marketing	3	ECO 201, ECO 202	CRE
	MIS 201	Fundamentals of MIS	3	BIS 201	CRE
	THM 202	The Andalusian Symbiosis II	3	THM 201	URE
		Total	**15**		

THIRD YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	FIN 301	Financial Statement Analysis	3	ACC 202, FIN 201	CRE
	COM 208	Public Speaking	3	COM 102	CRE
	FIN 302	Financial markets and institutions	3	FIN 201	MRE
	FIN 303	Investment Analysis	3	FIN 201	MRE
	FIN 304*	Real Estate	3	FIN 201	MRE
		Total	**15**		
Spring	COM 225	Global Business Communications	3	COM 204	URE
	FIN 404	Portfolio Management	3	FIN 303, QAN 202	MRE
	FIN 401*	International Finance	3	FIN 303	MRE
	THMXXX	Theme Course	3		URE
		Total	**15**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	FIN 403*	Commercial Banking	3	FIN 302	MRE
	ECO 301*	Intermediate Microeconomics	3	ECO 201	MRE
	ECO 302*	Intermediate Macroeconomics	3	ECO 201, ECO 202	MRE
	BLW 301	Business Law	3	3rd year junior standing	CRE
	THMXXX	Theme Course	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		
Spring	FIN 402	Futures & Options	3	FIN 303	MRE
	FIN 405	Advanced Financial Management	3	FIN 303, QAN 202	MRE
	MGT 406	Business Policy & Strategy	3	Senior Business Standing	CRE
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		

***** Substitutions are possible (check list of finance electives).

Bachelor of Science in Management Information Systems (B.S.M.I.S.)

Description

The Bachelor of Science in Management Information Systems (M.I.S.) program is dedicated to preparing successful graduates for professional business careers emphasizing the application of information technology to business processes and to engaging in service and research which serve the information technology needs of society in general, and the Gulf region, in particular.

Information systems is the study of computer technologies, human cognition and scientific principles directed to the design, implementation and management of information systems. The discipline includes technical components such as computer programming, system design, telecommunications, database management systems and computer graphics as well as human factors in system design and human-computer interaction. The management information systems professional analyzes the significance of information in problem solving, investigates how to collect information, understands the need to validate information and evaluate information sources, appreciates the importance of sharing information with others, and determines how to utilize information in problem solving and decision making.

The problems solved by information systems graduates come from many disciplines such as mathematics, economics, business, engineering, linguistics and psychology, to name a few. As an information systems professional working on a problem in one of those areas, one must be knowledgeable in that discipline as well as in the capabilities and uses of computers. The successful information systems professional must possess considerable communication skills and must be able to learn new ideas quickly and adapt to ever-changing conditions to satisfy the needs of the users.

Mission

In the last three decades we have witnessed immense developments in computers and information technologies. The rate of new technical advances in recent years shows no signs of diminishing. Among the most noteworthy achievements are the implementation of microchip technology, the mass production of microcomputers, the reduction in the cost of manufacturing memories and processors, the development of distributed systems, parallel processors and database systems, the convergence of computing systems and telecommunications with the growth of LANs, WANs, MANs and Internet, and the increasing availability and power of software packages. These technical advances have brought computer-based data processing, word processing, on-line marketing, process monitoring, information resource sharing and managerial decision making to many more organizations than before. Presently, the task of information processing permeates the whole of each organization; the data processing department is ceasing to be an autonomous part. Increasingly, managers are turning to information services to assist their decision-making. In order to meet these challenges, more and more complex application systems often using databases or knowledge bases such as computer-integrated manufacturing, group decision support systems, automatic learning and diagnostic systems, are being introduced every day.

The rapid expansion of computer technology and the increasing complexity of information systems generate a need for more sophisticated and effective methods of structuring information for purposes of storage, analysis and retrieval. This requires information systems professionals to be aware of the opportunities and problems resulting from the application of computer technology and capable of understanding both the information needs of managers, administrators and other end-users and the information needs of designing the appropriate computer-based systems. Accordingly, the information analyst and system designer can no longer be regarded as technical experts only; in addition to having a professional knowledge and command of information technology, they must understand the basic needs of the organization in which they operate and of the users of the information systems which they develop. The B.S.M.I.S. will endeavor to educate students so that they can

* Understand and plan for the use of current and emerging information technologies
* Develop a broad perspective of the integration of information technology in all functional areas of business
* Understand how to exploit information technology as a strategic resource
* Develop technical and managerial skills in management information systems
* Integrate quality and continuous improvement concepts into information systems management
* Understand ethical issues related to the use of information technology

Objectives of the M.I.S. Program

The program objectives are to

* Provide M.I.S. graduates with a curriculum that prepares them with the technical skills and conceptual knowledge necessary to succeed in an information systems career
* Continuously improve students' skills and knowledge of emerging information systems approaches and technologies that have been identified and targeted for future development
* Provide service courses to students in the school and the university that are appropriate for the business core and for students seeking general knowledge of the applications of information systems in business
* Allow students to prepare and take the examinations for professional certifications such as OCP (Oracle

Certified Professional), MSCP (Microsoft Certified Professional) and CISA (Certified Information Systems Auditor)

* Involve the faculty with the placement of students through contacts with potential employers, serving as references for students and advising students on job-search skills
* Enhance faculty interaction with information systems professionals to identify conceptual knowledge, technical skills and instructional methods appropriate for information systems careers
* Encourage faculty to engage in applied research in emerging technologies and approaches and publications of instructional development applied to the M.I.S. curriculum

M.I.S. Curriculum Outcomes

A successful graduate of the M.I.S. program should be able to

* Create an application in a structured development environment to manipulate business data files using structured programming techniques
* Create windows applications in an object-oriented programming language including the development of user interfaces, use of controls, writing/debugging code and the creation of interactive menus
* Apply data modeling techniques such as normalization and ER diagramming to create a database model
* Implement a database model in a relational database management system such as ORACLE including the creation of tables, establishing referential integrity constraints, loading data, creating views and producing forms and reports using the database
* Plan and manage a local area network including the creation of users, installation of software, establishment of security constraints, configuration of print services and configuration of clients
* Configure a web server and design a website

* Select and apply appropriate systems analysis and design methodologies and techniques to develop an information system for a business process
* Use modern application development products as prototyping tools in the systems development process
* Develop information system applications for solving business problems by completing a development project from initial requirements gathering to implementation
* Research emerging IS technologies and present recommendations to managers about the impact of those technologies on a business
* Design and implement web-based, interactive groupware applications to support collaborative work and to support access, tracking, sharing and organizing of information across time and space
* Apply telecommunication concepts to plan and manage wide-area networks and communicate plans to managers in both written and oral form

The curriculum is designed to be responsive to the rapidly changing role of information technology in the business environment. Courses cover current topics including: object-oriented analysis, design, programming, client server applications, using telecommunications for competitive advantage, electronic commerce, data mining and data warehousing, and technical and managerial issues related to the internet and corporate intranets. Advanced courses are designed for students who have completed the core and will challenge students to critically analyze issues faced by technology managers.

Unique features of a B.S.M.I.S. at AUS:

The Bachelor of Science in Management Information Systems at AUS incorporates a number of distinctive features that set it apart from other programs:

* Active learning methods that enhance the development of critical thinking abilities. The program curriculum places great emphasis on methods and skills of inquiry, analysis, judgment and decision making
* Courses that better integrate and reinforce general education requirements. The curriculum integrates, by extension and reinforcement in the M.I.S. field, the content and skills learned in basic courses such as English, psychology, accounting, marketing, economics
* A conceptual framework that cuts across functional areas. Courses in the M.I.S. curriculum are organized with an integrated conceptual structure common to all aspects of the

discipline. This conceptual structure emphasizes the utility of information, together with information production and dissemination given various uses

* Better development and improvement of students' interpersonal and communication skills. These skills are reflected in the fabric of the curriculum through the use of team projects and written and oral reports
* Greater integration of research findings into the curriculum. M.I.S. courses include knowledge gained through current research and related implications for the practice in the information technology field
* A working partnership between academe and practice is encouraged. The goal is to enable a continuous focus on the practical relevance of the educational process as well as a richer and more contemporary flavor to the content of course materials

Professional Outlook for Information Systems Graduates

A wide variety of rewarding professional opportunities are available to MIS graduates. These career options include the following:

* Managing technical information centers
* Evaluating and selecting software and hardware
* Developing and maintaining advanced systems for information storage, retrieval and distribution
* Managing in information-intensive business environments
* Planning and managing IT-based organizational change programs
* Planning and developing the corporate data and system architecture
* Developing IS portfolios

Curriculum Design Philosophy

This curriculum design emphasizes the broad university requirements, the common body of knowledge for business students specified by accrediting entities, the specialized knowledge of information systems specified in model curricula developed by renowned professional societies, and hands-on training and practice of specialized computer skills and information technologies. The university's emphasis of general requirements echoes the School of Business and Management philosophy that the purpose of higher education is to create a well-rounded individual who is knowledgeable not only in his or her specialty, but who also has a broad understanding of the humanities as well as natural and social sciences. The emphasis on the common body of knowledge for business students aids future information systems professionals understand the information needs of managers and other end-users, understand the linkages between information processes and other managerial processes and be aware of the ways to achieve overall organizational efficiency through designing effective information systems. The emphasis upon hands-on training and practice reflects our desire that students who complete this degree program must have working knowledge and skills in planning, analyzing, designing, and implementing information systems. These important issues will greatly differentiate the management information systems program from the computer science program and better match the increasing needs of a large number of businesses and public organizations. The curriculum is designed to ensure that a course selected either strengthens a student's understanding of the humanities, natural or social sciences, or improves the student's working knowledge of information systems planning, analysis, design, and implementation as it relates to the field of business.

Admission and Requirements

Students wishing to declare a major in management information systems may do so at the end of their sophomore year after demonstrating a high level of academic achievement in their business foundation courses. Students must apply, in writing, to the dean of the School of Business and Management no later than the first week of May of their sophomore year. Usually a minimum Grade Point Average of 2.5 is required in the business foundation courses in order to be considered for this major.

For further information regarding admission, please refer to the School of Business and Management section on admission requirements.

Program for Students Majoring in MIS

In addition to university and School of Business and Management requirements, the following MIS and management courses are required for

* MIS majors:
* MIS 202 Advanced MIS
* MIS 301 Fundamentals of Database Management
* MIS 302 Advanced Database Management
* MIS 303 Introduction to Systems Analysis
* MIS 401 Business Data Communications
* MIS 402 Knowledge Management
* MIS 403 Applied Systems Design
* MIS 404 Internet Business Applications
* MGT 301 Organizational Behavior
* MGT 380 Project Management

Proposed Sequence of Study

Bachelor of Science in Mangement Information Systems

(B.S.M.I.S)

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 101	Academic Writing	3	EPT score 4 or COM 001	URE
	ECO 201	Principles of Microeconomics	3		URE
	MTH 101	Math for Business I	3	Pass Placement Test or MTH 002	URE
	BIS 201	Business Information Systems	3	Pass Placement Test or BIS 001	CRE
	XXX	Science Elective	3		URE
		Total	**15**		
Spring	COM102	Writing and Reading Across The Curriculum	3	COM 101	URE
	ECO 202	Principles of Macroeconomics	3		URE
	MTH 102	Math for Business II	3	MTH 101	URE
	QAN 201	Introduction to Statistics	3		URE
	XXX	Science Elective			URE
		Total	**15**		

SECOND YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM 204	Advanced Academic English	3	COM 102	URE
	MGT 201	Fundamentals of Management	3	Second Semester (12 credits min.)	CRE
	ACC 201	Fundamentals of Financial Accounting	3	Second Semester	CRE
	QAN 202	Quant. Analysis for Decision Making	3	QAN 201	CRE
	THM 201	The Andalusian Symbiosis I	3	COM102	URE
		Total	**15**		
Spring	ACC 202	Fundamentals of Managerial Accounting	3	ACC 201	CRE
	FIN 201	Fundamentals of Financial Management	3	ACC 201, QAN 201	CRE
	MKT 201	Fundamentals of Marketing	3	ECO 201, ECO 202	CRE
	MIS 201	Fundamentals of MIS	3	BIS 201	CRE
	THM 202	The Andalusian Symbiosis II	3	THM 201	URE
		Total	**15**		

THIRD YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	FIN 301	Financial Statement Analysis	3	ACC 202, FIN 201	CRE
	COM 208	Public Speaking	3	COM 102	CRE
	MIS 301	Fundamentals of Database Management	3	MIS 201	MRE
	MIS 303	Introduction to Systems Analysis	3	MIS 201	MRE
		Total	**15**		
Spring	MGT 360	Business Ethics & Social Responsibility	3	MGT 201, junior standing	CRE
	COM 225	Global Business Communications	3	COM 204	URE
	MGT 301	Organizational Behavior	3	MGT 201	MRE
	MIS 302	Advanced Database Management	3	MIS 301	MRE
	MIS 403	Applied Systems Design	3	MIS 303	MRE
	THM XXX	Theme Course	3		URE
		Total	**18**		

FOURTH YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MIS 404	Internet Business Applications	3	MIS 201	MRE
	MIS 401	Business Data Communications	3	MIS 201	MRE
	BLW 301	Business Law	3	3rd year junior standing	CRE
	THMXXX	Theme Course	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		
Spring	MIS 402	Knowledge Management	3	Senior Standing	MRE
	MGT 380	Project Management	3	MIS 201, MGT301, ACC 202	MRE
	MGT 406	Business Policy & Strategy	3	Senior Business Standing	CRE
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		

Minor in Business Administration

Students from other AUS college and schools can enroll in a minor with concentration in one of the five areas of concentration within SBM. Students must have completed thirty credits of coursework with a GPA of 2.5 or higher prior to taking the minor courses. A total of 18 credits hours are required as follows:

Prerequisites

* ECO 201
* ECO 202
* COM 102
* QAN 201 or STA201 or STA202
* BIS 201

** One of three combinations (MTH101 and MTH102) or (MTH100 and MTH111) or (MTH103 and MTH104)*

Foundation courses

* ACC 201
* Foundation course in area of minor specialization (i.e. MIS 201, FIN 201, MKT 201, MGT 201)
* Foundation course in one of the remaining areas (i.e. MIS 201, FIN 201, MKT 201, MGT 201)

Upper Division Courses

* Students must take three 300 level or above courses which meet the concentration requirements.

Students planning to minor in business administration should take ECO 201 and ECO 202 early on as part of their social science requirement. Students who take only MTH 100 as a math requirement should consider one of the above combinations instead. Moreover, students can use their free elective slots to partially fulfill the requirements for the minor.

Students cannot take the concentration courses before completing sixty credit hours.

Engineering and Computer Science students do not have to take BIS 201.

Students minoring in accounting or finance must take ACC 201, ACC 202, and FIN 201 as foundation courses.

The upper division courses in MIS are MIS 301, MIS 303, and MIS 401.

Master of Business Administration (M.B.A.)

The Master of Business Administration program (M.B.A.) offered by the School of Business and Management is a graduate-level degree program designed by the American University of Sharjah faculty working in close cooperation with the American University of Washington, D.C. Applicants are required to hold a baccalaureate degree from an accredited institution. The M.B.A. degree is conferred upon completion of a 30 to 48 credit hour program utilizing an evening schedule of classes. It is designed to prepare students for careers in management leadership in both the private and public sectors. Students will acquire a comprehensive foundation in the fundamentals of business, the global environment in which they will function and the analytical tools for intelligent decision-making. Individual participation is emphasized through class discussions, interaction and cooperation with other students in the class.

Transfer credit may be accepted for admission to the M.B.A. program. A maximum of 18 credit hours from within the foundation courses may be transferred. Such a determination will be made on a case-by-case basis by the M.B.A. admissions committee.

Mission of the Program

The AUS M.B.A. program is committed to the idea of helping individuals in the Gulf region to think globally, act globally and integrate knowledge as the major tool of problem solving. The program is built on the premise that up-to-date expertise is what gives knowledge workers a value added capacity in a knowledge-based economy.

The American University of Sharjah is affiliated with the American University in Washington, D.C., one of the most respected and highly ranked American institutions in the United States. The American University of Sharjah has over 180 full-time faculty, and the School of Business and Management has 26 full-time faculty members, most of whom are holders of a Ph.D. from the most reputed universities in the United States. AUS offers its students the highest level of support and services associated with their studies. AUS students have access to computer labs, a massive number of electronic journals, books and databases, and most importantly the support of the full-time faculty and staff. Unlike other institutions, the only mission of AUS is to provide the best quality American education in the Arab world.

Goals and objectives

The objectives of the M.B.A. program are to

* Prepare individuals to identify, analyze and understand the interrelationships among business organizations and international and domestic institutions in the UAE and throughout the world
* Develop individuals who can lead organizations toward economic success and social responsibility in the global marketplace of the twenty-first century
* Prepare individuals to integrate information resources and technology to enable them to anticipate and manage change
* Advance students' knowledge of issues and practices affecting business organizations and international and domestic institutions and governments
* Develop an awareness of societal and environmental needs and concerns as they relate to ethical, professional and socially responsible business practices
* Provide students with a solid core business education that emphasizes the following teaching methodologies: case analyses, presentations, seminars and lectures

M.B.A. curriculum outcomes

A graduate of the M.B.A. program will

* Be able to develop a working environment where teamwork and team building are an integral part of the organization
* Have a thorough grounding in the definition of quality and how to apply this concept to his/her organization
* Be able to implement his/her communication skills in a way that enhances and presents effectively and convincingly his/her point of view
* Be technically proficient in using state-of-the-art hardware and software for decision support and expert systems
* Have developed diagnostic skills and the ability to apply concepts and theories to concrete, real life situations

Unique Features of the M.B.A.

The M.B.A program at AUS has a number of distinctive features that reflect the needs of student-professionals while providing AUS graduate students with a competitive edge:

* The delivery format allows the student to earn a master's degree without interrupting his/her career.
* The student develops an understanding of the full range of business disciplines, enhancing the skills required for career advancement.
* The student uses sophisticated new business tools in a state-of-the-art environment.
* The M.B.A. website provides easy access to assignments and professors from the comfort of home, which accommodates all students, particularly those from other emirates or countries.
* Participants benefit from the extensive use of the Internet, interactive learning and project work to assist with the comprehension of concepts.

The M.B.A. course structure

The degree is composed of 48 credit hours (16 courses). Eighteen credits (six courses) comprise the "foundation" courses of the program and thirty credits (ten courses), comprise the "core" courses.

The M.B.A. program can be completed in 24 months, including summers, if all the foundation courses are required and in 15 months if all the foundation courses are waived. A maximum of three courses can be completed each semester (16-week period) and classes are held in the evening. Each class is offered one night per week for two hours and forty-five minutes.

Participants must attend all classes except in the case of a personal emergency. Students must be prepared to devote significant additional time for class preparation and assignments. Grading is on an A, B, C, F scale. An average of B (3.0 GPA) is required to graduate. Each student must complete the approved course of study within five years of the date of first registration for graduate study.

Foundation Courses

* MBA 601 Managerial Economics
* MBA 602 Managing People and Organizations
* MBA 603 Accounting Concepts and Applications
* MBA 604 Applied Managerial Statistics
* MBA 605 Financial Management
* MBA 606 Management Information Systems

Core Courses

* MBA 610 Business Research Applications
* MBA 611 Advanced Financial Management
* MBA 612 Leadership and Change
* MBA 613 Accounting for Management
* MBA 614 Marketing Management
* MBA 615 Innovation and Entrepreneurship
* MBA 616 Electronic Commerce
* MBA 617 Ethical and Legal Issues
* MBA 618 Strategic Management in a Global Environment
* MBA 619 Capstone: A Diagnostic Practicum

The minimum passing grade for each course taken in the MBA program is a B. The expectations of the program are that students will significantly exceed this minimum. As noted above, a B average, 3.0 GPA, is required to graduate. Only two C's (in two courses or one course twice) are allowed and a course can only be repeated twice if the original grade is below B.

Waiver policy

Students may qualify to waive up to 18 credits (six courses) from the foundation courses. As a general rule, a course may be waived if the student has completed comparable course work at the undergraduate level.

Waiver Rules:
Students may waive foundation courses if (1) the courses have been taken in an approved business program, (2) the courses were taken within five years from the time of admission to the AUS program and (3) the minimum grades were B.

Admission to the M.B.A.

Admission to the M.B.A. program is on a case-by-case basis. Applicants must show proof of their ability to do collegiate level work. An undergraduate degree from a U.S. or other accredited university or college with a grade point average of 3.0 or above would be an indicator of such ability. Under all other circumstances a standardized examination, such as the GMAT and/or the TOEFL, may be required and may be administered locally.

Applicants must submit the following documents:

* Completed application form
* Passport photocopy
* Two passport size photos
* Copy of degree plus transcript of grades
* TOEFL score, if available
* GMAT score, if available
* Application fee

For admission or other information, contact

School of Business and Management
American University of Sharjah
P.O. Box 26666
Sharjah, United Arab Emirates
Tel: 00971 (6) 5055334
Fax: 00971 (6) 5055027
E-mail: graduate@aus.ac.ae

The Executive Master of Business Administration (E.M.B.A.)

For the professional manager today a credible E.M.B.A. is more than an academic degree. It is evidence of specialized knowledge, a sign of recognition by the profession and an indication of commitment to continued learning. The E.M.B.A. today is a gateway to corporate leadership.

Managers without an M.B.A. often find themselves on the defensive today. They enroll in increasing numbers in the many M.B.A. program options available to them. Needless to say, such options vary in philosophy, objectives, styles, curricula and quality.

The AUS E.M.B.A. has been uniquely designed by the American University of Sharjah faculty working in close cooperation with the American University of Washington, D.C. The courses are taught primarily by full-time faculty members of the AUS School of Business and Management.

The AUS E.M.B.A. is built on the premise that up-to-date expertise is what gives executives a value added capacity in a knowledge-based economy. It addresses itself to organizations and individuals convinced that intellectual capital is the real basis for competitiveness today.

The program uses instructional technology and is highly interactive in nature. It provides participants with a rigorous, though relaxed, learning environment and a chance to team up and build long-lasting relationships with colleagues.

Why the "EXECUTIVE" in E.M.B.A.?

Several key facts in the design of this E.M.B.A. make it the appropriate choice for working executives:

* Career, family and a multitude of other factors are vying for the executive's time. The E.M.B.A. program is demanding, but the E.M.B.A. takes no more than 15 to 24 months to complete utilizing a schedule of alternate weekends and quarterly breaks that allows ample time for work, family and recreation.
* Tomorrow's leaders will need to access and use both information and technology. Our E.M.B.A. enables the executive to use technology not only to access current information but also to analyze that information in order to make sound business decisions.
* Business is constantly changing. Traditional business programs are not designed to cope with this new environment. We have designed our E.M.B.A. to ensure that the experience of our participants, the expertise of our faculty and the resources of our affiliate universities are fully utilized. The concepts learned and cases studied relate to the current business environment.
* Most adults learn best in an interactive, experiential environment with a variety of teaching methodologies. Our primary objective is to guarantee the success of each participant. We utilize every available resource to ensure that we consistently meet that objective. The extensive use of case studies, video, internet, interactive learning, computer-based learning, project work and practical application will ensure appropriate application of principles and solidify comprehension of concepts.

Program Delivery

The E.M.B.A. program at AUS utilizes both traditional and innovative methods of teaching and participation. International learning resources will be tapped in a manner that will maximize their applicability to the local management community. Access to assignments and professors by e-mail will accommodate all students and particularly those attending from other Emirates or countries.

Participants in the program are required to attend the classes at AUS but will also utilize computer-based instruction (CBI) provided by AUS to supplement the classroom lectures. The participants will utilize the Internet to collaborate with their classmates and faculty. In some cases, videotapes will be available to supplement the lectures.

Since each course taught at the E.M.B.A. level requires significant use of CBI, Internet and video technologies, all students are required to have access to a P.C. and the Internet.

Program Design

The degree is composed of 48 credit hours (16 courses). Eighteen credits (six courses) comprise the "foundation" courses of the program and thirty credits (ten courses) form the "core" courses.

The E.M.B.A. program can be completed in 24 months if the foundation courses are required and in 15 months if the foundation courses are waived. Two courses are completed each quarter (ten-week period) and classes are held every other weekend. Each year contains four quarters, usually with a four-week break between each quarter.

The participants selected for the E.M.B.A. program must have significant business experience. Therefore, the courses are taught in such a manner as to draw upon and extend the experience of the participants as well as the expertise of the faculty. The cohort approach ensures that concepts are systematically delivered thereby maximizing the value of in-class time.

The courses utilize the case method approach. In this manner, the participants not only acquire needed business skills, but also apply them through the extensive use of simulated business cases.

Foundation Courses

The foundation courses are designed to provide the participants, who do not have a formal business education, with the basic tools and concepts that will be utilized in the core courses.

The foundation courses are

* EMB 701 Economic Analysis in an Interdependent Environment
* EMB 702 Theories of Management and Organizational Behavior
* EMB 703 Financial Management I (Accounting)
* EMB 704 Information Systems Strategy
* EMB 705 Marketing Management
* EMB 706 Financial Management II (Finance)

Core Courses

The core courses represent the advanced business courses that the participants will need to successfully complete the E.M.B.A. These courses utilize case studies, group projects and a hands-on participatory approach to enhance the learning process.

The core courses are

* EMB 710 Analytical Methods
* EMB 711 Corporate Finance
* EMB 712 Management in the International Environment
* EMB 713 Investment Analysis
* EMB 714 Advanced Systems Strategy and Implementation
* EMB 715 Entrepreneurship
* EMB 716 E-Commerce
* EMB 717 Corporate Communication Strategy
* EMB 718 Strategic Management
* EMB 719 Capstone: A Diagnostic Practicum

Admission to the E.M.B.A.

The AUS E.M.B.A. is designed for experienced managers and admission is highly competitive. Each cohort in the program is made up of 15 members, representing various organizations.

The admission review takes into consideration academic and employment information, giving special attention to professional accomplishments and potential for growth within an organization. Most participants have earned Bachelor degrees in Business Administration. Some hold advanced degrees in other fields. All have demonstrated an ability to sustain intensive, graduate-level work. Under certain circumstances a standardized examination, such as the GMAT and/or TOEFL, may be required and may be administered locally.

Applicants must submit the following documents:

* Resume
* Completed application form
* Two letters of recommendation
* Passport photocopy
* Two passport size photos
* Copy of degree plus transcript of grades
* TOEFL score, if available
* Application fee

Processing of applications follows several steps including verification of academic credentials and work experience. Important considerations in the evaluation of applicants include level of management experience, maturity, motivation and commitment to completing the program. The E.M.B.A. selection committee will make the final determination of applicants.

Applicants who are notified of their admission to the program will be required to pay a non-refundable deposit to secure a seat in the program. This deposit will be applied to the total cost of the first three quarters of the program. If the deposit is not received within two weeks of acceptance, the position may be passed to the next successful candidate.

For admission or other information, contact

School of Business & Management
American University of Sharjah
P.O. Box 26666

Sharjah, United Arab Emirates
Tel: 00971 (6) 5055334
Fax: 00971 (6) 5055027
E-mail: graduate@aus.ac.ae

School of Engineering

Dean
Leland T. Blank
Associate Dean
Steven W. Gyeszly

The School of Engineering of the American University of Sharjah blends the best North American educational methods with the practices used by the finest institutions in Europe and the Middle East. The engineering program at AUS is innovative. The program is intended to prepare its graduates for regional as well as worldwide practice. Therefore, the program is designed to satisfy the general university requirements, and to meet the program criteria adopted by the engineering accreditation agencies both in the United Arab Emirates and in the United States. The program emphasizes learning the effective use of technology, information resources and communication methods. The program instills in its graduates leadership qualities anchored in moral and ethical principles.

AUS engineering graduates will be well equipped to face the future. An AUS engineering degree gives its holder access to a learned profession with opportunities for practice in industry, government, business or consulting. AUS engineering graduates will also be well qualified to continue their studies toward a master's or doctorial degree leading to careers in research, development and teaching. Finally, an engineering education keeps many other avenues open such as law, business, medicine and public service.

Engineering graduates will work in an international and very competitive environment. Graduates therefore must achieve English fluency even if they intend to spend their careers in their native lands. English fluency is especially critical as more multinational corporations adopt English as their corporate language. AUS emphasizes the use of English in daily practice. To enhance the international communication skills of our graduates, instruction and interaction between students and faculty members are conducted in English.

The School of Engineering offers programs in chemical engineering, civil engineering, computer engineering, electrical and electronic engineering, and mechanical engineering. The AUS engineering faculty provides an educational experience that is equivalent to those offered by the best state and private universities in the United States and Europe.

Engineering is an excellent choice for young men and women who aspire to well-paid careers in which they are empowered to make a contribution to society. Those who enter engineering today can look forward to rewarding careers that offer personal fulfillment, service to humanity and economic prosperity.

Faculty

The School of Engineering faculty members are distinguished experts in their fields. These scholars and teachers are academic and professional practitioners. They provide an educational environment in which students can mature professionally and personally while preparing to live and work in a technologically rich global community.

Professors

Amr Abdel-Hamid (Mechanical Engineering)

Azm Al Homoud (Civil Engineering)

Leland T. Blank (Mechanical Engineering)

Abdurrahim El-Keib (Electrical Engineering)

Associate Professors

Jamal A. Abdalla (Civil Engineering)

Rana Ahmed (Computer Engineering)

Saad Ahmed (Mechanical Engineering)

Abdul-Rahman K. Al-Ali (Computer Engineering)

Yousef Al-Assaf (Electrical Engineering)

Hasan Al-Nashash (Electrical Engineering)

Mohamed A. Gadalla (Mechanical Engineering

Steven W. Gyeszly (Mechanical Engineering)

Mohammad-Ameen Jarrah (Mechanical Engineering)

Joseph M. Richardson (Civil Engineering)

Sami W. Tabsh (Civil Engineering)

Assistant Professors

Akmal S. Abdelfatah (Civil Engineering)

Adil Al-Tamimi (Civil Engineering)

Knud Villy Christensen (Chemical Engineering)

Rached Dhaouadi (Electrical Engineering)

Hany El Kadi (Mechanical Engineering)

Mohamed El-Tarhuni (Electrical Engineering)

Ali Ghrayeb (Electrical Engineering)

Ahmad Hamad (Chemical Engineering)

Abdul Khaliq Khan (Electrical Engineering)

Tarik Ozkul (Computer Engineering)

Nasser N. Qaddoumi (Electrical Engineering)

Ibrahim Taleb (Chemical Engineering)

Admission and Degree Requirements

Formal admission to a major in all the programs of the School of Engineering requires a cumulative grade point average (GPA) of 2.0.

Degree Requirements

In order to qualify for graduation with a bachelor of science degree in engineering, students must complete a minimum of 139 or 140 credit hours, depending on the major, with a cumulative GPA of 2.0 or better in the major, including:

* Prescribed courses that ensure the satisfaction of university requirements
* Major requirements that include courses in mathematics, sciences, engineering sciences, and engineering design that ensure preparation for professional practice

The students must also complete

* Summer practicum (a minimum of six weeks after the second year, working in a professional environment)
* Comprehensive assessment examination

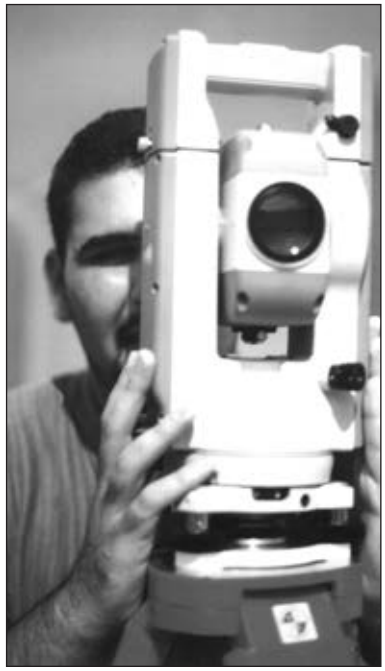
Bachelor of Science in Engineering

The School of Engineering offers a B.S. degree in each of the following:

* Chemical Engineering (B.S.Ch.E.)
* Civil Engineering (B.S.C.E.)
* Computer Engineering (B.S.Co.E.)
* Electrical and Electronic Engineering (B.S.E.E.)
* Mechanical Engineering (B.S.M.E.)

Each program is designed for completion in four years including one summer session (six weeks) of study. Students are also required to complete a summer internship. Students whose academic background requires the completion of preparatory courses in mathematics, chemistry, English and physics will require more than four years to complete the engineering program. Even without preparatory courses, many students take additional time to complete their programs.

The B.S. requirements are divided into three categories: university graduation requirements, major program requirements and technical elective courses that provide depth in a subspecialty in a chosen field. The university requirements include foundation courses in mathematics, science, the humanities, social sciences, Arabic heritage, and English. The first year, which provides a base in physics, chemistry, engineering and mathematics, is common to all engineering students. By the end of the third year, most fundamental engineering requirements should typically be fulfilled. During the final year, a major design project must be completed in addition to regular coursework. Practical training in an



engineering environment is compulsory for one summer. This practicum, or internship, strengthens the student's preparation for engineering practice.

Students must master basic concepts to effectively develop their engineering foundation. Therefore, after the completion of 90 credits the students are required to complete a comprehensive assessment examination, which is offered in October and in March.

Curricula in Engineering

The freshman year is identical for all engineering majors. Students with appropriate grades can change majors within the School of Engineering with no credit loss during the first year. Other course requirements are listed under individual engineering majors.

Proposed First Year Courses for All Engineering Students

FIRST YEAR (30 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CHM101	General Chemistry I	4		MR/URE
	COM101	Academic Writing	3	EPT score 4 or COM001	URE
	MTH103	Calculus I	3	MTH001 or placement test	MR/URE
	NGN110	Introduction to Engineering	2	Admission to the School of Engineering	MR/URE
	PHY101	General Physics I	4	PHY 001, Co-requisite: MTH103	MR/URE
		Total	**16**		
Spring	ARAXXX	Arabic	3		URE
	COM102	Writing & Reading across the Curriculum	3	EPT score 5 or COM101	URE
	MTH104	Calculus II	3	MTH103	MR/URE
	NGN111	Engineering Statistics	2	NGN 110	MR
	PHY102	General Physics II	4	PHY101	MR
		Total	**15**		

Abbreviations:
EPT: English Placement Test **MR:** Major Requirement **URE:** University Requirement

Bachelor of Science in Chemical Engineering (B.S.Ch.E.)

Chemical engineers have many different responsibilities including research and development, design, supervision, production and sales. They may manage the development of new technologies and products or strive to develop safe processes that yield desired results economically. Chemical engineers also direct the design, construction and operation of new plants, ranging from pilot plants to full-scale chemical facilities.

Chemical engineers today are making unparalleled contributions in chemical and petrochemical processing, food and pharmaceutical industries, pollution control and abatement, computer automation, process control and modeling and biochemical technology. To teach students aspiring to enter this field, the American University of Sharjah has designed a chemical engineering program that meets the challenges of the twenty-first century.

The Division of Chemical, Thermal and Mechanical Engineering offers a general four-year program leading to a Bachelor of Science in Chemical Engineering (B.S.Ch.E) degree. This degree prepares graduates to work in all areas of chemical industry. Specifically, it is designed to help students develop a basic knowledge in science, in engineering and in the fundamentals and practical knowledge of thermodynamics, fluid flow, heat transfer, mass transfer, reaction engineering, chemical unit operations, process control, process simulation, plant design, cost estimation and engineering economics.

Degree Requirements for B.S.Ch.E.

A total of 140 credit hours, including the following courses:

University Requirements

* Arabic requirement: one course, ARA XXX
* English language competency requirement: 12 credit hours in COM/ENG courses
* Mathematics and/or statistics requirement: MTH 103 and MTH 104
* Science requirement: CHM 101 and PHY 101
* General education requirement: four thematic courses and a three credit-hour humanities or social science course
* Free electives: nine credit hours, any courses offered at AUS.
* Computer Literacy Requirement: satisfied through extensive use of computer resources throughout the engineering curriculum.

Major Requirements

* CHE 203 Principles of Chemical Engineering
* CHE 204 Chemical Engineering Thermodynamics I
* CHE 215 Fluid Flow
* CHE 304 Chemical Engineering Thermodynamics II
* CHE 307 Heat Transfer

* CHE 321 Chemical Reaction Engineering
* CHE 329 Mass Transfer I
* CHE 330 Sim. Techniques in Chemical Engineering
* CHE 332 Engineering Economy
* CHE 421 Chemical Process Dynamics & Control
* CHE 429 Mass Transfer II
* CHE 451 Chemical Engineering Lab I
* CHE 452 Chemical Engineering Lab II
* CHE 490 Chemical Systems Design I
* CHE 491 Chemical Systems Design II
* CHE XXX Technical Elective I
* CHE XXX Technical Elective II
* NGN 110 Introduction to Engineering I
* NGN 397 Professional Training

Technical Elective Courses

* CHE XXX Technical Elective
* CHE XXX Technical Elective

Proposed Sequence of Study

Bachelor of Science in Chemical Engineering

SECOND YEAR (42 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CHE 203	Principles of Chemical Engineering	4	CHM 101	MR
	CHM 102	General Chemistry II	4	CHM 101	MR
	CHM 215	Organic Chemistry I	3	CHM 102	MR
	COM XXX	Communications III	3		URE
	MTH 203	Calculus III	3	MTH 104	MR
		Total	**17**		
Spring	CHE 204	Chemical Engineering Thermodynamics I	3	PHY 101	MR
	CHE 215	Fluid Flow	3	Co-requisite: MTH 205	MR
	CHM 216	Organic Chemistry II	3	CHM 215	MR
	CHM 216L	Organic Chemistry II lab	1	CHM 216	MR
	THM XXX	Theme I	3		URE/ELC
	MTH 205	Differential Equations	3	MTH 104	MR
	NGN 225	Electrical Circuits & Devices	3	PHY 102	MR
		Total	**19**		
Summer	COM XXX	Communications IV	3		URE
	HUM/SS XXX	Humanities elective	3		URE/ELC
		Total	**6**		

THIRD YEAR (34 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CHE 307	Heat Transfer	3	CHE 215	MR
	CHM 331	Physical Chemistry	3	CHM 231 OR CHE 204	MR
	CHM 335	Physical Chemistry Lab	2	Co-requisite: CHM 331	MR
	CHE 304	Chemical Engineering Thermodynamics II	3	CHE 204	MR
	NGN 231	Material Science	3	CHM 101	MR
	THM XXX	Theme II	3		URE
		Total	**17**		
Spring	CHE 330	Simulation Techniques in Chemical Engineering	3	CHE 203, MTH 205	MR
	MTH 221	Linear Algebra	3	MTH 104	MR
	CHE 321	Chemical Reaction Engineering	3	CHM 331, CHE 305	MR
	CHE 329	Mass Transfer I	3	CHE 215, CHE 307	MR
	CHE 332	Engineering Economy	3		MR
	THM XXX	Theme III	3		URE
		Total	**17**		

FOURTH YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CHE 421	Chemical Process Dynamics & Control	3	CHE 329	MR
	CHE 429	Mass Transfer II	3	CHE 329	MR
	CHE 490	Chemical Systems Design I	3	CHE 321, CHE 329	MR
	CHE 451	Chemical Engineering Lab I	1.5	CHE 307, CHE 329	MR
	CHE XXX	Technical Elective I	3		MR/ELC
	THM XXX	Theme IV	3		
		Total	**16.5**		
Spring	CHE 491	Chemical Systems Design II	3	CHE 490	MR
	CHE 452	Chemical Engineering Lab II	1.5	CHE 451	MR
	CHE XXX	Technical Elective II	3		MR/ELC
		Free Elective	3		URE
		Free Elective	3		URE
		Free Elective	3		URE
		Total	**16.5**		

Bachelor of Science in Computer Engineering (B.S.Co.E.)

Computer engineers work with the computer hardware and software aspects of systems design and development.They usually apply the theories and principles of science, engineering, and mathematics to design and develop hardware, software, networks, and processes and to solve technical problems. Computer hardware engineers design, develop, test, and supervise the manufacture of computer hardware-such as chips or device controllers. Software engineers, on the other hand, can be involved in the design and development of software systems for control and automation of manufacturing, business, and management processes.

Computer engineering is one of the fastest growing fields of today. Many of modern products and services that we use in our daily life have been developed by computer hardware and software engineers. From a video game to the complex fly by wire operation of an airplane, computer hardware and software engineers play a crucial role in the design, development, testing of the modern day equipment. The computer engineering program at the American University is designed to meet the challenges of the present and future.

The Division of Electrical, Electronic and Computer Systems Engineering offers a four-year Bachelor of Science in Computer Engineering (B.S.Co.E.) degree. The program has been designed to help students develop the necessary skills and competence needed to design and integrate computer components and software systems. Elective courses allow students to develop further specialization in the areas of computer networks, software engineering, and computer architecture.

Degree Requirements for B.S.Co.E.

A total of 140 credit hours, including

University Requirements

* Arabic requirement: one course, ARA XXX
* English language competency requirement: 12 credit hours in COM/ENG courses
* Mathematics and/or statistics requirement: MTH103 and MTH104
* Science requirement: CHM101 and PHY101
* General education requirement: four thematic courses and a 3-credit hour humanities or social science course
* Free electives: nine credit hours, any courses offered at AUS.
* Computer literacy requirement: satisfied through extensive use of computer resources throughout the engineering curriculum.

Major Requirements

* MTH 104 Calculus II
* MTH 203 Calculus III
* MTH 205 Differential Equations
* MTH 213 Discrete Mathematics
* MTH 221 Linear Algebra
* PHY 102 General Physics II
* NGN 110 Introduction to Engineering
* NGN 111 Engineering Statistics
* NGN 397 Professional Training
* COE 210 Introduction to Computing I
* COE 211 Introduction to Computing II
* COE 221 Digital Systems
* COE 311 Data Structures
* COE 331 Microprocessors
* COE 332 Embedded Systems
* COE 370 Data Communications
* COE 371 Computer Networks
* COE 381 Operating Systems
* COE 411 Computer Architecture and Organization
* COE 420 Software Engineering I
* COE 424 Design of Digital Computers
* COE 432 Design and Analysis of Algorithms
* COE 490 Design Project I
* COE 491 Design Project II
* ELE 211 Electric Circuits I
* ELE 212 Electric Circuits II
* ELE 241 Electronics I
* ELE 241L Electronics I Lab

Elective Courses

Students are required to take four 3-credit courses from the approved technical elective courses shown below. At least two of the four courses should be in COE. At least one of the COE courses should be in computer networks, or software engineering or computer architecture:

* COE 421 Software Engineering II
* COE 422 Database Systems
* COE 423 Computer Networks II
* COE 425 Modern Computer

Architecture

* COE 494 Selected Topics in Computer Engineering
* COE 427 Internet Computing
* COE 428 VLSI Design
* COE 429 Computer Graphics
* COE 431 Computer Application in Industry
* COE 433 Distributed System Design
* COE 434 Mobile Computing
* COE 496 Direct Independent Study
* ELE 311 Electromagnetics
* ELE 332 Measurement and Instrumentation
* ELE 341 Electronics II
* ELE 353 Control Systems I
* ELE 424 Digital Signals Processing
* ELE 452 Digital Communications

Proposed Sequence of Study

Bachelor of Science in Computer Engineering

SECOND YEAR (44 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COE 210	Introduction to Computing I	3	MTH 103	MR/URE
	COE 221	Digital Systems	4	CO: ELE 211	MR
	COM XXX	Communications III	3	COM 102	URE
	COM 102	Electric Circuits I	3	PHY 102	MR
	THM XXX	Theme I	3		URE
	MTH 203	Calculus III	3	MTH 104	MR
		Total	**19**		
Spring	COE 211	Introduction to Computing II	3	COE 210	MR
	COM XXX	Communications IV	3	COM 102	URE
	ELE 212	Electric Circuit II	3	ELE 211	MR
	ELE 241	Electronics I	3	ELE 211	MR
	THM XXX	Theme II	3		URE
	MTH 221	Linear Algebra	3	MTH 104	MR
		Total	**18**		
Summer	COE 331	Microprocessors	4	COE 221	MR
	MTH 205	Differential Equations	3	MTH 104	MR
		Total	**7**		

THIRD YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COE 311	Data Structures	3	COE 211	MR
	COE 370	Data Communication	3	ELE 212 & MTH 221	MR
	ELE 241L	Electronics I Lab	1	ELE 241	MR
	XXX	Free Elective	3		URE
	THM XXX	Theme III	3		URE
	MTH 213	Discrete Mathematics	3	MTH 103	MR
		Total	**16**		
Spring	COE 332	Embedded Systems	3	COE 331	MR
	COE 371	Computer Networks I	4	COE 370	MR
	COE 381	Operating Systems	3	COE 311	MR
	THM XXX	Theme IV	3		URE
	XXX	Free Elective	3		URE
		Total	**16**		

FOURTH YEAR (33 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COE 411	Computer Architecture & Organization	3	COE 331	MR
	COE 420	Software Engineering I	3	COE 311	MR
	COE 424	Design of Digital Computers	3	COE 331	MR
	COE 490	Design Project I	1	Senior Standing	MR
	COE/ELE XXX	COE/ELE Elective	3		MR
	COE XXX	COE Elective	3		MR
		Total	**16**		
Spring	COE 432	Design & Analysis of Algorithms	3	COE 311	MR
	COE 491	Design Project II	2	COE 490	MR
	COE/ELE XXX	COE/ELE Elective	3		MR
	COE XXX	COE Elective	3		MR
	HUM/SS XXX	Humanities/Social Sciences Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**17**		

Bachelor of Science in Civil Engineering (B.S.C.E.)

Society has experienced enormous social and technological changes, which offer civil engineers new challenges and opportunities. Civil engineers are involved in planning, design, construction and management of systems involving the natural and manmade environment. Civil engineers work on the construction of industrial facilities, public works and infrastructure systems and human environment protection. Examples include buildings, highways, offshore structures, airports, bridges, reservoirs, tunnels and hazardous waste disposal plants. A civil engineering degree opens up many attractive opportunities with public agencies, private industry, consulting firms or contracting firms.

Civil engineers also seek solutions to reduce air, water and ground pollution, to improve congested transportation systems, and to reduce the consequences of natural hazards such as storms, floods, wind and earthquakes. Civil engineering plays an important role in avoiding environmental problems within the context of sustainable development.

The Division of Civil, Environmental and Urban Systems Engineering offers a four-year program leading to the Bachelor of Science in Civil Engineering (B.S.C.E.) degree. The objective of the program is to provide the students with a broad background in both the theory and practice of the profession. The program is supported by modern laboratories for teaching and research. The program is based on an integration of science and technological knowledge with management and leadership capabilities at the detailed component level and at the system level. It provides the future leaders of the profession with skills and foundations for life-long learning and growth.

Degree Requirements for B.S.C.E.

A total of 140 credit hours, including

University Requirements

* Arabic requirement: one course, ARA XXX
* English language competency requirement: 12 credit hours in COM/ENG courses
* Mathematics and/or statistics requirement: MTH103 and MTH104
* Science requirement: CHM101 and PHY101
* General education requirement: four thematic courses and a 3-credit hour humanities or social science course
* Free electives: nine credit hours, any courses offered at AUS.
* Computer literacy requirement:

  satisfied through extensive use of computer resources throughout the engineering curriculum.

Major Requirements

* CVE 221 Materials of Construction and Quality Control
* CVE 231 Engineering/Environmental Geology
* CVE 241 Elementary Surveying
* CVE 242 Field Plane Surveying
* CVE 301 Theory of Structures
* CVE 302 Construction Materials Lab
* CVE 303 Geotechnical Engineering Lab
* CVE 311 Reinforced Concrete Design
* CVE 312 Structural Steel Design
* CVE 322 Civil Engineering Cost Analysis
* CVE 331 Geotechnical Engineering Principles
* CVE 333 Geotechnical Engineering Design
* CVE 341 Hydraulic Engineering
* CVE 351 Water and Wastewater Treatment
* CVE 360 Urban Transportation Planning

* CVE 363 Highway Engineering
* CVE 401 Environmental Engineering Lab
* CVE 467 Project Estimating, Planning and Control
* CVE 490 Civil Engineering Design Project I
* CVE 491 Civil Engineering Design Project II
* NGN 110 Introduction to Engineering I
* NGN 1I1 Engineering Statistics
* NGN 221 Statics
* NGN 222 Dynamics
* NGN 223 Mechanics of Materials
* NGN 241 Fluid Mechanics
* NGN397 Professional Training
* MTH 104 Calculus II
* MTH 203 Calculus III
* MTH 205 Differential Equations
* PHY 102 General Physics II
* ENV 101 Introduction to Environmental Sciences

Electives

Students must complete two elective courses (six credit hours) in civil engineering, general engineering and basic science courses:

* CVE 321 Numerical Methods and Computer Applications in Civil Engineering
* CVE 411 Structural Concrete Design
* CVE 412 Computer Methods in Structural Design
* CVE 413 Bridge Design
* CVE 437 Advanced Concrete Technology
* CVE 442 Advanced Foundation Engineering
* CVE 445 Environmental Geotechnology
* CVE 446 Geotechnical Dam Engineering
* CVE 447 Irrigation and Drainage Engineering
* CVE 448 Port and Harbor Engineering
* CVE 450 Environmental Pollution Engineering and Control
* CVE 455 Environmental Impact Assessment, Protection and Public Health
* CVE 456 Traffic Engineering
* CVE 457 Airport Planning and Design
* CVE 461 Advanced Surveying
* CVE 464 Building Construction
* CVE 494 Selected Topics in Civil Engineering
* NGN 463 Quantitative Engineering Management 1

Proposed Sequence of Study

Bachelor of Science in Civil Engineering

SECOND YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM XXX	Communication III	3	COM 102	URE
	CVE 242	Field Plane Surveying	1	Co-requisite: CVE 241	MR
	CVE 241	Elementary Surveying	3	MTH 104	MR
	ENV101	Introduction to Environmental Sciences	3		MR
	THM XXX	Theme I	3		URE
	MTH 203	Calculus III	3	MTH 104	MR
	NGN 221	Statics	3	PHY 101	MR
		Total	**19**		
Spring	COM XXX	Communication IV	3	COM 102	URE
	CVE 231	Engineering/Environmental Geology	3		MR
	THM XXX	Theme II	3		URE
	MTH 205	Differential Equations	3	MTH 104	MR
	NGN 223	Mechanics of Materials	3	NGN 221	MR
	NGN 241	Fluid Mechanics	3	MTH 104, NGN 221	MR
		Total	**18**		

THIRD YEAR (36 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CVE 301	Theory of Structures	3	NGN 223	MR
	CVE 302	Construction Materials Lab	1	Co-requisite: CVE 221	MR
	CVE 303	Geotechnical Engineering Lab	1	Co-requisite: CVE 331	MR
	CVE 221	Materials of Construction & Quality Control	3	NGN 231	MR
	CVE 331	Geotechnical Engineering Principles	3	NGN 223, CVE 231	MR
	CVE 360	Urban Transportation Planning	3	NGN 111 (or Statistics course)	MR
	MTH 221	Linear Algebra	3	MTH 104	MR
		Total	**17**		
Spring	CVE 311	Reinforced Concrete Design	3	CVE 301	MR
	CVE 333	Geotechnical Eng. Design	3	CVE 331	MR
	CVE 341	Hydraulic Engineering	3	NGN 241	MR
	CVE 363	Highway Engineering	3	CVE 241, CVE 360	MR
	HUM/SS XXX	Humanities & Social Sciences	3		URE
	NGN 222	Dynamics	3	NGN 221	MR
		Total	**18**		

FOURTH YEAR (37 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	CVE 312	Structural Steel Design	3	CVE 301	MR
	CVE 322	Civil Engineering Cost Analysis	2	NGN 111	MR
	CVE 351	Water and Waste Water Treatment	3	CVE 341	MR
	CVE 401	Civil Engineering Lab IV	1	Co: CVE 351	MR
	CVE 467	Project Estimating, Planning & Control	3	NGN 111	MR
	CVE 490	Civil Engineering Design Project I	1	Senior standing	MR
	CVE XXX	Technical Elective	3		MR
	THM XXX	Theme III	3		URE
		Total	**19**		
Spring	CVE 491	Civil Engineering Design Project II	3	CVE 490	MR
	CVE XXX	Technical Elective	3		MR
	THM XXX	Theme IV	3		URE
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**18**		

Bachelor of Science in Electrical and Electronic Engineering (B.S.E.E.)

Electrical and electronics engineers work in different areas such as the planning, design, and operation of power generation, transmission, and distribution systems, telecommunications, medical electronics, machine controls, instrumentation and electrical equipment manufacturing. Electrical and electronics engineers also design and develop new electrical products, write their performance requirements, and develop maintenance schedules. They also test and supervise electrical equipment, solve their operating problems, and estimate the time and cost of engineering projects. There is an enormous array of opportunities exist for electrical engineers.

The field of electrical engineering is one that is continually expanding. The explosive growth in this area during the past two decades has impacted almost every area of human life. The role of electric power in our daily life needs no explanation. Modern telecommunication has shortened geographic distances making every one part of a true "global village". Instrumentation and control play a major role in supporting the industry. Advances in medical electronics have contributed to the welfare of mankind. It is difficult to find a sector of economy and society where the work of electrical and electronic engineer is not relevant. The electrical and electronic engineering program at the American University of Sharjah is designed to meet these challenges of the modern world.

The Division of Electrical, Electronic and Computer Systems Engineering offers a four-year program leading to a Bachelor of Science in Electrical Engineering (B.S.E.E.). The curriculum has been designed with the aim of providing breadth, depth, design and coverage across the key areas of electrical and electronic engineering. This degree prepares graduate to work in a broad range of areas related to electrical engineering profession like electric power, power electronics, telecommunication, control system, instrumentation, microwaves, and medical electronics.

Degree Requirements for B.S.E.E.

A total of 139 credit hours, including

University Requirements

* Arabic requirement: one course, ARA XXX
* English language competency requirement: 12 credit hours in COM/ENG courses
* Mathematics and/or statistics requirement: MTH 103, MTH 104, and MTH 203
* Science requirement: CHM 101, PHY 101, PHY 102, and COE 210
* General education requirement: Four thematic courses and a 3- credit hour Humanities or Social Science course
* Free electives: Nine credit hours, any courses offered at AUS.
* Computer Literacy Requirement: satisfied through extensive use of computer resources throughout the engineering curriculum.

Major Requirements

* MTH 104 Calculus II
* MTH 203 Calculus III

* MTH 205 Differential Equations
* MTH 221 Linear Algebra
* PHY 102 General Physics II
* NGN 110 Introduction to Engineering I
* NGN 111 Engineering Statistics
* NGN 224 Statics and Dynamics
* NGN397 Professional Training
* COE 210 Introduction to Computing I
* COE 221 Digital Systems
* COE 331 Microprocessors
* ELE 211 Electric Circuits I
* ELE 212 Electric Circuits II
* ELE 241 Electronics I
* ELE 241L Electronics I Lab
* ELE 251 Electrical Energy Conrversion
* ELE 311 Engineering Electromagnetics
* ELE 321 Signals and Systems
* ELE 332L Measurements and Instrumentation Lab
* ELE 341 Electronics II
* ELE 341L Electronics II Lab
* ELE 353 Control Systems I
* ELE 353L Control Systems I Lab
* ELE 361 Communications I
* ELE 361L Communications I Lab
* ELE 371 Power Systems Analysis
* ELE 371L Electric Machines and Power Systems Lab
* ELE 424 Digital Signal Processing
* ELE 490 Design Project I
* ELE 491 Design Project II

Elective Courses

Students are required to take four 3-credit elective courses and 1-credit laboratory from the approved list of major electives. Two elective courses must be taken from one area, which is the student's area of specialization, and two from two different areas. There are four areas of specialization in electrical engineering: communications, electric power engineering, instrumentation and control, and medical electronics.

A student specializing in communications can decide to take two courses in communications. Only one of the other two courses can be an electromagnetics related course. If the student decides to take two electromagnetics related courses, only one of the other two courses can be a communications course.

A student specializing in power engineering can decide take two courses in power systems. One of the other two courses can be a power electronics course. If the student decides to take two power electronics related courses, one of the other two courses can be a power systems course. In both cases the fourth course must be from an area other than power electronics and power systems.

The following is a list of the elective courses in each of the four major areas:

Communications

* COE 455 Digital Image Processing
* ELE 452 Digital Communications
* ELE 453 Microwave Engineering
* ELE 454 Antennas and Propagation
* ELE 494 Selected Topics in Communication Engineering
* ELE 457 Satellite Communications
* ELE 458L Communications Systems Lab
* ELE 496 Directed Independent Study in Communications Engineering

Electric Power Engineering

* ELE 481 Power Systems Protection
* ELE 482 Electric Power Distribution Systems
* ELE 485 Power Electronics
* ELE 486 Power Electronics and Drives
* ELE 487 Power Quality and Harmonics
* ELE 488 Power Engineering Lab
* ELE 494 Selected Topics in Power Engineering
* ELE 496 Directed Independent Study in Electric Power Engineering

Instrumentations and Control

* ELE 332 Measurements and Instrumentation Lab

* ELE 444 Control Systems II
* ELE 471 Digital Control Systems
* ELE 472 Nonlinear Control
* ELE 473 Industrial Instrumentation and Control
  * ELE 494 Selected Topics in Control Systems
* ELE 475 Distributed Control Systems
* ELE 443 Power Electronics and Drives
* ELE 476L Instrumentation and Control Systems Lab
* ELE 496 Directed Independent Study in Instrumentations and Control

Medical Electronics

* ELE 425 Optoelectronics
* ELE 426 Imaging Systems
* ELE 432 Medical Instrumentation I
* ELE 433 Medical Instrumentation II
* ELE 435 Medical Signal and Image Processing
* ELE 436 Biomedical Materials
* ELE 494 Selected Topics in Medical Electronics
* ELE 439L Medical Electronics Systems Lab
* ELE 496 Directed Independent Study in Medical Electronics

Proposed Sequence of Study

Bachelor of Science in Electrical and Electronics Engineering

SECOND YEAR (41 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COE 210	Introduction to Computing I	3	MTH 103	MR/URE
	COE 221	Digital Systems	4	Co-requisite: ELE 211	MR
	COM XXX	Communications III	3	COM 102	URE
	ELE 211	Electric Circuits I	3	PHY 102	MR
	MTH 205	Differential Equations	3	MTH 104	MR
		Total	**16**		
Spring	COM XXX	Communications IV	3		URE
	ELE 212	Electric Circuits II	3	ELE 211	MR
	ELE 241	Electronics I	3	ELE 211	MR
	ELE 251	Electric Power Engineering	3	Co-requisite: ELE 212	MR
	MTH 203	Calculus III	3	MTH 104	MR
	MTH 221	Linear Algebra	3	MTH 104	MR
		Total	**18**		
Summer	COE 331	Microprocessors	4	COE 221	MR
	HUM/SS XXX	Humanities/ Social Sciences Elective	3		URE
		Total	**7**		

THIRD YEAR (35 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ELE 241L	Electronics I Lab	1	ELE 241	MR
	ELE 311	Electromagnetics	3	MTH 205, PHY 102	MR
	ELE 321	Signals and Systems	3	ELE 212, MTH 221	MR
	ELE 341	Electronics II	3	ELE 241	MR
	ELE 353	Control Systems I	3	MTH 205, ELE 212	MR
	ELE 371	Power System Analysis	3	ELE 251	MR
	ELE 371L	Machines/Power Systems Lab	1	Co-requisite: ELE 371	MR
		Total	**17**		
Spring	ELE 332L	Measurements and Instrumentation Lab	1	ELE 241	MR
	ELE XXX	ELE Elective	3		MR
	ELE 341L	Electronics II Lab	1	ELE 341	MR
	ELE 353L	Control Systems I Lab	1	ELE 353	MR
	ELE 361	Communications I	3	ELE 321	MR
	THM XXX	Theme I	3		URE
	XXX	Free Elective	3		URE
	NGN 224	Statics and Dynamics	3	MTH 104, PHY 101	MR
		Total	**18**		

FOURTH YEAR (32 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	ELE 361L	Communications I Lab	1	ELE 361	MR
	ELE 424	Digital Signal Processing	3	ELE 321	MR
	ELE 4XX	ELE Elective	3		MR
	ELE 4XX	ELE Elective	3		
	ELE 490	Design Project I	1	Senior Standing	MR
	THM XXX	Theme II	3		URE
	THM XXX	Theme III	3		URE
		Total	**17**		
Spring	ELE 4XX	ELE Elective	3		MR
	ELE 4XX	ELE Elective Lab	1		MR
	ELE 491	Design Project II	2	ELE 490	MR
	THM XXX	Theme IV	3		URE
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		

Bachelor of Science in Mechanical Engineering (B.S.M.E.)

Mechanical engineering provides an excellent broad education for today's technological world. Mechanical engineers model, analyze, test, manufacture the engines that power ground as well as aerospace vehicles; they design, operate and modify the power plants that convert the energy in fuels, atoms, wind, and sunlight into electricity, and they construct intelligent machines and robots in industry. Mechanical engineers can also build a prototype of an electric car, develop computer and control systems for automobiles and industrial processes, design interfaces between computers and mechanical and energy systems, develop energy management systems for industry, design and manufacture electronic products, develop new materials that can be used for commercial jets and design instruments for medicine and high-performance sport equipment. In short, the mechanical engineer is the backbone of the engineering profession.

Coursework in the mechanical engineering program includes topics in applied mechanics, fluid mechanics, thermal sciences, engineering materials, manufacturing processes, mechatronics and energy.

The Division of Chemical, Thermal and Mechanical Engineering offers a four-year program leading to a Bachelor of Science in Mechanical Engineering (B.S.M.E.) degree. The curriculum has been designed with the aim of providing breadth, depth, design and coverage across the key areas of mechanical engineering. This degree prepares graduate to work in a broad range of areas related to the mechanical engineering profession.

Degree Requirements for B.S.M.E.

A total of 140 credit hours, including the following:

University Requirements

* **Arabic requirement**: one course, ARA XXX
* **English language competency requirement:** 12 credit hours in COM/ENG courses
* **Mathematics and/or statistics requirement:** MTH 103 and MTH 104
* **Science requirement:** CHM 101 and PHY 101
* **General education requirement:** four thematic courses and a 3-credit hour Humanities or Social Science course
* **Free electives:** nine credit hours, any courses offered at AUS.
* **Computer literacy requirement:** satisfied through extensive use of computer resources throughout the engineering curriculum.

Major Requirement

* MCE 115 Workshop
* MCE 215 Engineering Drawing
* MCE 231 Manufacturing Processes
* MCE 241 Thermodynamics I
* MCE 311 Engineering Measurements
* MCE 316 Kinematics and Dynamics of Machinery
* MCE 321 Mechanical Design I

* MCE 322 Mechanical Design II
* MCE 335 Computational Techniques
* MCE 341 Thermodynamics II
* MCE 344 Heat Transfer
* MCE 410 Control Systems
* MCE 482 Intermediate Fluid Mechanics
* MCE 490 Design Project I
* MCE 491 Design Project II
* MTH 104 Calculus II
* MTH 203 Calculus III
* MTH 205 Differential Equations
* MTH 221 Linear Algebra
* NGN 110 Introduction to Engineering
* NGN 111 Engineering Statistics
* NGN 221 Statics
* NGN 222 Dynamics
* NGN 223 Mechanics of Materials
* NGN 225 Electric Circuits and Devices
* NGN 231 Materials Science
* NGN 241 Fluid Mechanics
* NGN 397 Professional Training
* PHY 102 General Physics II

Elective Courses

Students must complete four technical elective courses (12 credit hours) in the major areas of mechanical engineering. Two courses (six credit hours) should be from the areas of mechatronics, dynamics, control, manufacturing, design, mechanics or materials and two courses (six credit hours) from the areas of thermosciences or engineering management.

Technical Electives

Mechatronics, Dynamics, Control and Manufacturing

* MCE 418 Modeling and Simulation of Dynamic Systems
* MCE 423 Mechanical Vibrations
* MCE 430 Fundamentals of Computer-Aided Design and Manufacturing
* MCE 439 CIM in Industrial Systems
* MCE 440 Advanced Manufacturing Processes

* MCE 464 Introduction to Robotics
* MCE 466 Introduction to Mechatronics
* MCE 494 Selected Topics in Mechanical Engineering
* MCE 496 Independent Study

Design, Mechanics and Materials

* MCE 435 Advanced Mechanics of Materials I
* MCE 436 Advanced Mechanics of Materials II
* MCE 443 Introduction to Fracture Mechanics
* MCE 473 Applied Finite Elements Analysis
* MCE 476 Design Optimization
* MCE 477 Composite Materials
* MCE 480 Plastics and Plastic Processing
* MCE 494 Selected Topics in Mechanical Engineering
* MCE 496 Independent Study

Thermo-Fluid and Energy Conversion Systems

* MCE 445 Energy Systems
* MCE 446 Refrigeration and Air Conditioning
* MCE 447 Internal Combustion Engines
* MCE 448 Advanced Heat Transfer
* MCE 449 Renewable Energy Systems
* MCE 450 Energy Conservation and Management
* MCE 454 Electronic Heat Transfer
* MCE 473 Applied Finite Elements Analysis
* MCE 487 Turbomachines
* MCE 488 Introduction to Computational Fluid Dynamics (CFD)
* MCE 489 Fluid Power
* MCE 494 Selected Topics in Mechanical Engineering
* MCE 496 Independent Study

Engineering Management

* NGN 461 Management for Engineers
* NGN 462 Engineering Project Management
* NGN 463 Quantitative Engineering Management I
* NGN 464 Engineering Economics
* NGN 465 Quality Control for Production Systems
* NGN 466 Quantitative Engineering Management II
* MCE 496 Independent Study

Proposed Sequence of Study

Bachelor of Science in Mechanical Engineering

SECOND YEAR (42 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	COM XXX	Communication III	3	COM 102	URE
	THM XXX	Theme I	3		URE
	MCE 115	Workshop	1		MR
	MTH 203	Calculus III	3	MTH 104	MR
	MCE 215	Engineering Drawing	2		MR
	NGN 221	Statics	3	PHY 101	MR
	NGN 231	Material Science	3	CHM 101	MR
		Total	**18**		
	THM XXX	Theme II	3		URE
	NGN 222	Dynamics	3	NGN 221	MR
	NGN 223	Mechanics of Materials	3	NGN 221	MR
	NGN 241	Fluid Mechanics	3	MTH 104, NGN 221	MR
	MCE 231	Manufacturing Techniques	3	MCE 115, NGN 231	MR
	MTH 205	Differential Equations	3	MTH 104	MR
		Total	**18**		
Summer	HUM/SS XXX	Humanities & Social Sciences	3		URE
	COM XXX	Communication IV	3		URE
		Total	**6**		

THIRD YEAR (31 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	THM XXX	Theme III	3		URE
	MTH 221	Linear Algebra	3	MTH 104	MR
	MCE 241	Thermodynamics I	3	PHY 101	MR
	MCE 321	Mechanical Design I	3	NGN 223	MR
	MCE 335	Computational Techniques	3	MTH 205	MR
	NGN 225	Electric Circuits & Devices	3	PHY 102	MR
		Total	**18**		
Spring	THM XXX	Theme IV	3		URE
	MCE 311	Engineering Measurements	3	NGN 225, NGN 241	MR
	MCE 316	Kinematics & Dynamics of Machinery	3	NGN 222	MR
	MCE 322	Mechanical Design II	3	MCE 321	MR
	MCE 341	Thermodynamics II	3	MCE 241	MR
	MCE 344	Heat Transfer	3	NGN 241, MCE 241	MR
		Total	**18**		

FOURTH YEAR (31 credit hours)					
Term	**Course #**	**Course Title**	**Credit Hours**	**Prerequisite(s)**	**Fulfills**
Fall	MCE 410	Control Systems	3	NGN 222, NGN 225, MTH 205	MR
	MCE 490	Design Project I	2	Senior standing	MR
	MCE 4XX	Mechanical Elective (A)	3		MR/ELC
	MCE 482	Intermediate Fluid Mechanics	3	NGN 241, MCE 241, MTH 205	MR
	MCE 4XX	Mechanical Elective (B)	3		MR/ELC
	XXX	Free Elective	3		URE
		Total	**16**		
Spring	MCE 4XX	Mechanical Elective (A)	3		MR/ELC
	MCE 491	Design Project II	2	MCE490	MR
	MCE 4XX	Mechanical Elective (B)	3		MR/ELC
	XXX	Free Elective	3		URE
	XXX	Free Elective	3		URE
		Total	**15**		

Abbreviations:

MR: major requirement; **URE:** university requirement; **ELC:** elective from the list of approved technical electives in mechanical engineering (A= mechatronics, dynamics, control, manufacturing, design, mechanics or materials; B= thermosciences or engineering management)

Continuing Education Center

Director
Bashir Abolail, MBA

The Continuing Education Center (CEC) at the American University of Sharjah offers quality educational and professional development programs to meet the ongoing needs of businesses and organizations in the Emirates. CEC fulfills this mandate by making the most of the facilities and resources of AUS and its affiliates as well as utilizing a select group of local and international consultants.

Professional Certificate Programs

In order to cover the lack of professional personnel in the market place for both the local work force and expatriates, CEC has launched professional certificate programs that cover a wide range of professional disciplines such as sales and marketing, accounting, finance, computers and the internet, human resources, and professional English.

The professional certificate programs utilize a modular approach to learning that is directly applicable to the workplace. These modules allow individuals to access different aspects of a discipline while building practical skills. By successfully completing a specified number of independent modules, individuals will be granted an AUS Continuing Education Center certificate.

Other certificates prepare students to sit for internationally recognized examinations such as the CFA (chartered financial analyst) and others. These certificates enhance individual professional ability, and provide the certificate holder with increased earning potential.

Customized Training

Organizations require a flexible, highly skilled workforce and management capable of meeting the challenges of today's dynamic and competitive business environment. The CEC is uniquely qualified to help organizations in the UAE and surrounding region train and update the skills of their workforces through a variety of training programs.

CEC is distinctive in its ability to deliver the right combination of experienced personnel, excellent facilities and the latest technology. Our team includes professionals with years of experience both in the UAE and in the USA. This relevant expertise is available throughout the year.

Our programs provide a fertile environment for the exchange of ideas and valuable opportunities for middle and senior level executives to learn from each other. Aside from the direct benefit from the discussions and networking which result from both the formal and informal aspects of each program, CEC programs provide participants with training that is immediately relevant to their work and their organization. Therefore, everything new they learn can be implemented and practiced in a timely manner.

To be effective, the unique needs and goals of an organization must be considered and incorporated into the design and delivery of training. The experts at

CEC work closely with the management of organizations to ensure that the objectives, materials and delivery move that organization toward meeting its objectives. When the skills learned in the classroom are related to the workplace, participants experience better retention of the new skills and the employer sees direct improvement in the workplace.

CEC can assist organizations in many ways. By working in partnership with key management staff, it can

* Assess internal and external needs
* Set training objectives
* Develop training plans for individuals or organizations
* Develop customized courses and materials to achieve specific organizations' goals
* Provide certification or develop internal certification programs

Since its inception, CEC has worked with local government, organizations and businesses to develop programs in leadership, managerial development, team building, communication, project management, executive English, real estate investment, English language development, time management, computer skill upgrading for engineers, exposition management and others. In addition to these programs, the diverse nature of faculty expertise at AUS allows CEC to develop and deliver a wide range of other programs related to business, management, engineering, design, arts, science and other disciplines.

Course Delivery

In recognition of the schedule of working professionals, these courses are delivered in a part-time evening format. At the request of an organization or group of students, programs may be offered at different times or in a more intensive format.

For further information regarding CEC and the certificate and diploma programs, please contact the following numbers:

Tel: 971-06 505 5023
Fax: 971-06 505 5020
E-mail: edu_center@aus.ac.ae

College of Arts and Sciences

ARA *Arabic*

Arabic Language

Most Arabic Language courses meet the university requirement of three credits of Arabic. When in doubt, confirmation should be sought from the CAS Dean's office.

ARA 103 Composition for Native Speakers of Arabic (3-0-3). A practical language-based course that aims to develop the writing skills of the native speaker of Arabic. Develops themes such as letter writing and gives attention to the development of personal style. An additional element will be a historical look at styles of composition in Arabic.

ARA 104 Arabic as a Second Language I (3-0-3). Introduces students to the script of modern written Arabic and develops their confidence and knowledge in the four skill areas. The materials are designed using a modern approach to foreign language teaching. (Formely ARA 100). This course does not satisfy the Arabic heritage requirement.

ARA 200 Arabic as a Second Language II (3-0-3). An extension of ARA 100 this course is designed to develop further the student's knowledge and proficiency in modern Arabic. As with the previous course this one will also be video-driven. Prerequisite: equivalent of approximately 60 - 70 classroom hours of Arabic. This course does not satisfy the Arabic heritage requirement.

ARA 300 Arabic as a Second Language III (3-0-3). This course builds on the earlier Arabic courses using more advanced materials. Video materials will be used as the main focus for this course that build on grammatical structures and conversational skills practiced in earlier courses. Prerequisite: equivalent of approximately 125-150 classroom hours of Arabic. This course does not satisfy the Arabic Heritage requirement.

ARA 308 Introduction to Stylistics and Metrics (3-0-3). This course falls into two major parts: stylistics (balaghah) and metrics ('arud). In stylistics, a brief theoretical survey of the major components of the field is followed by extensive textual analysis. In metrics, the basic principles of the taf'ilat and their variations are introduced and applied to selected examples.

ARA 408 The Arabic Language and Modern Linguistics (3-0-3). This course will focus on the application of modern linguistic theory to the study of medieval and modern Arabic. By introducing the student to modern linguistic terminology and theory, it will assess the importance of modern linguistics in furthering our understanding of traditional Arab grammatical theory.

Arabic Literature

Most Arabic literature courses meet the university requirement of three credits of Arabic. When in doubt, confirmation should be sought from the CAS Dean's office.

ARA 101 and 102 Readings in Arabic Heritage (3-0-3). These two courses survey selections from writings in Arabic prose, literature and poetry which reflect the intellectual, literary and cultural development of the Arabs from pre-Islamic times up to the present day. ARA101 in English has a Corequisite: COM 102

ARA 201 Arabic Literature in Translation (for non-native speakers only) (3-0-3). This course is a detailed study of genre and theme in Arabic literature, with special emphasis on the modern period. It focuses on literature as a vital reflection of Arab culture and society.

ARA 202 Arab-Islamic History and the History of Arabic Literature (3-0-3). This is a very intensive and wide-ranging survey course designed to illustrate the essential facts of Arab history. It focuses on the landmarks of Arabic literature from pre-Islamic to modern times, and provides glimpses of the literary fruits borne within that milieu. The course will also deal with the fundamental facts of Arab history.

ARA 203 Pre-Islamic Poetry (3-0-3). Examines relevant aspects of pre-Islamic Arabian life and history, and deals with the main issues and trends related to pre-Islamic poetry using major primary sources. A direct textual approach is adopted based on a close critical analysis of selected poems.

ARA 204 Early Islamic and Umayyad Poetry (3-0-3). Surveys Arabic poetry from the advent of Islam to the end of the Umayyad era. Ideological, cultural, economic, social and political factors affecting poetry in both phases of this period are studied. The course highlights the revival of poetry under the Umayyads, the restoration of pre-Islamic poetic traditions, and the major poetic trends and features that testify to the contemporaneous nature of this poetry. The foundation of this course is a critical analysis of selected poems.

ARA 205 Poetry in the Abbasid Age (3-0-3). Covers the whole period from the fall of the Umayyads to the fall of Baghdad, and the entire territory from Transoxania to Al Andalus. The contemporaneous nature of Abbasid poetry, in its artistic techniques and in its response to the changing social and cultural life, represents a genuine break with the Arab poetic code which pervaded pre-Islamic and Umayyad poetry. Major trends and issues of this new poetry are surveyed, with a special emphasis on at least four major poets: Abu Nuwwas, Abu Tammam, Al Mutanabbi and Al Macarri.

ARA 206 Modern Arabic Prose (3-0-3). Surveys the renaissance of Arabic prose from the nineteenth century to the present. The general burden of the course is the study of the modern Arabic novel, short story, play and autobiography. Special attention is paid to the factors leading to the rise of these fundamentally Western literary forms in the Arab world as a result of the 'Nahda', and to elements of fiction and drama in 'parallel' forms in classical Arabic literature. The focus of the course is the study of the established works of Naguib Mahfouz and Tawfiq Al Hakim.

ARA 207 Arabic Drama (3-0-3). Looks at the emergence of Arabic drama in the nineteenth century until the present day and assesses prototype drama forms of the medieval period. Through a study of selected plays by prominent authors, a picture will emerge of the influence of Arabic drama on Arabic literature. Attention will be given to the effect created by the use of colloquial dialogues in play scripts. A selection of video recordings will also accompany this course.

ARA 213 Contemporary Arabic Literature (3-0-3). The course offers a survey of modern and postmodern Arabic fiction drama, poetry and criticism. Themes include love,

death, exile, and social and political concerns. The course illustrates the nexus between literary works and contemporary Arab life.

ARA 301 Classical Arabic Prose until the end of the Third Century A.H. (3-0-3). Through critical textual analysis, this course tracks the evolution and development of classical Arabic prose from pre-Islamic times until the late second century A.H. after the death of Al Jahiz. Major trends, styles and forms are examined from a complex perspective, combining the evolutionary chronological approach with the artistic and analytical. It assesses the significance of the oratory tradition in early Islam, and also looks at the early development of the epistolary genre which was to become the main focus of Arabic prose literature. It also looks at the influence of the Qur'an and Hadith on the development of Arabic prose.

ARA 302 Arab Identity and Thought (3-0-3). Since the Arab awakening of the late 19th century Arab thought has been largely concerned with identity formation in relation or in opposition to other cultures and nationalisms. This course examines representative writings by Arab thinkers and authors, which deal with issues concerning the state formation, modernization, nationalism, democracy, Islamism, women rights, and minority issues.

ARA 303 Classical Arab/Islamic Culture (3-0-3) This course explores the ways in which Islam has shaped the history and culture of the Arabs. It discusses some of the significant features of Arab/Islamic culture and the several contributions this culture had made.

ARA 304 Modern Arabic Poetry (3-0-3). Surveys the renaissance of Arabic poetry from the nineteenth century to the present, principally through the stimulating first exposure to the West and the rise of Neo-Classicism by Al Barudi, Shawqi and others. It also investigates the steady and progressive exposure to the territory and soul of the West, which produced successive and contemporaneous waves of imitation, assimilation, 'apostasy' and rejection.

ARA 305 Literature of the Arabian Gulf (3-0-3). Through selected texts, this course examines the contribution of literary figures in the Arabian Gulf, especially those of the United Arab Emirates, to Arabic literature in general.

ARA 312 Modern Arabic Literature: Prose and Poetry (3-0-3). This course surveys the renaissance (Nahda) of Arabic literature from the early twentieth century to the present day. Modern literary trends such as romanticism, realism and existentialism will be illustrated through the study of selected works: novels, short stories , drama and poetry (free verse) by prominent writers.

ARA 401 Literary Criticism from the Arab Perspective (3-0-3). This course is a survey of the history of Arab literary theories and of Arab literary criticism in classical times. The authoritative work by Ihsan Abbas (Tarikh Al Naqd Al Adabi 'ind Al Arab) provides the ideal framework for the course.

ARA 402 Qur'anic Studies (3-0-3). An introduction to the major Qur'an related issues such as the collection of the Qur'anic suras, Qur'anic imagery and the various trends in Qur'anic studies and interpretations and exegesis. It will also examine the important contribution made by the rationalist Mu'tazila to Muslim exegesis.

ARA 403 Sufi Literature (3-0-3). The purpose of this course is to familiarize students with Sufi literature and Sufi traditions and doctrines.

BIO *Biology*

BIO 101 General Biology I (3-3-4). This is part one of a rigorous two semester course covering the scientific method, the molecular basis of life, the carbon atom, cells, organelles, plant and animal physiology, genetics, speciation, behavior and evolution. The course is designed to give students an in-depth study of biology that will prepare them for a profession in biology. A required laboratory is part of the course. Prerequisites: None.

BIO 102 General Biology II (3-3-4). This is part two of a rigorous two semester course covering the origins of life, plant and animal diversity, animal evolution, plant and animal form and function, body systems, ecology and conservation biology. The course is designed to give students an in-depth study of organism biology that will prepare them for a profession in biology. A required laboratory is part of the course. Prerequisite: None.

BIO 230 Plant Adaptation (2-3-3). The course focuses on the adaptations of plants to the environment, such as their structure, reproduction and physiology. Special attention is given to environmental case histories of plant adaptations to specific habitats and adverse environments. This course also deals with the importance of plants in describing the environment and the energy budget, formation of habitat and the descriptions of prevailing environmental conditions. Prerequisite: BIO 102.

BIO 251 Environmental Ecology (2-3-3). This is a general ecology course with a strong emphasis on environmental principles. The course will help the students understand the complexity of the environment, structures of ecosystems, food webs, energy flow, chemical cycles, population dynamics, limiting factors, recognition of diverse biomes, ecosystems, communities and habitats. Emphasis will be strong in the area of how plants respond to the environment and provide the basis for major biomes, ecosystems and specific communities in our geographical region. Labs will focus on quantitative techniques used by professionals. Prerequisite: BIO 102.

BIO 260 Genetics (3-0-3). This course will cover the general principles of genetics from Mendelian to modern molecular genetics. The emphasis will be on molecular genetics and how these techniques are being used in genetic engineering, medicine, agriculture, and industry and law enforcement. The student will also obtain a strong understanding of genetic principles applied to biogeography, population dynamics, species diversity, conservation and evolution. Prerequisite: BIO 102.

BIO 331 General Microbiology (2-3-3). This is a general course covering the biology of microorganisms (viruses, bacteria, fungi and helminthes). It emphasizes the role they play in our lives in pathology, industry, bioremediation and the environment. Students will learn sterile technique, how to culture and identify bacteria and how to control them in clinical, personal, industrial and environmental settings. Prerequisite: BIO 102.

CHM *Chemistry*

CHM 101 General Chemistry I (3-3-4). An introductory course covering the fundamental chemical principles, concepts and laws. Topics include reaction stoichiometry, types of chemical reactions, solution stoichiometry, gas laws, kinetic theory of gases, thermochemistry, atomic structure and periodicity, the Bohr model, Lewis structures, ionic and covalent bonding, the solid state and crystallography, the liquid state and phase diagrams. Laboratory experiments illustrate principles discussed in the course. Prerequisites: None.

CHM 102 General Chemistry II (3-3-4). Properties of solutions, including colligative and chemical properties. Acid-base and complex ion equilibria, laws of thermodynamics, enthalpy and free energy, electrochemistry, nuclear chemistry, representative elements, transition metals and coordination compounds. Laboratory includes

experiments illustrating principles discussed in the course. Prerequisite: CHM 101.

CHM 103 Chemistry and Everyday Life (3-0-3). This course introduces the student to the extraordinary chemistry of ordinary things, the magic of chemistry and the building blocks of chemistry. Topics include chemistry of the nucleus and the atomic bomb, perfumes, cosmetics, soaps and detergents, chemistry in the kitchen, food additives and food coloring, pesticides, toxins and poisons, chemistry of the mind, forensic chemistry and DNA finger printing. Not open to Science or Engineering students. Prerequisites: None.

CHM 105 Chemistry and the Environment (3-0-3). The main topics are air and energy, toxic substances, water and waste treatment. Special attention is paid to the ozone layer, ground level pollution, air and marine pollution, heavy metals in soil, global warming and environmental impact of energy production. Learning activities include projects, Web searches, laboratory experiments and field trips. Not open to Science or Engineering students. Prerequisites: None.

CHM 215 Organic Chemistry I (3-0-3). A survey of reactions of aliphatic and aromatic compounds including modern concepts of bonding, mechanisms, conformational analysis, and stereochemistry. Alkanes and cycloalkanes, alkenes, alkynes, biologically active acetylenic compounds. Electrophilic and nucleophilic reactions, resonance, alkyl halides, SN1, SN2, E1 and E2 mechanisms. Corequisite: CHM 102.

CHM 215L Organic Chemistry Laboratory I (0-4-1). Organic laboratory that includes experiments onpurification, separation and identification techniques. It also includes synthesis of various organic compounds. Prerequisite: CHM 215.

CHM 216 Organic Chemistry II (3-0-3). Modern spectroscopic techniques for structure determination. Chemistry of oxygen and nitrogen compounds. The chemistry of alcohols, ethers, carbonyl compounds and amines with special attention to mechanistic aspects. Prerequisite: CHM 215.

CHM 216L Organic Chemistry Laboratory II (0-4-1). An advanced organic laboratory with experiments related to the theoretical principles and synthetic methods of modern organic chemistry. Prerequisites: CHM 215L and CHM 216.

CHM 231 Physical Chemistry I (3-0-3). This course investigates in depth the basic concepts of thermodynamics. The properties of gases are analyzed as the basis for the study of the laws of thermodynamics, which are applied to questions of chemical equilibrium, phases and solutions, phase equilibrium and other applications. Prerequisites: CHM 102 and MTH 104.

CHM 241 Quantitative Analysis (2-3-3). This course introduces the basic theories underlying analytical methods of chemical analysis. It covers fundamentals and applications of electrochemistry; complexiметric titrations; spectrophotometry; gravimetric and combustion analysis. Special attention is given to analysis of environmental samples. The laboratory component deals with a variety of analytical techniques. Prerequisite: CHM 102.

CHM 251 Environmental Chemistry (3-0-3). The course investigates in detail the interaction between natural systems and human activity. Topics include biogeochemical cycles, aquatic chemistry, water pollution and treatment, atmospheric chemistry and air pollutants, organic pollutants, photochemical smog, hazardous wastes, toxicological chemistry, nuclear waste disposal and treatment of oil spills. Local and regional pollution problems are emphasized and investigated in detail. Prerequisite: CHM 102.

CHM 331 Physical Chemistry II (3-0-3). The course covers kinetics, electrochemistry, surface chemistry and transport properties. In kinetics emphasis is on the theory of reaction rates and methods of handling kinetic data. The electrochemical section examines the conventions, underlying theory, and practical applications of electrochemical cells. Prerequisite: CHM 231 or CHE 204.

CHM 335 Physical Chemistry Laboratory (1-5-2). This is an advanced laboratory course in physical chemistry. Students are assigned a series of experiments to be performed individually. Experiments cover the topics of thermodynamics, kinetics, electrochemistry, surface chemistry and transport phenomena. An original report is submitted after each experiment, including sample calculations and error analysis. Corequisite: CHM 331.

CHM 445 Instrumental Analysis (2-3-3). This course introduces modern instrumental methods of analysis utilized by scientists, environmentalists and engineers. Its objective is to provide an understanding of the principles, laws and operation of modern instrumentation. This includes molecular and optical spectroscopy; flame and plasma absorption spectroscopy; electrochemical and analytical methods; thermal methods; separation and chromatographic techniques; mass spectroscopy. Prerequisite: CHM 102

CMM *Communications*

CMM 223 Survey of Mass Communication (3-0-3) Designed to help the student understand the various areas of the mass media, and how they impact on the individual and society. Prerequisites: COM 102

CMM 227 Principles of Public Relations (3-0-3) This course is a survey course that vocovers the fundamentals and techniques involved in puhlic relations operations, including the history, philosophy and ethics of the practice, the functions of management, planning, research and commnications. It will explore the theoretical and practical applications of public reletions in contemporary society. Prerequisites: CMM 223

CMM 229 Mass Communication and Culture (3-0-3) Provides the students with an overview of the effect of media on culture and society. The course explores how media reflect and mold culture. It examines the role the media play in creating "the global village." The course examines how the audience uses and is used by various media outlet and how that use affect perception of various cultures. Prerequisites: COM 102

CMM 269 Public Relations Writing (3-0-3) Designed to introduce the student to the essentials of how to prepare and present written material for use in the practice of public relations. It teaches the student the techniques needed for creating effective written communication at a standard generally expected of persons entering into the practice of public relations. Prerequisites: CMM 223, CMM 227

CMM 277 Film Criticism (3-0-3) Introduces students to film genres and formulas (film noir, polyphonic narrative, comedy, romance, verite, etc.) and to critical approaches with which to analyze the cinematic text. Students will explore, discuss, research and write about films as well as screenplay-texts, using such theoretical approaches as semiotics and structuralist, feminist, psychoanalytic, formalist, and social criticism. Prerequisites: COM 203 or 204

CMM 351 Advertising Copywriting and Design (3-0-3) Explores issues, strategies, theories and practices in writing and editing advertising messages This course also teaches the technical aspects of advertising: Writing advertising copy and designing effective layouts based on clients' strategies, elements of reproduction mechanicals. Students learn how to embrace new technologies and design parameters to produce affective advertising. Audience differentiation, media strategy and

creative strategy all are considered. Emphasis is on persuasive and attention-getting techniques. Prerequisites: COM 235

CMM 353 Case Studies in Advertising (3-0-3) Focuses on major issues in advertising and public relations, with a special emphasis on international issues. Students will examine international advertising and advertising directed at cultural minorities. In addition, case studies of international and cross-cultural problems in public relations within and across industry, government, and institutions will be examined. Prerequisites: COM 231 and COM 235

CMM 361 Case Studies in Public Relations (3-0-3) Designed to teach the student how to apply the principles and thoeries of public relations to solve problems or initiate opportunities for actual occurrences in the practice of public relations. Prerequisites: CMM 223, CMM 227

CMM 363 Organizational Communication (3-0-3) Designed to emphasize the role of communication in creating a productive organizational environment in terms of interpersonal and group behavior. Reviews the theory and practice of team-building, conflict resolution, and problem-solving and explores how communication and organizational cultures relate to each other. Prerequisites: COM 225

CMM 371 Hard News and Feature Writing (3-0-3) Builds expertise in the writing of news and feature articles for newspapers and magazines. Students will experience concentrated practice in the methods of research, interviewing, writing, marketing and publishing of articles, and in the skills required in the production of the AUS student newspaper, The Leopard. Prerequisites: CMM 231

CMM 373 Scriptwriting for Television and Film (3-0-3) Teaches the craft of writing for the electronic media and broadcasting. Students will explore the types of scripts used in the media profession, such as industrials, in-house promotional vehicles, corporate training, public service and documentary forms, as well as entertainment and features. Coursework will consist of practice in research, interviewing, production planning and budgeting, the treatment, writing for picture, and writing for talent (actors, narrators). Prerequisites: CMM 277

CMM 451 Advertising Campaign Research and Design (3-0-3) Introduces students to concept of media mix—matching product, consumer and media profiles for retail and business-to-business applications; conception, research, planning and design of advertising campaigns for print, broadcast and new media; ethics in advertising. Prerequisites: CMM 351

CMM 453 Advertising Media Management (3-0-3) Examines media planning, buying and sales as performed by advertising agencies, clients and the media. Students learn how to evaluate and select advertising media for various market situations and that deliver messages to a target audience, media characteristics and sources of media data. Examines contemporary trends in communications media and their effects on advertisers. Prerequisites: CMM 351

CMM 455 Advertising Campaign Management and Portfolio (4-0-4) The class will function as an advertising agency that will prepare advertising campaign for actual clients. Conceived as the capstone of the advertising track. Students will embark on a semester-long project, collaborating on the conception research, planning and execution of advertising campaigns. Special emphasis will be given to advanced copywriting, as well as to layout and production concerns for print, broadcast and new media. Part of this course consists of lab work in which student run a full-service advertising agency. Students organize, manage and perform all functions: solicit business, perform market and consumer research, contact clients, write plans, create advertising campaigns, evaluate media, and prepare campaign evaluations for community-service agencies. Prerequisites: CMM 453

CMM 459 Advertising Internship (3-0-3) Students have to gain practical work experience in advertising creativity, sales, and research as well as advertising media management. Prerequisites: CMM 451 and CMM 453

CMM 461 International Mass Communication (3-0-3) Designed to help the student gain an understanding of the mass media of the world - what they are like, how they operate, what impact they have on people, and what policies are, and could be used by the various countries to develop or regulate them, and how they are influenced by a country's political, economic, social, and cultural make-up. Prerequisites: CMM 223, COM 220 or CMM 229, or permission of professor

CMM 463 International Public Relations (3-0-3) Designed to help the student develop the skills necessary to plan and implement international public relations programs, taking into account social, economic, political, legal, and cultural factors. Prerequisites: CMM 227, CMM 361

CMM 465 Public Relations Campaign Strategies (3-0-3) Deals with the application of public relations theory and writing to strategies and techniques for the planning, execution, and evaluation of communications for fund raising, special events including direct mail, feature stories, and media kits. Prerequisites: CMM 267, CMM 269, CMM 361, CMM 363

CMM 469 Public Relations Internship (3-0-3) Provides students with a minimum of six weeks on-the-job training and experience with a professional firm in the field of public relations. Prerequisite: Permission of the department

CMM 473 Writing for Multimedia (3-0-3) Offers advanced students hands-on experience with writing and producing shorter-form texts for electronic media. Comparative perspectives of writing for radio, television, Internet and CD-Rom texts will be studied, and the creation of projects will include generating ideas, writing proposals, research and development of topics, planning, and employing the stylistic conventions of professional writers in the field. Students learn the distinctive competencies of writing for each medium, and of working from concepts to actual productions. Prerequisites: CMM 373 Co-requisite: DES 230

CMM 475 Writing and Producing Documentaries (3-0-3) Study of representative documentaries with regard to history, form, technique, trends, and audience objectives. Students will examine different formats used in documentary production and the concepts used in transforming research efforts into production of a full half-hour program. The course will emphasize genre-specific research methodologies, planning a production schedule, interviewing skills, videotape shooting, sound, scriptwriting and rewriting for longer form reports, sound and video editing, graphics and post-production. Prerequisites: CMM 473

CMM 477 Media Project Management (3-0-3) Requires students to conceptualize, write, develop, manage and produce a multimedia campaign using a variety of forms (print, broadcast, Web-based, etc.). The semester-long project culminates in discrete, marketable productions as well as a coherent campaign, thus providing each student with a writer-producer's portfolio and demo-reel to present to prospective employers, as the student embarks on a career as a media professional. Prerequisites: CMM 473

CMM 479 Mass Communication Internship (3-0-3) Provides students with a

minimum of six weeks on-the-job training and experience with a professional firm, either in the fields of print, radio, television/film, internet/web, or multimedia. Prerequisite: Permission from the department

CMP *Computer Science*

CMP 105 Introduction to C++ Programming (3-1-3). A general overview of programming design and analysis of programs in C++: data types, arithmetic and logic operators and expressions, input/output, conditional expressions and statements, repetitive structure, functions, arrays and pointers, concepts of object-oriented programming: classes, objects, inheritance.

CMP 107 COBOL Programming (3-1-3). Elementary and intermediate programming techniques in COBOL. Computer solutions to business-oriented problems.

CMP 108 Java Programming (3-1-3). Basic concepts of problem solving and programming in Java. Basic data types, operators, variables and expressions. Arrays and Strings. Fundamental concepts of object-oriented programming such as classes, objects, methods and attributes, inheritance and reusability. Designing interactive web applets and applications. Graphical user interfaces and its components. Greater emphasis in this course is placed on business-oriented applications.

CMP 110 Visual Basic (2-2-3). Covers the standards of the Windows interface and its link to the Basic programming language. It includes the following concepts: forms, controls, functions, graphics, programming in Visual Basic, arrays, files and designing of custom menus.

CMP 111 Computing Fundamentals (3-1-3). History of computing, the concept of algorithm, computing disciplines, Survey of aspects of the application of computer Science: Hardware and software engineering, basic computer organization, system software; Programming languages paradigms and history, Databases, Storage, Networks and the Internet, Artificial Intelligence.

CMP 120 Introduction to Computer Science I (3-2-4). Algorithms, problem solving strategies, program documentation, fundamental programming constructs: syntax and semantics of a high-level programming language, data types, variables, operators, expressions and statements, conditional and iterative control structures, classes, objects, methods, parameter passing, program input and output. Arrays, strings and lists. Testing and debugging programs. Prerequisite: CMP 111.

CMP 210 Digital Systems (3-0-3). Number systems, Boolean algebra, analysis and design of combinational circuits, minimization techniques, analysis and design of sequential circuits, and introduction to computer design. Prerequisite: CMP 120.

CMP 211 Digital Systems Laboratory (0-2-1). Experiments and laboratory work to support CMP 210. Corequisite or Prerequisite: CMP 210.

CMP 213 Discrete Structures (3-0-3) (Cross-listed as MTH 213). This course covers propositional and predicate calculus, sets, major classes of functions and related algorithms, principal of mathematical induction, proof techniques, recursive definitions, counting, relations, graph, and trees. Prerequisite: MTH 103.

CMP 220 Introduction to Computer Science II (3-1-3). Data abstraction, encapsulation and information hiding. Abstract data types: linked lists, stacks and queues. Recursion and recursive functions. Object-oriented programming concepts: constructor methods, overloaded and overriding methods, inheritance and polymorphism. Selected advanced programming concepts such as exception handling, multithreading, event-driven programming and application programming interfaces. Prerequisite: CMP 120.

CMP 232 Data Structures and Algorithms (3-1-3). Data structures and the complexity of algorithms. Abstract data types: binary search tress, hash tables, lists, graphs and priority queues. Searching and sorting algorithms. Applications of abstract data types. Advanced data structures. Prerequisite: CMP 220 and Concurrent: CMP 213.

CMP 235 Social and Professional Issues (1-1-1). Social impact of computers, economics of computing, policy, moral and legal issues, privacy and security issues, computer crimes and law. Work in this course will be based on group and class discussions and essays addressing the above topics. Prerequisites: CMP 120 or equivalent.

CMP 240 Introduction to Computer Systems (3-0-3). Introduction to computer organization, registers, machine instructions, data representations, execution control and addressing techniques, segmentation, linkage and recursion. Prerequisite: CMP 210.

CMP 310 Introduction to Operating Systems (3-0-3). Operating systems architectures, process scheduling and synchronization, memory management, virtual memory, deadlocks management, file system, input/output management, and distributed systems. Prerequisites: CMP 232 and CMP 240.

CMP 320 Database Systems (3-0-3). Introduction to database concepts, data independence, logical and physical views of database systems. Data models: hierarchical, network and relational. Data description languages, query functions, relational algebra. Prerequisite: CMP 232.

CMP 321 Programming Languages Laboratory (2-2-3). Overview of programming languages syntax and semantic definitions, language translators, language categories, programming in a high level language other than the one taken in CMP 120. Prerequisite: CMP 220.

CMP 340 Design and Analysis of Algorithms (3-0-3). Algorithmic analysis. Algorithmic strategies. Hashing, graph and spanning trees algorithms. Topological sort. Pattern matching. Number-theoretic algorithms. Matrix operations. Distributed algorithms. Complexity classes. Basic computability theory. Prerequisite: CMP 232.

CMP 341 Computational Methods (3-0-3). An introduction to the fundamentals of numerical algorithms and their application for scientific computing. Includes topics such as error analysis, root finding, interpolation and function approximations, optimization techniques and linear programming. Prerequisite: CMP120 and MTH 221.

CMP 350 Introduction to Software Engineering (3-1-3). The software development life cycle. Software project management. Software metrics and cost estimation. Software specification and requirement analysis. Software testing and maintenance. Prerequisite: CMP 232.

CMP 410 Computer System Architecture (3-0-3). Advanced study of the architecture of computer systems. Processor organizations, hardwired and micro-programmed control, input/output subsystem, bus control, programmed I/O, DMA and interrupts, memory subsystem, interleaved, cache and associative memory, pipelines and their scheduling, RISC and CISC architectures. Prerequisite: CMP 240.

CMP 411 Performance Evaluation of Computer Systems (3-0-3). Modeling and evaluation of computer systems. Probability spaces and probability calculus, random variables and their distribution functions, the calculus of expectations. Markov chains, birth-death processes, Poisson processes, single queue, network of queues and their simulation. System simulation for performance prediction. Modeling concurrent processes and the resources they share. Prerequisite: CMP 310 and STA 201.

CMP 412 Introduction to Distributed Systems (3-0-3). Architectures for distributed systems. Overview of network topologies and networking technologies and infrastructures. Distributed algorithms, deadlock and termination detection. N-Tier client-server computing systems. Fault-tolerance and recoverability issues. Applications and case studies. Prerequisite: CMP 340.

CMP 415 Computer Networks (3-0-3). Introduction to computer networks, network architectures, Overview of layered protocol hierarchies. OSI reference model, thephysical, link and network layers, network protocols, error control, flow control and routing algorithms. Application layer protocols. Prerequisite: CMP 240 and CMP 232.

CMP 416 Internet and Network Computing (3-0-3). The internet, itsprotocols and architecture, TCP/IP and internet application protocols, designing internet-based clients and servers, and multi-tiered applications, network security and network management. Distributed object computing, remote method invocation, emerging internet technology standards: CORBA, XML. Building internet-based applications. Prerequisites: CMP 310.

CMP 417 Parallel Computing Systems (3-0-3). Models of parallel computation. Shared memory parallel machines. Interconnection networks. Parallel architectures. Parallel algorithms, complexity and performance measures. Parallel searching and sorting. Parallel evaluation of expressions. Issues of non-determinism, synchronization and deadlock. Survey of parallel applications. Prerequisite: CMP 240 and CMP 340.

CMP 418 Introduction to Simulation and Modeling (3-0-3). Design and implementation of simulation models for systems design and analysis. Emphasis on discrete stochastic systems and real-world business and government problems including resource allocation, queuing, simulation languages and their applicability to problem solving. Prerequisite: CMP 232.

CMP 430 Computer Graphics (3-0-3). Study of two- and three-dimensional graphics, graphics representation, algorithms for computing graphics and producing images, clipping, windowing, transformation, graphics hardware and applications. Prerequisite: CMP 220 and MTH 104.

CMP 431 File Processing (3-0-3). External storage devices. Sequential, indexed sequential and direct file organizations. Tree-structured, multi-list, inverted, cellular multi-list and hybrid file organizations. File systems. External sorting and merging. The protection problem. Prerequisite: CMP 232.

CMP 432 Image Processing (3-0-3). An introduction to basic techniques of analysis and manipulation of pictorial data by computer. Image input/output devices, image processing software, enhancement, segmentation, property measurement, Fourier analysis, computer encoding, processing and analysis of curves. Prerequisite: CMP 232.

CMP 433 Artificial Intelligence (3-0-3). Introduction to problems and techniques in artificial intelligence. Problem-solving methods. Major structures used in artificial intelligence programs. Study of knowledge representation techniques such as probabilistic reasoning, predicate and nonmonotonic logic. Examples of expert systems. Introduction to natural language understanding and various syntatic and semantic structures. Learning as a form of problem-solving through problem decomposition and subparts interaction. Prerequisite: CMP 232.

CMP 434 Information Theory (3-0-3). Information concepts, communication and data transmission, Shannon's theory, the mathematical concept of information, encoding of data and binary representation, Hoffman coding, entropy as a measure of the amount of information, Markov processes and probability, area of application. Prerequisite: STA 201.

CMP 435 Computer Security (3-0-3). Security issues in computer systems. Basic encryption and decryption, secure encryption and encryption protocols. Security in operating systems, databases, and communications. Risk analysis and assessment. Security planning and management. Security platforms. Application to electronic commerce systems. Prerequisite: CMP 310.

CMP 436 Introduction to Symbolic Computation. (3-0-3). History of systems for symbolic computation. Algebraic structures. Forms and data structures. Arithmetic on integers, polynomials, rational functions and power series. Modular arithmetic. Homomorphism methods. Greatest Common Divisor Algorithms. Polynomial factoring. Solution of equations. Symbolic integration. Prerequisite: CMP 213 and CMP 232.

CMP 437 Introduction to Neural Networks (3-0-3). Presents different types of neural networks and describes the basic mechanisms that underlie each network. Discusses fundamental network properties necessary to achieve autonomous behavior. Analyzes how well each network satisfies these properties. Prerequisite: CMP 232.

CMP 438 Programming Robots (3-0-3). An examination of programming issues involved in creating autonomous robots, which can interact with their environments in "intelligent" ways. Topics include traditional robotics, behavior-based robotics, sensor processing, sensor-based control, programming robotic behaviors. Prerequisite: CMP 220

CMP 450 Object-Oriented Analysis and Design (3-0-3). An exploration of object-oriented design and software construction. Topics in object-oriented analysis and programming: classes, methods, messages, inheritance, static and dynamic binding, polymorphism, templates, design methodologies, class libraries and software reuse. Substantial object-oriented software project required. Prerequisite: CMP 350.

CMP 452 Compiler Construction (3-0-3). Review of program language structures, translation, loading, execution and storage allocation. Compilation of simple expressions and statements. Organization of a compiler including compile-time and run-time symbol tables, lexical and syntax scan, object code generation, error diagnostics, object code optimization techniques and overall design. Use of compiler writing languages and boot-strapping. Prerequisite: CMP 350.

CMP 453 Organization of Programming Languages (3-0-3). History and classification of programming languages. Formal definition of syntax and semantics of programming languages. Expressions, statements, data types, naming structures, type checking, and control structures. Binding and memory allocation. Block structure and scoping. Parameter passing, subprograms and implementation. Exception handling, Concurrency. Logic programming languages, object-oriented programming languages. Prerequisite: CMP 232.

CMP 454 Software Testing and Quality Engineering (3-0-3). Overview of software engineering. Validation and verification activities. Software quality assurance. Black-box and white-box testing. Acceptance testing. Integration and regression testing. Data flow analysis. Test execution. Distributed systems testing. Object-oriented software testing. Prerequisite: CMP 350.

CMP 455 Human Computer Interaction (3-0-3). Human behavior and user interface design. Issues in graphical user interface design. Interface representation and user-centered prototyping tools. Analysis and evaluation of user interfaces. Multimedia objects and interfaces. Usability engineering. User interface design and project organization. Case studies and project.

Prerequisite: CMP 350.

CMP 470 Formal Languages and Computability I (3-0-3). An introduction to theoretical computer science. Topics include: regular expression and finite state concepts, basic automata theory, formal grammars and languages, computability, Turing machines and elementary recursive function theory. Prerequisite: CMP 213.

CMP 471 Hypermedia Computing (3-0-3). Hypermedia covers integration of text, graphics, animation, sound and video into a single computer application: gives students a broad understanding of the technical aspects of hypermedia application development as well as the conceptual issues that affect this technology. Prerequisite: CMP232.

CMP 472 Multimedia Computing (3-0-3). Integration of multimedia objects: text, sound, video, images and animations. Multimedia data technologies. Compression and decompression techniques. Multimedia objects and databases. Multimedia synchronization. Multimedia applications. Multimedia authoring tools. Simulation and performance evaluation for multimedia systems. Prerequisite: CMP 320.

CMP 490 Project in Computer Science (3-0-3). Faculty supervised projects by students on special topics of current interest. Both oral and written presentations on the topics are required. Prerequisite: CMP350.

CMP 494 Topics in Computer Science (3-0-3). Selected topics of current interest in computer science. Prerequisites: CMP 232. CMP 496 Independent Study (variable credit: 1-3 credit hours). Involves investigation under faculty supervision beyond what is offered in existing courses. Prerequisite: Senior standing.

COM *Communication*

English Communications Competency Program

COM 001 Fundamentals of Writing (3-0-3). Develops the skills of reading and writing, and teaches grammar competencies needed to write complex English sentences. Students will learn how to write and support topic sentences and build coherent and unified paragraphs. Prerequisite: EPT below 4.

COM 101 Academic Writing (3-0-3). Students practice the process of writing different essay types by reading a variety of texts and focusing on the development of writing unified, coherent and supported academic essays. Students are expected to refine their grammatical skills and demonstrate the ability to produce appropriate sentences. Prerequisite: EPT 4.

COM 102 Writing and Reading Across the Curriculum (3-0-3). Builds upon the skills developed in COM 101 and focuses on the development of critical thinking, active reading and analytical writing skills across the curriculum. Students are expected to read and respond to texts from a variety of disciplines and achieve further refinement of grammar and vocabulary skills. Students are also
introduced to basic research techniques. Prerequisite: EPT 5 or COM 101.

COM 203 Genre Analysis (3-0-3). Builds upon the skills acquired in COM 102 to develop further students' critical thinking, and academic writing competencies. Students will read short stories, poetry and drama and produce a research paper using analytical and critical skills in response to literary texts. Prerequisite: COM 102.

COM 204 Advanced Academic Writing (3-0-3). Builds upon the skills acquired in COM 102 to develop further students' critical thinking, and academic writing competencies. Students will read and respond to a variety of texts from different disciplines and produce a research paper using analytical and critical skills in response to non-literary texts. Prerequisite: COM 102.

COM 208 Public Speaking (3-0-3). Introduces students to the art of public speaking, debate and argument. Students gain confidence as public speakers by learning the techniques of making effective presentations and by gaining extensive practice in public speaking. Prerequisite: COM 102.

COM 209 Dramatic Expression (3-0-3). This course is intended to give students an opportunity to perform publicly in a variety of formats, including poetry reading, acting, miming and singing. Prerequisite: COM 102.

COM 220 Intercultural Communication (3-0-3) Provides an overview of the way in which cultures influence communication. From this course, the student will be able to acquire knowledge about and skills to understand and interpret communication patterns of people from diverse cultures. A broad range of topics will be covered including perception differences, verbal and non verbal communication in high and low context cultures, and the effect of bias and conflicting value systems on cross-cultural communication. Prerequisites: COM 102

COM 225 Global Business Communication (3-0-3) Aims at developing students' skills in writing business documents such as CVs, correspondence, memoranda, short and long reports, proposals, necessary to communicate effectively in the business world. It also focuses on developing oral communication skills in business settings. Prerequisite: COM 203 or 204

COM 231 Writing for Visual Media (3-0-3) Introduces students to existing and emerging communication technology, and examines its impact on the communication process.This course also prepares students to manage the process of designing documents, from the planning stage through final production. Students learn basic rhetorical principles and apply them by writing articles, stories and advertising copy. Prerequisite: COM 102

COM 235 Communication in Advertising (3-0-3) Provides students with an analysis of commercial advertising from a global perspective with attention to communication theory. Students will examine the structure of advertising messages, how they are adapted to specific audiences, and the social settings in which they occur. Issues of Internet advertising and e-commerce will be explored. Prerequisite: COM 102.

COM 396 Independent study of Language (1 - 3) This course explores how language is used in communication, for personal and social functions, in its written and oral channels. Students reflect on language issues and practice the use of language in selected disciplines. Students are expected to analyze texts exploring various issues in language and write critical evaluations of the essays studied.

CSC *Cultural Studies*

CSC 201 Western Cultural Studies I (3-0-3). Introduces the student to the basic doctrines and concepts of Western civilization. It covers reading material from the Renaissance to modern times, focusing on selections from the great books that have made Western civilization what it is. It deals with readings that cover theology, politics, science and literature. Prerequisite: COM102.

CSC 202 Western Cultural Studies II (3-0-3). Like CSC 201, this course continues the introduction of students to the basic doctrines and concepts of Western civilization. It covers reading material from modern and contemporary authors focusing on selections from the great books that have made Western civilization what it is. It deals with readings that cover theology, politics and literature. Prerequisite: COM 102.

CSC 204 Belief Systems and Ideology in the Western Tradition (3-0-3). This course explores major belief systems and ideologies of the West from the Greco-Roman period to

the present. The goal of the course is to introduce students to the major theological, philosophical and political traditions of Western culture and society. Prerequisite : COM 102

CSC 205. World Cultures (3-0-3). This course is an exploration into the varied cultures of the world. Student will acquire an appreciation for the critical importance of societal culture as a tool of human survival. The course provides the framework for an appreciation of cultural differences and similarities and thereby increases understanding of the complex world with which we must cope. Prerequisite : COM 102

ECO *Economics*

ECO 201 Principles of Microeconomics (3-0-3). Introduction to the basic principles of microeconomics and their applications; supply and demand, operation of markets, consumer and enterprise behavior, competition and monopoly, income distribution, discrimination and alternative approaches to economics.

ECO 202 Principles of Macroeconomics (3-0-3). Introduction to the basic principles of macroeconomics, stressing national income, unemployment, inflation, economic growth, depression, prosperity, international economics and economic development. Prerequisite: ECO 201.

ECO 210 Capitalism in Western Societies (3-0-3) After examining alternative definitions of capitalism, this course describes the development of the trading system that developed under a system of government-enforced private property rights in the western world since 1750. Private property rights include the right to trade away initial rights and liability for harm caused to others. The course presents and compares alternative theoretical models and images that have been used interpret and evaluate the consequences of this historical development. Prerequisite: ECO 201, ECO 202 and HIS 206

ECO 301 Intermediate Microeconomics (3-0-3). Theory of relative prices of commodities and productive services under perfect and imperfect competition. Theory of the firm and consumer demand. Prerequisite: ECO 201.

ECO 302 Intermediate Macroeconomics (3-0-3). Concepts and theory of national income determination, unemployment, inflation and economic growth. Prerequisite: ECO 201 and ECO 202. (Formely ECO 204)

ECO 305 International Trade (3-0-3). Introduction to the economics of international trade, including why countries trade, commercial trade policies and their effects, growth and international trade, and multinational firms. Prerequisite: ECO 201.

ECO 306 International Finance (3-0-3). (cross listed with FIN 401) Introduction to the economics of international finance, including why countries trade, commercial trade policies and their effects, growth, and international trade, and multinational firms.. Prerequisite: ECO 201.

ECO 310 Development Economics (3-0-3). Theories of economic development. The colonial and neo-colonial legacy. Problems of poor countries. New strategies of development and economic relations between poor and rich countries. Prerequisite: ECO 201 and ECO 202.

ECO 314 Political Economy of the Asia Pacific Region (3-0-3) This course provides an exploration of political, economic, social and environmental issues in the Asia Pacific. This region includes South, Southeast, East and Northeast Asia, Australasia, and the Pacific littoral states of North, Central and South America. Special emphasis will be placed upon the efforts of regional cooperation organizations and lessons to be gleaned by the states of Southwest Asia and the Middle East.

ECO 315 Economics of the Middle East (3-0-3). Detailed historical and contemporary investigation of the Middle Eastern economies, including the role of oil in economic growth, trade relations, development patterns, labor and financial flows. Prerequisite: ECO 201 and ECO 202.

ECO 318 Economics of Water Resources (3-0-3). Water resources: supply, demand, pricing, allocation and distribution. Impact of water policy on economic growth and conservation. Planning, development and management of water resources. Prerequisites: ECO 201.

ECO 320 History of Economic Ideas (3-0-3). Exposition and analysis of the development of economic theory. Emphasis on tracing evolution of economic theories out of specific historical contexts. Major figures and schools in economic thought from Adam Smith to the present. Prerequisite: ECO 201 and ECO 202.

ECO 321 Theories of Political Economy (3-0-3). Analysis of political economic theories including old and new institutionalists, neo-Ricardians and modern Marxist perspectives. Emphasis on interdependence of political, economic and social forces in shaping contemporary social problems. Prerequisite: ECO 201 and ECO 202.

ECO 322 Global Political Economy (3-0-3) This course deals with the roots and evolution of the global political economy from the end of the World War II and the launching of the Bretton Woods system to the Asia crisis of 1997 and its spread to Russia, Latin America, and the Middle East. It will focus on the interplay between politics and economics for topics such as management of the international financial system via the IMF, World Bank, World Trade Organization, globalization, trade, multinational corporations and changes in world production patterns, trade agreements such as the European Union, development strategies, debt crises, and attempts at political and economic liberalization in various countries. Prerequisite: ECO 201 and HIS 206

ECO 325 Public Economics (3-0-3) (cross -listed as PBA 325). Microeconomic theory as a framework for understanding the problems of public managers. Resource scarcity, consumer behavior, production costs, economics of efficient management, operation of product markets under competition and monopoly, labor markets, market failure and public goods. Prerequisite: ECO 201.

ECO 326 Economics and the Law (cross-listed as PBA 326) (3-0-3). Major topics include property rights, contract rights and liability rules. Both efficiency and fairness will be analyzed. For efficiency, emphasis is placed upon the incentive effects that legal rulings create for economic behavior in the future. Fairness is analyzed mostly in terms of the effects which legal rulings have upon the distribution of wealth. Prerequisite: ECO 201.

ECO 327 Competition, Free Markets and Antitrust (cross-listed as PBA 327) (3-0-3). Firms take actions which improve their own competitive position and which harm their rivals. This course discusses the benefits and harms of such actions, and introduces the basic framework which can help determine which actions should be legal, and which should not. Topics include: a comparison of competition with market power, vertical integration, price fixing and cartels, vertical restrictions, price discrimination and predatory pricing. Prerequisite: ECO 201.

ECO 328 Government Regulation of Business (3-0-3). (Cross-listed as PBA 328). Examination of the reasons why governments regulate business. Such reasons include: fairness, excessive competition, natural monopoly, externalities, imperfect information and transactions costs. Class time

will be divided between examining the theories for regulation and investigating actual legal cases. Prerequisite: ECO 201. ECO 330 Money and Banking (3-0-3). The role of money and credit in the economy. The structure and operations of commercial banks. Central banking and the operation of monetary policy. Non-banking institutions and the structure of financial markets. Elements of monetary theory. Prerequisite: ECO 201 and ECO 202.

ECO 335 Economic History of the World Economy (3-0-3). Historical investigation of economic development using Western Europe, Russia, the Third World and the United States as case studies. Prerequisite: ECO 201 and ECO 202.

ECO 340 Great Economic Thinkers (3-0-3) This course explores in depth the economic thinking of well-known economists, including those of earlier history and Nobel Prize winners. The instructor chooses the list of economist covered. Prerequisite : ECO 201 and ECO 202

ECO 345 Economics of Collective Decision-Making (3-0-3) (Cross-listed as PBA 345) This course is designed as an introductory course in the economics of collective decision-making, including decision-making in a democratic government. It describes the history of the subject, explores alternative definitions of public choice, describes the major subject areas, and discusses some well-known economist' views of a democratic society. Subject areas subjects include the theory of constitutions, voting and elections, political parties, law making, bureaucracy, rent-seeking , and privatization. Prerequisite : ECO 201 or permission of instructor.

ECO 403 Economics of Natural and Energy Resources (3-0-3). This course addresses the policy issues related to the changing role of natural resources in modern economies. Issues related to valuation of renewable and non-renewable resources, optimal resource extraction rates and economic development will be central to the course. The issues of oil and gas supply, demand and pricing the role of energy in Gulf economies will also be addressed in detail. Prerequisite: ECO 201.

ECO 404 Economics of Environmental and Natural Resources (3-0-3). This course deals with the economic issues that arise in the use of environmental resources. The course begins with an economic analysis of the contention that market failure to adequately control environmental pollution. Alternative policy mechanisms that have been proposed for control of environmental pollution will also be address. The environmental problems address will include water and air pollution, global climate change, temperate and tropical forest management, fisheries, biodiversity and habitat preservation.. Prerequisite: ECO 201.

ECO 405 Introduction to Econometrics (3-0-3). Review of the theory of economic statistics and statistical techniques. Emphasis on applying statistical models to economic data. Regression analysis and estimation of economic models. Includes: violations of the basic assumptions of the regression model, dummy variables, analysis of variance, cross section and time series data analysis, index numbers and time series analysis. Prerequisite: ECO 301 and STA 201 and (MTH 102 or MTH 104).

ECO 413 Political Economy of the Arab World (3-0-3) This course is a study of the political and economic incentives and events that have influenced, and continue to influence, the political and economic environment in the Arab World. Topics to be addressed will include world energy markets trade patterns global environmental issues, nationalism, globalization, economic development policies, impacts or regional and international conflict, regional organizations, and international political movements. Prerequisite: ECO 202

ECO 495 Senior Seminar in Economics (3-0-3). Intensive investigation of special topics in economics chosen by the instructor. Ordinarily, this course must be taken over two semesters for six credits. Only fourth-year students may take this class. Prerequisite: ECO 301 and ECO 302 and consent of instructor.

ECO 497 Internship in Economics (3-0-3). Applied work in economics with businesses or government organizations in the Emirates. The student's economics advisor must approve admission to class. Only fourth-year students may take this course. Prerequisite: ECO 301 and ECO 302.

ENG *English*

ENG 105 Contemporary World Literature (3-0-3). Introduces students to contemporary literary movements such as postmodernism, magic, realism, feminism, regionalism and postmodernism. Students study the works of major international writers such as Grass, Calvino, Kundera, Allende, Mahfouz, Mimouni and Soyenka. Works studied will be written in, or translated into English. Prerequisite: COM 203 or 204 or 231 or 235 ENG 108 Introduction to Genre (3-0-3). Focuses on the study of fiction, poetry or drama and shows how writers use the basic elements of their craft to convey their insights into human nature. Whatever genre is featured in a given semester, the course will focus primarily on accessible modern and contemporary work. The course is designed for non-majors who need to fulfill their or humanities requirement as well as for English majors. Prerequisite: COM 203 or 204 or 231 or 235.

ENG 123 Introduction to Language Study (3-0-3). Defines language and how it works. Leads students to examine their own beliefs and attitudes about language and provides them with techniques of language analysis. Topics covered include: grammar and appropriate usage, oral vs written language, formal vs informal language, standard vs non-standard languages, language universals and language typology. Prerequisite: COM 203 or 204 or 231 or 235

ENG 126 Development of the English Language (3-0-3). Traces the development of the English language from its Indo-European roots to the present day. Linguistic change in English throughout the various periods (Indo-European; Germanic, Old, Middle and Modern English) is studied, covering phonological, morphological, syntactic, lexical and semantic changes. Prerequisite: Prerequisite: COM 203 or 204 or 231 or 235

ENG 201 Creative Writing (3-0-3). This course is an introduction to the basic elements of writing and evaluating poetry, fiction and creative non-fiction, in which students will submit at least 20 pages of material suitable for inclusion in the student literary magazine. Students will also be responsible for editing the magazine. Fulfills writing requirement for majors. Prerequisite: COM 203 or 204 or 231 or 235.

ENG 203 Introduction to Literary Theory (3-0-3). Highlights a variety of twentieth century critical practices and theoretical approaches to the study of literature. It offers practical applications of the theoretical texts under examination. Prerequisite: ENG 105 or ENG 108.

ENG 205 Modern Drama and Beyond (3-0-3). Introduces students to developments in drama from the modern period to the present. It exposes students to major literary developments in drama such as realism, theater of the absurd, epic theater and various types of experimental and contemporary theater. The course may include works by such playwrights as Ibsen, Chekov, Shaw, Brecht, Ionesco, Beckett, Fornes, Helman, Hansberry, Hwang, Mishima, Soyenka, Havel, Mroczek, Gad and Wanoos. Prerequisite: ENG 105 or ENG 108.

ENG 209 Survey of English Literature I (3-0-3); fall. Surveys English literature (poetry, prose and drama) from the Anglo-Saxon, Medieval, Renaissance, Restoration and the Age of Reason literary periods. Representative texts are studied in relationship to their social, political and historical background. Prerequisite: ENG 105 or ENG 108 or consent of instructor.

ENG 213 Survey of English Literature II (3-0-3). Surveys English literature (poetry, prose and drama) from the Romantic, Victorian and Modern literary periods. Representative texts are studied in relationship to their social, political and historical background. Prerequisite: ENG 105 or ENG 108 or consent of instructor.

ENG 219 Survey of American Literature I (3-0-3). Examines American literature from the colonial period to the present, concentrating on the philosophical, social and political issues that shaped the styles and ideas of such writers as Franklin, Poe, Emerson, Thoreau, Dickenson, Whitman, Twain, O'Neil, Cather, Hemingway and Faulkner. Focus is on poetry, drama, the essay and the short story. Prerequisite: ENG 105 or ENG 108.

ENG 222 Phonetics, Phonology and Morphology (3-0-3). Examines the nature of the rules governing the sound system of language with special emphasis on English. Introduces the study of the physiology of speech production and phonetic transcription through practical exercises. Students also examine inflectional and derivational rules in language and study word formation processes. Prerequisite: ENG 123.

ENG 224 English Grammar (3-0-3). Focuses on the fundamental rules of English grammar as they relate to sentence structure and function. Students will also learn about different systems of analysis, including an introduction to the analysis of texts. Prerequisite: COM 102

ENG 234 Language in Society (3-0-3). Introduces the student to the sociolinguistic approach to language. It focuses on issues about how language structure and language use are interrelated. It also examines variables responsible for language variation within a speech community. Definitions of language, dialect, diglossia and multilingualism are explored. The practicum component of this course initiates the student to field methods techniques in data collection. Prerequisite: ENG 123.

ENG 303 Shakespeare and His Contemporaries (3-0-3). Examines works by both Shakespeare and a few other major writers in his time. It exposes students to Shakespeare's poetry, especially his sonnets, in relation to other major poets in his time such as Spenser, Sidney and Wyatt. The course will also introduce students to English Renaissance drama, exposing them to selections from histories, comedies, tragedies and romances by Shakespeare and some of his contemporaries such as Marlowe, Jonson, Middleton, Webster and Carey. A term paper is required. Prerequisite: ENG 209.

ENG 309 The American Novel (3-0-3). Examines the styles and concerns of the American novel from the 19th Century to the present and includes representative examples of such national and international literary movements as Romanticism, Realism, Modernism, Post Modernism and Magic Realism, with particular emphasis on how American novelists adapted these styles to suit their own society and culture. The course will include such novelists as Melville, Hawthorne, Twain, Crane, James, Wharton, Cather, Hemingway, Welty, Pynchon and Morrison. Five novels will be studied. A term paper is required. Prerequisite: ENG 219.

ENG 311 Early English Novel (3-0-3). Traces the development of the novel from its rise in the early 18th century to its flowering in the great realistic novels of the 19th century. It includes such writers as Defoe, Smollett, Richardson, Fielding, Austen, the Brontes, Dickens, Elliot and Hardy. Prerequisite: ENG 209.

ENG 313 Modern British Novel (3-0-3). Examines trends in the 20th century British novel, including such literary movements as Realism, Modernism and Post Modernism. It considers the novels of such authors as Joyce, Conrad, Wolfe, Forster, Lawrence, Snow, Greene, Byatt and Lessing. Five novels will be studied. A term paper is required. Prerequisite: ENG 209.

ENG 315 East Meets West: Colonial and Post-Colonial Encounters (3-0-3). Examines the representations of the Middle East, India, China and North Africa in the works of North American and European writers. It also addresses the responses to and representations of westerners by non-western writers. Some of the writers studied may include Kipling, Forster, Durrell, Camus, Hersey, Kiteley, Desai, Shamas, Ghali, El-Saadawi, Kabbani, Adnan and Maalof.The course will introduce students to basic ideas in the writings of such post-colonial theorists as Said, Spivak, Mohanty, Mernissi and others. A term paper is required. Prerequisite: ENG 201 or ENG 203.

ENG 334 Semantics and Pragmatics (3-0-3). Students will be introduced to various approaches to the study of meaning in language both at the word and sentence levels. This course examines linguistic reference and truth conditions of linguistic signs and expressions. It also explores the role of shared inferential strategies, presuppositions and speech acts in human communication, and how situational context determines language use. Prerequisite: ENG 224.

ENG 336 Discourse Analysis (3-0-3). This course looks at the interpretation of meaning situated beyond the level of the sentence. To achieve a better understanding of how language works as a communication medium, the role of notions such as background knowledge, cohesion and coherence, in texts and conversational interaction are examined. Prerequisite: ENG 224.

ENG 338 Psycholinguistics (3-0-3). Introduces the study of the psychology of language by exploring the relationship between language and the mind. Examines processes involved in comprehension, production and acquisition of language and initiates students to research techniques and linguistic data collection. Prerequisite: COM204 or Consent of Instructor.

ENG 400 Second Language Acquisition (3-0-3). Focuses on the prominent research trends in second language learning, the process of L2 acquisition and learning, and the social and individual factors affecting this process. Examines ways in which research in this area can be used in ESL classroom contexts. Prerequisite: ENG 224 or consent of instructor.

ENG 401 Advanced English Grammar (3-0-3) The course provides an intensive investigation into contemporary English sentence structure, function, and meaning. It also analyzes how structure types and sentence relationships are realized in various texts and genres. In addition, the course discusses issues relative to descriptive/ prescriptive approaches to language. Prerequisites: ENG 224. Meets with ENG 501

ENG 402 Applied Linguistics (3-0-3); alternate years. Investigates the relationship between the field of applied linguistics and the language communication process, in and outside the classroom. Views linguistics in terms of real world applications and from the perspective of teaching practitioners in different professional settings. Prerequisite: ENG 336.

ENG 404 Using Literary Texts in TEFL Classrooms (3-0-3). Introduces practicing teachers to the use of literature in teaching English in the more advanced levels of

instruction. Early short stories and other selected texts would be used by teachers to motivate students to read and continue learning English by developing vocabulary and structure, and gaining an appreciation of literature. Prerequisite: ENG 400 or departmental approval.

ENG 406 Survey of Topics in Linguistics and Communication (3-0-3). Presents an overview of different trends in linguistic inquiry and examines how these trends have influenced various fields such as computational linguistics, lexicography, sign language, speech pathology, artificial intelligence and artificial voice communication. Prerequisite: ENG 336.

ENG 408 Reading and Writing in ESL/TEFL (3-0-3). Discusses various theoretical models dealing with teaching literacy skills in a foreign language to children and adults. Processes involved in reading and learning strategies in language learning are examined and discussed, together with effective instructional strategies based on current research. Prerequisite: ENG 400 or consent of instructor.

ENG 410 Language Teaching Methodology (3-0-3). Overviews theories, methodological approaches and techniques of teaching English as a Second or Foreign Language. Analyzes aspects of classroom practice, including teacher and learner roles. Offers opportunities to survey and create ESL/TEFL materials, evaluate commercially available texts and consider their value and adaptation of authentic texts. Prerequisite: ENG 400 or departmental approval.

ENG 411 Seminar in English Literature (3-0-3). Examines in-depth the career of a single literary figure with particular interest in historical and cultural milieu. The needs and desires of students and the preferences of the instructor determine the literary figure. Among the literary figures typically considered are Spenser, Shakespeare, Milton, Dryden, Pope, Swift, Johnson, Blake, Byron, Keats, Austen, Dickens, Eliot and Joyce. Prerequisite: consent of the instructor is required or ENG 311 or ENG 313.

ENG 412 Curriculum Development (3-0-3). Introduces students to principles of ESL/TEFL course design. Examines the stages of developing and evaluating learner centered/communicative curriculum. Topics to be discussed include: students' needs analysis, setting goals and objectives, analyzing resources, content selection, methodology, materials and texts, implementation, evaluation and assessment. Prerequisite: ENG 410 or departmental approval.

ENG 413 Seminar in American Literature (3-0-3). Focuses on the work of a major American writer and the critical assessment of that writer. Some of the writers to be studied may be Melville, Whitman, Dickinson, Twain, Faulkner, Cather, Hemingway, Welty, Frost or Morrison, as decided by the instructor. A critical paper will be required. Prerequisite: ENG 309.

ENG 415 Seminar in Post-Colonial Literature (3-0-3). Focuses on the work and the historical, political and social context of a major writer who was raised in a culture other than that of Britain or North America but who writes in English. It also examines the literary theories underlying the "subaltern voice" and the inclusion or exclusion of texts from the mainstream literary canon, with particular emphasis on the ideas of literary and cultural critics such as Edward Said and Gayatri Chabravorty Spivak . Some of the writers studied may include Derek Wollcott, Chinua Achebe, R.K. Narayan, V.S. Naipaul, Gita Mehta, and Michael Ondaatje. Prerequisite: ENG 315.

ENG 420 Seminar: Bridging the Disciplines (3-0-3). Introduces an interdisciplinary approach to the analysis of English language issues within the contexts of English literature, communication and translation. Develops students' understanding of how texts work across these three disciplines to heighten their understanding of critical issues that cross linguistic and cultural boundaries. Prerequisite: consent of the instructor.

ENG 490 Senior Research Project (3-0-3). Focuses on the study of a literary movement or literary writer of the student's and professor's choice and the writing of a long critical paper on this writer or movement. Prerequisite: ENG 411 or ENG 413 or ENG 415

ENG 495 Seminar in English Language (3-0-3). The content of this course changes from year to year. The focus will be on various topics of the English language from the practical such as computer-assisted language learning to studies in dialectology and bilingualism or linguistic anthropology. Prerequisite: consent of the instructor and a GPA of at least 3.0 in the major.
English Literature

English Gradute Courses

ENG 501 Advanced English Grammar (3-0-3) The course provides an intensive investigation into contemporary English sentence structure, function, and meaning. It also analyzes how structure types and sentence relationships are realized in various texts and genres. In addition, the course discusses issues relative to descriptive/ prescriptive approaches to language. Students are expected to produce a research paper at the end of this course. Prerequisite: Admission to the program. Meets with ENG 401

ENG 511 Linguistics for ESL Teachers (3-0-3) This course investigates areas in linguistics relevant to ESL teachers. Students examine key linguistic concepts and definitions in phonology, morphology, syntax and semantics and their applications to teaching and learning English. Students also read and discuss selected topics from a variety of linguistic fields. Prerequisite: Admission to the program

ENV *Environmental Science*

ENV 101 Introduction to Environmental Science (3-0-3). This course is an interdisciplinary study, combining ideas and information from chemical, physical and biological disciplines. Students will acquire knowledge on how nature works and how environmental systems are interconnected. This course employs scientific laws, principles and concepts to help understand environmental and resource problems and their possible solutions. Connections are made between natural systems and environmental issues using different physical science perspectives. The information presented in this course will ultimately be related to real world environmental problems. Prerequisites: None.

ENV 311 Environmental Modeling (3-0-3). Involves the study of the collection, evaluation and interpretation of data and the modeling and analysis of urban and environmental problems. Topics include population, pollution, mass transportation systems and climate modeling. Prerequisite: MTH 104.

ENV 335 Microbial Environments (2-3-3). Students in this course will learn about the roles of bacteria in diverse microenvironments, some controlled and others natural. They will learn the functions, physics and metabolism of microorganisms in the air, soil, marine and fresh water environments; geochemical cycles, water treatment, sewage treatment, bioremediation, food, culture reactors, mining, waste disposal, recycling and agriculture. Prerequisite: BIO 331.

ENV 351 Environmental Monitoring and Analysis Techniques (3-0-3). This course covers chemical and radiation safety, risk assessment, regulatory legislation, statistics and monitoring, as well as chemical and

nuclear detection and identification procedures and their impact on living organisms. Practical work is supplemented by case studies, together with visits to municipal offices and other environmental monitoring agencies. Prerequisites: STA 201 and CHM 251.

ENV 361 Evolution and Biodiversity (3-0-3). Evolution is the unifying theme for all biology; therefore, this course will introduce the principles of evolution as applied to all organisms. The course covers the origins of life, prehistoric events, biogeography, history of evolution and applications to current problems in agriculture, species conservation, population dynamics, the effects of environmental changes and genetic manipulation of species. The emphasis will be on obtaining skills that allow the student to accurately predict evolutionary outcomes in a changing global environment. Prerequisite: BIO 260.

ENV 400 Environmental Physiology Systems (2-3-3). This course explores the stresses encountered by microorganisms, plants and animals in the environment and the roles they play in the environment. The general physiology of organisms will be explored first and taken to the cellular and metabolic pathway levels. The student will gain an understanding of the functions and dysfunctions in plants and animals and their reactions to environmental stresses, pollution and manipulation. Prerequisite: BIO 331.

ENV 411 Environmental Assessment and Management (3-0-3) This is a multidisciplinary course that deals with the impact of human activities on the ecosystem. It demonstrates how environmental assessment results provide a basis for comparing various management options, enabling decision makers and the public to make better informed decisions about the management of ecological resources. Local and regional issues are emphasized Prerequisite: Consent of instructor.

ENV 421 Marine Aquatic Environments (2-3-3). This course focuses on the interactions between biological, chemical and physical processes in the unique local marine environments found in the Emirates. The interactions between the terrestrial sources of freshwater and the marine ecosystems will be covered with specific topics on diversity of environments found in the UAE and how they are related to open and closed marine systems and the broader regional concerns. Topics covered will include the migration and introduction of species, effects of pollution, food webs modeling, energy flow, niche partitioning, physiological stress, climate, geochemical cycling, habitat conservation, protection of endangered species. Prerequisite: BIO 251.

ENV 430 Environmental Systems in the Arabian Peninsula (3-0-3). Emphasis in this course will be on those terrestrial ecosystems that are located in the Arabian Peninsula, particularly in the UAE and the surrounding areas, and how they relate to the larger regional and global systems in the same latitudes. The systems will include deserts, grasslands, tropical forests, mountain, fresh water and marine habitats. Readings from research done throughout the region and neighboring environments as well as local examples will be used to obtain an in depth understanding of specific methods and research techniques used by environmental scientists. Prerequisite: BIO 251.

ENV 451 Waste Treatment (3-0-3). Introduces the modern concepts of solid and liquid waste treatment. It covers sources and classifications of hazardous waste and their transport in the environment; hazardous waste management problems; physical, chemical and biological waste treatment processes; waste minimization; analysis systems for regional planning. Prerequisite: CHM 251.

ENV 452 Soil and Water Chemistry (3-0-3). Discusses the development of soil/water chemistry. It includes modern analysis methods for humic substances, minerals, particulates and pollutants in the soil. Topics covered are mineralogy, soil solution, ion exchange/sorption, water acidity, wetlands and redox processes in aerobic soils and nitrogen transformations. Prerequisite: CHM 251.

ENV 491 Senior Research Project I (0-6-3). Student selects an environmental problem for independent research project. Upon approval by the department, student begins literature search then follows up with field and laboratory studies. The results are presented in seminar as well as in thesis form. This is a capstone course in the development of the student as an environmental scientist. Prerequisite: Senior standing.

ENV 492 Senior Research Project II (0-6-3). Continuation of ENV 491. Student selects a new or related environmental problem for independent research. Upon approval by the department, student begins literature search then follows up with field and laboratory studies. The results are presented in seminar as well as in thesis form. Prerequisite: Senior standing.

FRN *French*

FRN 101 French For Beginners (3-0-3). For students who have never studied French. The course introduces the student to the main patterns of French grammar, written exercises, directed composition and conversation practice. Language lab may be required.

FRN 102 French Language and Culture for Upper Beginners (3-0-3). The course is a continuation of FRN 101 using French in Action (the Caprentz method) to improve students' conversational French, use of basic grammar patterns, everyday vocabulary and basic reading and writing skills. The course uses audio and video material to practice listening and speaking skills, and to facilitate the understanding of languages in social interaction and in a cultural context. Prerequisite: FRN 101 or permission of instructor.

GEO *Geography*

GEO 201 World Cultural Geography (3-0-3). This course provides a broad survey of the cultural geography of the world. Among other topics, the course will address cultural systems, agriculture and natural resources, urbanization, industrialization, development, and political Geography. Prerequisite: COM 102

GEO 202 Physical Geography of the Global Environment (3-0-3). This course deals with the natural aspects of the geographic environment. Topics covered include weather and climate, water resources, landforms, soil and vegetation, the earth crust and the forces that shape it. Special attention is paid to the physical geography of the Middle East, particularly to problems arising from water scarcity. Prerequisite: COM 102.

HIS *History*

HIS 204 Modern Arab History (3-0-3). This course studies the history of the modern Arab world focusing mainly on the history of the region from 1800 and the changes that began to take place at that time. It concentrates on four aspects of the region's transformation: the experience of imperialism and colonialism, modernity, nationalism and the development of the modern state system. Prerequisite: COM 102.

HIS 205 World History I [up to 1500] (3-0-3). A study of the world's major civilizations prior to 1500 concentrating on their primary institutions and their cultural contacts. Particular attention is devoted to the Arab and Islamic world and Western Europe. Prerequisite: COM 102.

HIS 206 World History II [1500 - Present] (3-0-3). Looks at some of the major changes that have taken place since 1500 including:

the exploitation and settlement of the Americas, the shift in power from the East (the Middle East and Asia) to the West (Europe and the United States), the Industrial Revolution and the globalization of capitalism, the domination of most of the societies of the world by the European powers and the United States (i.e., colonialism and imperialism), political and social revolutions including wars of national liberation against colonial regimes, and changes in technology. Prerequisite: COM 102.

HIS 207 History of Modern Palestine (3-0-3). A historical study of modern Palestine with particular emphasis on the conflict with Israel from its genesis in the late nineteenth century to the present. Students will examine the issues and events that led to the social, economic and political transformation of the Arab State of Palestine, with a majority Arab population, to the Jewish State of Israel, with a majority Jewish population. Prerequisite: COM 102.

HIS 208 Women in History (3-0-3). A comparative survey of women's history from antiquity to the present in Europe and the Middle East. The course aims not only to examine the lives, achievements, contributions and position of women historically, but also to introduce students to the methodology of women's history, the sources for the study of women and the theories that provide the framework for the research and writing of women's history. Prerequisite: COM 102.

HIS 209 Modern Arab History through Literature (3-0-3). Introduces students to modern Arab history through literature and links literary production to its historical and cultural context. In this course, students become aware of how history and literature intersect and of the similarities and differences in historical and literary writing. The readings for the course include works of fiction and non-fiction such as novels, short stories, memoirs, biographies and auto-biographies. Prerequisite: COM 102. (Formerly listed as HIS 394).

HIS 210 The Modern Arab Gulf (3-0-3). Introduces students to the modern history of the Arab Gulf, which is the period from 1820 to post-independence, and the cultural heritage of the region. The major topics of the course are British imperialism and indigenous resistance to British domination, the socio-economic transformation of the region as the traditional economy based on pearling and trading goes into decline; the rise of nationalism and the creation of the modern state system, and the impact of oil production on the society and culture. Prerequisite: COM 102

HIS 211 Modern Arab History and Biography (3-0-3). This course takes a biographical approach to the subject, Modern Arab History. It examines the major social and economic changes of the 19th and 20th centuries through the lives of ordinary men and women who lived through these changes. Prerequisite : COM 102 (Formerly listed as HIS 394.06)

HIS 220 The Modern History of Europe and North America (3-0-3) This course focuses on Europe and North America from the late 19th century to the present and on the major political, economic, social and cultural developments of the period. Some of the issues and events covered in the course include the economic and social effects of the Second Industrial Revolution, the economic and political crisis of the 1930s, global conflicts of the 20th century, the explosion of science and technology, the ethnic and cultural diversity of the population, major social movements, the Cold War and the fall of totalitarian regimes and the military and economic institutions that link both sides of the Atlantic. Prerequisite: COM 102

HIS 221 History of Science and Technology (3-0-3) Core course. A study of the development of scientific thought and methodology from ancient Greece to the modern era. Topics include contributions of China, Islamic lands and Europe, the surge of French and seventeenth century English science, influence of science on patterns of thinking and behavior. The course touches upon diverse areas such as the histories of astronomy, nuclear energy, chemistry, forensics, as well as life and environmental sciences. Prerequisite: COM 102

IEP *Intensive English*

IEP 001 Novice Level (3 credits). At this level, instruction involves the presentation of large amounts of language. The primary goals are to improve student fluency in both the conversational and written modes, to increase vocabulary as rapidly as possible, to develop basic reading skills and to introduce the mechanics of writing at the sentence and paragraph level.

IEP 002 Elementary Level (3 credits). In this course, language instruction moves from functional, survival English to academic discourse. To that end, important reading skills such as skimming, scanning and predicting are practiced and writing activities extend beyond the paragraph to the multi-paragraph essay. Complex grammatical concepts involving time relationships are also introduced, note-taking from authentic materials is practiced and oral presentations are given.

IEP 003 Intermediate Level (3 credits). At the intermediate level, instruction takes on an overtly academic quality. High-level reading skills such as inferencing and synthesizing information from more than one source are introduced, while writing instruction involves the exploration of various rhetorical modes. Students are also expected to develop an awareness of contextual clues, an understanding of speaker purpose, a recognition of idiomatic usage and an accurate and fluent speech production.

IEP 004 Advanced Level (3 credits). This course prepares students for university studies, though the focus is still on the major language skills rather than the actual content being covered. Students are required to read longer texts and to write longer essays. They study complex grammatical usage at the clause level. Finally, public speaking skills are refined through the discussion of complex source material and through oral presentations on topics involving persuasion and argumentation skills.

IEP 005 Bridge Level (3 credits). This course simulates credit-bearing instruction at the university by integrating academic listening, speaking, reading and writing into the daily classroom pedagogy. Extensive reading is expected and major reading skills reviewed and thus, reinforced through large amounts of practice. The instruction includes an introduction to writing term papers.

INS *International Studies*

INS 494 Special Topics in International Studies (3-0-3) This course will address issues in international studies that, in the judgment of the faculty, would not be addressed in debt in other courses and which are worthy of special consideration. Normally, these issues would be topical and related to on going world events that are important and evolving during the period of the students' course of study. The topics may range from economics and trade, conflict and diplomacy, world politics, technological change, or cultural change. Prerequisites: International Studies core courses and permission of instructor.

INS 495 Senior Seminar (3-0-3). This course is offered once a year and is considered the capstone course of the concentration. The topic of the course changes from year to year. Students are required to write a major research paper on the seminar topic. Prerequisite : Core Courses in IS and in the Student's concentration.

INS 497 Internship (3-0-3) Applied work in International Studies with businesses, government organization or private agencies. Admission to class must be approved by the student's advisor. Only 4th year students may take this course. Prerequisite: Core Courses, Senior Standing and permission of instructor.

MTH *Mathematics*

MTH 001 Preparatory Mathematics (3-0-3); a pre-calculus course. Polynomials, functions, exponents and logarithms, coordinate geometry and graphing, complex numbers, vectors and their basic operations.
MTH 002 Preparatory Business Mathematics (3-0-3). This course is preparatory to MTH 101 Mathematics for Business. It covers integers and variable expression, fractions, decimals and real numbers, polynomials, ratio and proportion, percentage, geometry and application.

MTH 003 Preparatory Mathematics for Architects (3-0-3). This course is preparatory to MTH 111, Mathematics for Architects. It covers a review of basic arithmetic. Algebra, geometry and trigonometry to prepare
students for the geometry and calculus based MTH 111.

MTH 100 Fundamentals of Logic and Geometry (3-0-3). Covers logic and set theory, and geometry in the plane and space. Topics include: fundamentals of inductive and deductive reasoning, propositional and first order logic; sets, relations and functions; Euclidean and Analytical geometries in two and three dimensions; linear transformations and quadratic forms.

MTH 101 Mathematics for Business I (3-0-3). Coordinate systems and graphs, matrices, linear systems and applications, elementary linear programming, set theory, counting techniques, permutations and combinations, introduction to probability, topics in the mathematics of finance. Emphasis is placed on techniques and applications. Prerequisite: MTH 002 or placement test.

MTH 102 Mathematics for Business II (3-0-3). The derivative, rules for differentiation and their applications, definite and indefinite integrals, methods of integration and applications, functions of more than one variable, partial differentiation, applications to optimization. Emphasis is placed on techniques and applications. Prerequisite: MTH 101.

MTH 103 Calculus I (3-1-3). Functions and limits, differentiation with applications including maxima and minima, related rates, approximations, theory of integration with applications including areas, volumes, lengths, moments, center of mass and work. The course has a computer laboratory component. Prerequisite: MTH 001 or placement test.

MTH 104 Calculus II (3-1-3). Transcendental functions, exponential and logarithmic functions, trigonometric functions. Techniques of integration, indeterminate forms. Infinite series, power series, parametrized curves, polar coordinates and integration in polar coordinates. The course has a computer laboratory component. Prerequisite: MTH 103.

MTH 111 Mathematics for Architects (3-2-4). An introduction to the topics of geometry and calculus needed for architecture. Review of trigonometry, areas and volumes of elementary geometric figures, and the analytic geometry of lines, planes and vectors in two and three dimensions. Differential and integral calculus, including applications optimization, areas and volumes by integration. The course has a computer laboratory component. Prerequisite: MTH 003 or placement test.

MTH 203 Calculus III (3-1-3). Calculus of functions of several variables, vectors and analytic geometry of three dimensional space, partial derivatives, gradients, directional derivatives, maxima and minima, multiple integrals, line and surface integrals, Green's theorem, divergence theorem and Stokes' theorem. The course has a computer laboratory component. Prerequisite: MTH 104.

MTH 205 Differential Equations (3-0-3). Mathematical formulation of ordinary differential equations, methods of solution and applications of first order and second order differential equations, power series solutions, solutions by Laplace transforms and solutions of first order linear systems. Prerequisite: MTH 104.

MTH 213/CMP213 Discrete Mathematics (3-0-3). Covers prepositional and predicate calculus, sets, functions and related algorithms, mathematical induction, recursive definitions, counting, relations, graphs, trees and Boolean algebra. Prerequisite: MTH 103.

MTH 221 Linear Algebra (3-0-3). Systems of linear equation, algebra of matrices, linear transformations, determinants, vector spaces, inner product spaces, eigenvalues and eigenvectors, diagonalization and orthogonality, special matrices and applications. The use of computer software is essential. Prerequisite: MTH 103.

MTH 311 Advanced Calculus I (3-0-3). The real number system. Rigorous presentation of limits, continuity, differentiability and Taylor's theorem for functions of a real variable. Definition, existence and properties of the Riemann integral. Prerequisite: MTH 203.

MTH 313 Number Theory and its Applications (3-0-3). The Euclidean algorithm, linear congruencies and the Chinese Remainder Theorem, Fermat's Little Theorem, quadratic residues and quadratic reciprocity, Pythagorean triples and sums of squares. Applications in communication, public key cryptography, computer arithmetic, random number generators and music. Prerequisite: MTH 213.

MTH 314 Combinatorics (3-0-3). Techniques for counting configurations of objects, recurrence relations, principle of inclusion-exclusion; graphs, trees and circuits. Additional topics include Polya's Theorem, generating functions and network flows. Prerequisite: MTH 213.

MTH 320 Modern Algebra (3-0-3). Groups, subgroups, normal subgroups, quotient groups, homomorphisms, permutation groups, matrix groups, symmetry groups. Definition and examples of rings. Prerequisite: MTH 213 and MTH 221 or consent of the instructor.

MTH 325 Coding Theory I (3-0-3). Introduction to coding theory, linear codes, Hamming codes, Hamming distances, Hamming weights, probability, Shannon's theorem, dual codes, weight distribution of linear codes, cyclic codes, BCH codes, convolutional codes, encoding and decoding. Prerequisite: MTH 221 or consent of the instructor.

MTH 341/CMP 341 Computational Methods (3-0-3). An introduction to the fundamentals of numerical algorithms and their application for scientific computing. Includes topics such as error analysis, root finding, interpolation and function approximations, optimization techniques and linear programming. Prerequisite: CMP120 and MTH 221.

MTH 342 Numerical Linear Algebra (3-0-3). Direct and iterative methods for solving general and special systems of linear equations, includes LU and Choleski decomposition, nested dissection, Jacobi, Gauss-Seidel, successive overrelaxation, alternating directions and conjugate gradient methods. Singular value decomposition. Iterative methods for algebraic eigenvalue problem. Prerequisite: MTH 221.

MTH 351 Methods of Applied Mathematics I (3-0-3). Initial and boundary value problems. Higher-order equations, the Laplace transform and its inverse, applications of Laplace transform to linear ordinary differential and integral equations, the z-transform, applications of z-transform to difference equations and linear networks. Prerequisite: MTH 203 or MTH 205.

MTH 352 Methods of Applied Mathematics II (3-0-3). Fourier series, the Fourier transform, inverse Fourier transform, introduction to partial differential equations, classification of second-order partial differential equations, initial and boundary value problems, the method of separation of variables, methods of solution and behavior of elliptic, parabolic and hyperbolic equations. Prerequisite: MTH 351 or MTH 205.

MTH 381 Linear Control Systems (3-0-3). Linear systems, time and frequency domain representation, open and closed loop systems, time and frequency domain analysis, stability, root locus, frequency response, compensators, output and state feedback. Prerequisite: MTH 205.

MTH 382 Linear Programming (3-0-3). Methods and applications of optimizing a linear function subject to linear constraints. Theory of the simplex method and duality, parametric linear programs, sensitivity analysis, modeling and computer implementation. Prerequisite: MTH 221.

MTH 411 Advanced Calculus II (3-0-3). Theory of sequences and series of numbers and functions; power series, topological structure of Rn; continuity, differentiation, and integration of real functions of several variables, chain rule, Taylor's theorem, Fubini's theorem, differentiation of integrals involving a parameter. Prerequisite: MTH 311.

MTH 412 Complex Variables (3-0-3). A first study of functions of a complex variable. Algebra of complex numbers, elementary functions with their mapping properties, analytic functions, power series, integration, Cauchy's Theorem, Laurent series and residue calculus, elementary conformal mappings and boundary value problems. Prerequisite: MTH 311.

MTH 418 Graph Theory (3-0-3). Graphs and subgraphs, connected and disconnected graphs, matrices, trees and girth, planar and nonplanar graphs, graph embeddings, connectivity and edge connectivity, Hamiltonian graphs, matchings, factorization and coverings, Networks, applications to science and engineering. Prerequisite: MTH 213.

MTH 421 Applied Matrix Theory (3-0-3). Review of the theory of linear systems, eigenvalues and eigenvectors, the Jordan canonical form, bilinear and quadratic forms, matrix analysis of differential equations. Variational principles and perturbation theory: the Courant minimax theorem, Weyl's inequalities Gershgorin's theorem, perturbations of the spectrum, vector norms and related matrix norms. Prerequisite: MTH 221.

MTH 431 Dynamical Systems (3-0-3). Second order differential equations in phase plane, linear systems and exponential operators, canonical forms, stability of equilibria. Lyapunov functions, the existence of periodic solutions, applications to various fields. Prerequisite: MTH 221 and MTH 205.

MTH 432 Partial Differential Equations (3-0-3). Mathematical formulations and solutions of partial differential equations of physical problems, includes the wave, heat and Laplace's equation. The mathematical tools include Fourier transform, Fourier series and Laplace transform. Prerequisite: MTH 351 and MTH 352.

MTH 441 Numerical Solutions of Ordinary Differential Equations (3-0-3). Theory of numerical techniques for linear and nonlinear initial, boundary-value and eigenvalue problems. Stiff equations and multiple time scales. The analysis of the numerical techniques will focus on consistency, accuracy, stability, stiffness, numerical efficiency, etc. Prerequisite: MTH 342.

MTH 442 Numerical Solutions of Partial Differential Equations (3-0-3). Computationally efficient schemes for solving PDE numerically: finite difference schemes, stability and convergence of finite difference schemes, an introduction to finite element methods. Prerequisite: MTH 441.

MTH 451 Methods of Applied Mathematics III (3-0-3). Integral equations, volterra and Fredholm type equations, relation to differential equations, solutions by Neumann series, Green's function, asymptotic analysis of solutions, perturbation techniques connection with eigenvalue problems. Prerequisite: MTH 351.

MTH 460 Mathematical Logic (3-0-3). The formal study of truth and provability, propositional calculus; predicate calculus, Godel's completeness theorem, applications to formal number theory and incompleteness. Additional topics chosen from areas such as undecidability or nonstandard analysis. Prerequisite: MTH 320.

MTH 465 Topics in Mathematics (3-0-3). Topics of current interest in mathematics not covered in existing courses. May be repeated under a different subtitle. Prerequisite: junior or senior standing and consent of instructor.

MTH 470 Modeling and Simulation (3-0-3). Basic principles of modeling and simulation, description and treatment of deterministic and random processes, computational methods and applications with emphasis on the use of microcomputers. The course will include a major project. Prerequisite: MTH 205.

MTH 481 Calculus of Variations and Control Theory (3-0-3). An introduction to the classical theory of calculus of variations, necessary and sufficient conditions for optimality, the Pontryagin maximum principle, dynamic programming in continuous-time and Hamilton-Jacobi theory, introduction to control theory, the linear regulator problem. Prerequisite: MTH 205.

MTH 483 Discrete Optimization (3-0-3). Theory and applications of discrete optimization algorithms, transportation problems and network flow problems; integer programming; computer implementation. Prerequisite: MTH 382.

MTH 495 Seminar in Mathematics (3-0-3). Investigation of and oral report on a mathematical topic under the direction of a faculty member. Prerequisite: junior or senior standing and consent of instructor.

MTH 496 Independent Study (1-6). Involves investigation of special topics, under faculty supervision, beyond what is offered in existing courses. Prerequisite: junior or senior standing and consent of instructor.

PBA *Public Administration*

PBA 101 Introduction to Public Administration (3-0-3). An introduction to the basic concepts and models of public administration including: organization theory, leadership, communication, decision making, interpersonal relations, public policy processes, regulations, legal authority, politics and power relations.

PBA 108 Communication and Mobilization of Interpersonal Relationships in Public Organizations (3-0-3). An introduction to the concepts of symbolic interactionism, organizational communication, building interpersonal relationships in the workplace; and the public management perspective of the social and psychological aspects of public organizations.

PBA 201 Public Management (3-0-3). An introduction to the contemporary techniques of management and leadership in public organizations. Problems of public agencies,

nonprofit organizations and others will be analyzed; with a focus on how to cope with the challenges, internal and external, which the top level of management faces. Prerequisite: PBA 101.

PBA 204 Women in Public Management (3-0-3). An examination and analysis of the emerging role of women in management positions in government, business and nonprofit organizations. Unique problems and challenges which may be related to gender including: building effective management, teamwork and espirit de corps in the context of a diverse workforce. Prerequisite: PBA 101.

PBA 205 Intergovernmental Relations (3-0-3). The political, fiscal, administrative relationships, which help to shape complex intergovernmental systems. Focus on federal, centrally unified, Emirate (provincial), municipal and other jurisdictions. Prerequisite: PBA 101.

PBA 206 Motivation, Employee Development and Performance Appraisal in Public Organizations (3-0-3). Consideration of the theories of motivation, productivity, development of the self, and self-fulfillment in the workplace. There will be a study of models of performance appraisal and employee rehabilitation and employee assistance programs.Prerequisite: PBA 101.

PBA 301 Public Management Skill Modules (3-0-3). Focuses on leadership, communication, techniques of motivation, delegation of authority and strategic planning.Prerequisite: PBA 101.

PBA 302 Comparative Public Administrative Systems (3-0-3). An examination of governmental administrative systems in Europe, North America, the Arab world, Asia and Africa. The emphasis is on a comparative analysis of industrialized nations with nations of the Third World. Prerequisite: PBA 101.

PBA 304 Public Budgeting (3-0-3). A survey of the principles of and problems of financial organization and management in the public service, with emphasis on: fiscal planning, the annual budget process, program budgeting, political factors and accounting in Western systems and Third-World nations. Prerequisite: PBA 101.

PBA 305 Classification, Job Analysis, Compensation and Fringe Benefits in Public Organizations (3-0-3). Classification systems and techniques, rational job analysis, compensation and incentive plans, and fringe benefit management, as aspects of achieving maximum organizational efficiency and effectiveness. Prerequisite: PBA 101.

PBA 306 Human Resources Management in Public Organizations (3-0-3). An introduction to management and leadership tasks of running a professional-level, human resources subsystem. Focus will be on the challenges, opportunities, and strategies, which human resources managers face, including the dynamics of external and internal conflict resolution, and acting in an advisory capacity to executive-level managers. Prerequisite: PBA 101.

PBA 307 Recruitment, Selection, Promotion, Retention and Disciplinary Actions in Public Organizations (3-0-3). Techniques for the mobilization of a workforce; affirmative recruiting, incentive plans for long-term service, grievance procedures; concepts of probation, reprimand, suspension and termination. Prerequisite: PBA 101.

PBA 308 Executive and Middle Management Training in Public Organizations (3-0-3). Techniques of training others to be proficient executive-level and middle-level managers. Emphasis will be on creative formats, learn-by-doing techniques, case study analysis, hands-on interaction with peers, management inventory approaches, coping with social change, role-playing, effective dealing with failures, leveling communication with others. Prerequisite: PBA 101.

PBA 310 Research in Public Administration (3-0-3). An introduction to research methods in public administration. Research design, the concept of validity, data collection and data analysis. Prerequisite: PBA 101.

PBA 311 Nonprofit Organization Management (3-0-3). Concepts of management and organizational development, which are appropriate to the nonprofit sector. Emphasis will be on developing people skills, a volunteer workforce, fundraising, goal-setting, motivation and communication techniques. Prerequisite: PBA 101.

PBA 313 Government Regulation of Business (3-0-3). (Cross-listed as ECO 328). Examination of the reasons why governments regulate business. Attention will be given to contemporary legal issues and case studies in the West and in the UAE. Prerequisite: PBA 101.

PBA 325 Public Economics (3-0-3) (Cross-listed as ECO 325). Microeconomic theory as a framework for understanding the problems of public managers. Resource scarcity, consumer behavior, production costs, economics of efficient management, operation of product markets under competition and monopoly, labor markets, market failure and public goods. Prerequisite: ECO 201

PBA 326 Economics and the Law (3-0-3). (Cross-listed as ECO 326). Major topics include property rights, contract rights and liability rules. Both efficiency and fairness will be analyzed. For efficiency, emphasis is placed upon the incentive effects that legal rulings create for economic behavior in the future. Fairness is analyzed mostly in terms of the effects which legal rulings have upon the distribution of wealth. Prerequisite: ECO 201.

PBA 327 Competition, Free Markets and Antitrust (3-0-3). (Cross-listed as ECO 327). Firms take actions which improve their own competitive position and which harm their rivals. This course discusses the benefits and harms of such actions, and introduces the basic framework, which can help determine which actions should be legal and which should not. Topics include: a comparison of competition with market power, vertical integration, price fixing and cartels, vertical restrictions, price discrimination and predatory pricing. Prerequisite: ECO 201.

PBA 328 Government Regulation of Business (3-0-3) (Cross -listed as ECO 328) In this course, students will examine the reasons governments regulate business. Such reasons include: fairness, excessive competition natural monopoly externalities, imperfect information and transactions costs. Class time will be divided between examining the theories for regulation and investigating actual legal cases. Prerequisite: ECO 201

PBA 345 Economics of Collective Decision-Making (3-0-3) (cross-listed as ECO 345). This course is designed as an introductory course in the economics of collective decision-making, including decision-making in a democratic government. It describes the history of the subject explores alternative definitions of public choice, describes the major subject areas, and discusses some well-known economists' views of a democratic society. Subject areas subjects include the theory of constitutions, voting and elections, political parties, law making bureaucracy, rent-seeking, and privatization. Prerequisite: ECO 201

PBA 380 Special Topics in Human Resources Management (3-0-3). An in-depth focus on selected contemporary human resources trends, the impact of social changes and workforce demographics, or contemporary problems in human resources management, in the Middle East, Asia, Europe and the U.S. Prerequisite: PBA 101.

PBA 402 Local and Regional Administration (3-0-3). Survey of the structure, function and process of administration in a local government setting and regional levels. Focus on the unique challenges public organizations face, with respect to national issues, local issues, funding, social groups, environmental pollution and politics. Prerequisite: PBA 101.

PBA 407 Legal Issues in Public Administration (3-0-3). An introduction to legal issues facing public managers; including risk management, due process for employees, judicial review aspects, administrative ethics and personal liability. Prerequisite: PBA 101.

PBA 408 Development Management (3-0-3). The concepts and techniques of development administration with a focus on Third World nations and societies which are pre-eminently concerned with basic economic development, capital formation and exports. Prerequisite: PBA 101.

PBA 410 Public Program Evaluation (3-0-3). An introduction to the elements of program evaluation in public organizations. Qualitative and quantitative analysis; valid methods. Prerequisite: PBA 101.
PBA 411 Foundations of Public Policy Analysis (3-0-3). An examination of the public policy process in the Middle East and the West. Focus on concepts of externalities, risk and uncertainty, and public choice models in public policy analysis. Prerequisite: PBA 101.

PBA 413 Public Financial Analysis (3-0-3). How to analyze the financial health of state and local governments and other organizations, and develop remedies for financial problems. Financial condition is related to expenditures, revenue, borrowing, the economic base, needs of the community, capital markets and public employees. Prerequisite: PBA 101.

PBA 415 Law and Public Policy (3-0-3). An analysis of selected public policy issues such as: poverty, population, density, housing, transportation, energy, education, crime or environmental pollution. The response of laws and regulations to social problems, and the political processes which affect governmental decision making. Prerequisite: PBA 101.

PBA 417 Public Finance (3-0-3). Public revenue sources for public organizations. Examines the concepts of taxation, export sales revenues, public accounting systems, auditing and maximizing the search for additional revenue funds. Prerequisite: PBA 101.

PBA 419 Seminar in Executive-Level Public Management (3-0-3). A specialized course which concentrates on identifying the tasks, challenges and responsibilities of being a CEO, a CAO or an executive director of an organization. Prerequisite: PBA 101.

PBA 497 Internship in a Public Organization (3-6). Placement of students by a Public Administration professor in a government agency, a nonprofit organization or a private firm. The emphasis will be on administrative-level, hands-on, experience, which will benefit the agency and the student. A written report, a daily journal and an agency supervisor's evaluation are required. Prerequisite: PBA 101.

PHI *Philosophy*

PHI 201 Introduction to Philosophy (3-0-3). An introduction to basic issues and concepts of philosophy; e.g., epistemology, ethics, classical idealism, naturalism, humanism, existentialism, ontology, ethics, skepticism, post-modernism or phenomenology. Thinkers will be selected from the classic, modern and contemporary periods. Prerequisite: COM102

PHI 202 Introduction to Islamic Philosophy (3-0-3). This course is an introductory survey of major philosophers in Islam: for example, Al-Ghazzi, Ibn Rashid, the Sufis or Al-Farabi. Focus will be on the concepts of religious and philosophical doctrines. Prerequisite: COM102N.

PHI 203 Political Philosophy (3-0-3). An introduction to the abiding questions of a civil society, pertaining to freedom, equality, justice, glory, power, law, nature, convention and civic virtue. (Cross-listed with POL 203). Prerequisite: COM102

PHI 204 Ethics for Professionals (3-0-3). Examines the ethical duties of professional practice, in such fields as engineering, architecture, business, public administration, or environmental science. The emphasis will be on developing a framework for moral thinking and judging; and becoming aware of the moral viewpoint of others. Focus on case studies, which evoke conflicts between personal convictions, and public responsibilities. A special concern will be an emphasis on how institutions may support or inhibit professionals in exercising moral leadership and making moral choices. Prerequisite: COM 102N

PHY *Physics*

PHY 001 Preparatory Physics (3-0-3). A preparatory course designed to introduce concepts in mechanics and wave behavior with a brief introduction to electricity and magnetism. The course gives students an opportunity to review algebra and trigonometry in problem-solving. An introduction to vector analysis and calculus is also presented via problem-solving. Prerequisites: None.

PHY 101 General Physics I (3-3-4). A calculus-based introductory course for scientists and engineers covering the fundamental principles, laws and concepts of physics. The course will cover mechanics, and mechanical waves. Laboratory includes experiments illustrating the principles, laws and concepts discussed in the course. Prerequisite: PHY 001 or Placement. Corequisite: MTH 103.

PHY 102 General Physics II (3-3-4). This is a continuation of General Physics I. Topics covered are electricity and magnetism as well as light and optics. The laboratory includes experiments illustrating the principles, laws and concepts discussed in the course. Prerequisite: PHY 101.

PHY 104 Physics for Architects (3-0-3). It is a general physics course, based on algebra, with selected emphases appropriate to the background and needs of architecture students. The course covers mechanics: kinematics, and dynamics; optics: geometrical optics and interference; sound: general principles of acoustic phenomena, including the propagation, transmission, amplification attenuation of sound energy; heat and energy. Prerequisites: MTH 101 or MTH 103 or MTH 111.

PHY 201 Modern Physics (3-3-4). Topics include relativity, quantum theory, atomic and nuclear physics, solid state and semiconductor physics. The course shows how modern physics has led to a multitude of important technological achievements, such as the laser, integrated circuits and computer displays. Laboratory includes experiments illustrating the principles, laws and concepts discussed in the course. Prerequisite: PHY 102.

PHY 251 Meteorology (3-0-3). A study of weather phenomena, general climatology, meteorological control, the techniques and problems of weather forecasting, air quality, atmospheric effects, radiation and pollution, temperature distributions and stability, precipitation, horizontal wind, air masses, storms and general circulation, effects of pollutants on the atmosphere, and meteorological instruments. Prerequisites: None.

PHY 301 Energy Sources (3-0-3). Energy is studied from a physics perspective. Present and future alternative energy sources are examined. These include fossil fuels,

hydroelectric, nuclear, solar, geothermal and tides. The course also investigates the pollution caused by each energy source and the role conservation plays in the overall energy picture. Prerequisites: None.

PHY 303 Atmospheric Physics (3-0-3). Application of thermodynamics, radiation theory, optics, and mechanics to atmospheric phenomena: atmospheric composition, origin and structure; thermodynamics of atmospheric processes; extratropical synoptic scale disturbances; cloud microphysical processes; radiation transfer and trapping; energy balance; atmosphere dynamics. Prerequisite: PHY 201.

PHY 304 Issues in Environmental Physics (3-0-3). Topics include population growth effects upon resource depletion, natural resources and their depletion, atmospheric pollution, greenhouse gases, global climate changes on earth, physical principles involved in climate modeling, UV radiation, water pollution. Prerequisites: None.

PHY 351 Analytical Techniques (3-3-4). Applications of physical principles to current environmental issues including nuclear radiation, X-ray technology, remote sensing, and clean energy conversion techniques such as fuel cells. Laboratory covers experiments in X-ray spectroscopy, atomic physics, laser and nuclear physics, with application to airborne pollution measurements, acquisition and interpretation of environmental data by remote sensing. Prerequisite: PHY 201.

POL *Political Science*

POL 200 Globalization (3-0-3). The process of globalization is well underway at all levels of society, with socio-political impacts on all cultures. An introduction to the globalization of economic systems, multi-national organizations, technological, consumerism and world-wide communication systems. Prerequisite: COM 102.

POL 201 Introduction to Political Studies (3-0-3). An introduction to the science of politics, including an examination of the nature of government and public policymaking. Focus on the processes of government, including public administration, foreign policy and international relations. Prerequisite: COM 102.

POL 202 International Relations (3-0-3). This course aims at making students acquainted with the main stages of the evolution of IR as a discipline since 1945 which can be seen as an ongoing debate about the explanatory value of one particular theory, namely Realism. The course gives a profound introduction into theories of International Relations as well as a theory-based introduction into foreign policy analysis. It offers an analysis of the different schools of IR-Theory as well as their respective critiques. Prerequisite: COM 102.

POL 203 Political Philosophy (3-0-3) (Cross-listed as PHI 203). An introduction to the abiding questions of a civil society, to freedom, equality, justice, glory, power, law, nature, convention and civic virtue. (Cross-listed with PHI 203). Prerequisite: COM 102.

POL 204 International Organizations (3-0-3). An introduction to the structure and function of international organizations, and their role in economic, political, military, cultural or humanitarian relations, among nation-states. Selected organizations, such as, the United Nations, NATO, OPEC and the WTO, are examples. Prerequisite: COM 102.

POL 205 Public International Law (3-0-3). An examination of substantive international law, including the Law of the Seas, crimes against humanity, environmental law, the Geneva accords, international treaties, regional treaties, the Charter of the United Nations and trade agreements. Selected legal institutions, like the International Court of Justice in The Hague, and other tribunals, dealing with international disputes will be analyzed. Prerequisite: COM 102.

POL 206 Theories of Democracy (3-0-3) . This course discusses alternative definitions and viewpoints of democracy. It compares full-participation democracy with different types of representative democracy, including the constitutional democracy and the majority rule democracy. It compares different types of representative democracy, including the presidential and parliamentary systems and their variations. It discusses the relationship between democracy and human welfare, including the prospect for war and economic progress. Prerequisite : COM 102

POL 207 Wars, Conflicts, and Diplomacy (3-0-3). This course provides an introduction to the causes of war and other levels of violent international conflict; and the efforts which nations, and international organizations make to avoid it. Among other topics, the course includes an examination of the techniques of diplomacy, which have been utilized, historically speaking, in these attempts to avoid wars, and violent conflicts. Special emphasis will be placed on concepts of national self-interest, realpolitik, just and unjust wars, non-interference with internal sovereign issues, and nuclear weapons issues. Case studies of specific wars will be analyzed, and consideration will be made of various theories for controlling potential future flare-ups, and real international conflict situations. Prerequisite : COM 102

POL 300 Comparative Chief Executives of Nation-States (3-0-3). An analysis of the legal framework, and political power relationships, between heads of government, vis a vis parliaments, and/or national public bureaucracies, in the East and the West. Focus will be on executive privilege, administrative discretion, legislative oversight, separation of powers, rule of law and an independent judiciary. Prerequisite: COM102.

PSY *Psychology*

PSY 101 General Psychology (3-0-3). Topics include: research methods, the nature of psychological phenomena, physiological bases of behavior, life-span development, altered states of consciousness, sensation, perception, learning, conditioning, memory, language, thinking, motivation, emotion, personality, individual differences, conflict and stress, abnormal behavior, therapeutic techniques and social psychology. Prerequisite: COM 102.

PSY 102 Social Psychology (3-0-3). Focuses on the impact of group dynamics on individual behavior. Topics to be discussed include: the nature and methodology of social psychology research and various major theoretical concepts, including childhood development and socialization, causality attribution, attitude formation, anti-social behavior, interpersonal attraction and intimacy and the social effects and function of groups. Particular emphasis will be placed on the application of social psychology concepts in the workplace. Prerequisite: COM 102.

PSY 202 Abnormal Psychology (3-0-3). Examines the symptoms and causes of various types of psychological disorders - particularly the neurotic, psychotic and mood disorders. Diagnoses, suggested treatments, advantages and disadvantages of classifications schemes, and examinations of organic (i.e., genetic) and learning factors in the development of mental illness are among the topics that will be discussed. This course will be of particular interest to all students who wish to understand the underlying causes, and suggested treatments, of a wide range of mental illnesses, including depression, schizophrenia, anxiety disorders and other illnesses. Prerequisite: COM 102.

PSY 205 Industrial and Organizational Psychology (3-03) This subject addresses the issues of using psychology at work by analyzing human work behavior. A focus on the development of employees and

organizational structure helps students understand how psychology is applied in the work place with special emphasis on social behavior, including management of work groups and organizations. Students are presented with strategies for solving "human problems of work" that result from environment, technological and social factors. This course presents topics of using psychology at work (the history of I/O Psychology, methods of study and research), establishing a strong work force (preparing for employee selection , the selection of effective personnel ,using psychological tests in selection , training and development at work , evaluating job performance), social organization (the motivation to work , satisfaction with work , leadership at work, designing effective work organization , the dynamics of interaction) and solving human problems of work (stress and its effect on work, employee health problems and organizational interventions , designing the work environment.).Prerequisite: COM 102

SOC *Sociology*

SOC 101 Introduction to Sociology (3-0-3). Introduces the basic concepts and models of sociology, including: functionalism, conflict theory and symbolic interaction theory. The sociology of the family, organizations, social systems, religion and social movements will be examined. Concepts, such as, social inequality, social deviance, culture, social structure, socialization, social stratification, poverty, gender, the environment and power will be introduced. Prerequisite: COM 102.

SOC 202 Environmental Sociology (3-0-3). An introduction to the critical issues entailed in the reciprocal relations between human populations and the environment. The environment, broadly defined, includes the air, the water, the plant-life, animals; and the economic, aesthetic, political and social mores, aspects of the human culture. An analysis of social change and public policy that affects environmental degradation and natural resources depletion, and the social groups which affect the protection of the environment. Prerequisite: COM 102.

SOC 380 Sociology of Urban Politics (3-0-3). An analysis of cities and the suburban areas, including the community power structure, the inequalities of wealth, and the problems of transportation, housing, poverty, homelessness, crime, social class, social change, racism, public health and education. A special focus on the politics of public service delivery systems related to economic development policies and redistribution policies. Prerequisite: COM102.

STA *Statistics*

STA 201 Introduction to Statistics for Engineering and Natural Sciences (4-0-4). Descriptive statistics; probability distributions; experimental design; estimation; hypothesis testing; mean and variance tests; analysis of variance; simple regression and correlation; and the use of statistical computer software.

STA 202 Introduction to Statistics for Social Sciences (4-0-4). Acquisition and development of statistical methods that are commonly used in social sciences. Methods include: techniques for classification of data, descriptive statistics; probability distributions; experimental design; sampling techniques; index numbers; estimation; hypothesis testing; analysis of variance; nonparametric techniques; simple regression and correlation; and the use of statistical computer software.

STA 360 Engineering Statistics (3-0-3). Probability model; random variables and probability distributions; mathematical expectation; sampling distributions and designs; introduction to random processes in engineering; discrete and continuous models with applications; product reliability; robust design and quality control. Prerequisite: MTH 104 and STA 201.

STA 361 Probability and Statistics I (3-0-3). Random variables and their probability distributions; moments and generating functions; random vectors; some special distributions; limit theorems; sample moments and their distributions; the theory of point estimation. Prerequisite: MTH 104 and STA 201.

STA 362 Probability and Statistics II (3-0-3). Theory of testing of hypotheses (Neyman-Pearson, likelihood ratio, etc.); some further results on hypotheses testing; confidence estimation; the general linear hypothesis; nonparametric statistical inference; sequential statistical inference. Prerequisite: STA 361.

STA 380 Applied Statistics with Applications in Economics (3-0-3). Estimation, inference, multiple regression and correlation; elementary decision theory; introduction to time series; quality control techniques; applications in economics such as organization and interpretation of economic data, analysis of price, production and income data. Prerequisite: STA 201.

STA 401 Regression Analysis (3-0-3). Simple and multiple regression; least squares; curve fitting; graphic techniques; diagnostics and remedial measures (topics include multicollinearity, autocorrelation, problems with the model); polynomial models; intrinsically linear and nonlinear models; the general linear model; categorical response variable. Prerequisite: STA 201.

STA 450 Introduction to Stochastic Processes (3-0-3). Introduction to random walk, Markov chains and processes; birth and death processes, Poisson processes, renewal theory, Brownian motion, Gaussian processes, white noise, spectral analysis; queuing systems and applications. Prerequisite: STA 361 or STA 360.

STA 460 Applied Time Series Analysis (3-0-3). An introduction to the theory of time-dependent data; moving average and autoregressive processes; spectral theory and filtering; some large sample theory; estimation of the mean and autocorrelations; the periodogram, estimated spectrum; parameter estimation; regression, trend, and seasonality; unit roots; applications from economics, finance, engineering and others. Prerequisite: STA 361 or STA 380.

STA 470 Applied Multivariate Statistics (3-0-3). Aspects of multivariate analysis with applications; matrix theory and random vectors; sample geometry and random sampling; multivariate normal distribution; test of hypotheses; multivariate analysis of variance; multivariate regression; analysis of covariance structure (topics include: principal components, factor analysis, discriminant analysis, canonical correlation); classification and grouping techniques. Prerequisite: STA 361 or STA 401.

STA 480 Sampling Techniques (3-0-3). Theory of probability sampling and survey designs; methods for determining expected value, bias, variance; unrestricted random sampling, stratified sampling, cluster sampling, multistage or subsampling, ratio estimates, regression and composite estimation, double sampling; introduction to measurement error and comparison of alternative designs. Prerequisite: STA 201.

THM *Theme Courses*

THM 201 Arabs and the West: The Andalusian Symbiosis I (3-0-3), A two-semester interdisciplinary course that introduces students to the cultural symbiosis between Arabs and Europeans during the eight centuries of Arab/Muslim rule in Spain. The literary, cultural and scientific developments of that time will be closely examined and reevaluated. In the first semester, students will learn about the historical, literary, linguistic, artistic, and architectural products of al-Andalus (This course satisfies the Arabic Heritage requirement). Prerequisite: COM 102

THM 202 Arabs and the West: The Andalusian Symbiosis II (3-0-3), Examines the channels through which philosophical and religious, as well as scientific and technological knowledge, in Muslim Spain was produced and transmitted. The course ends with a reevaluation of the Andalusian legacy to the Arab World and the West (This course satisfies the Arabic Heritage requirement). Prerequisite: COM 102

TRA *Translation and Interpreting*

TRA 101 Introduction to Translation (3-0-3). Aims to familiarize students with the field of translation and the skills necessary to work as successful translators. Emphasis is placed on a problem-solving approach, supported by text analysis (both in the pre-translation phase and in subsequent editing and evaluation). Practical tasks will involve translation into and out of English and Arabic.

TRA 102 Practical Issues in Translation (3-0-3). Integrates both theory and practice: What is translation and how can it be studied most effectively? The course addresses in some detail the issues involved in the process of translating a text, the various kinds of translation and how translators deal with problems of text in context. The course also focuses on the professional translator, the pre-translation techniques needed for analyzing a text and the final stage of assessing the end-product. Prerequisite: TRA 101.

TRA 201 Theoretical and Practical Issues in Translation (3-0-3). Views translation practice as seen in the light of various theories and models of translation. Theories informed by modern linguistics, cultural studies and literary criticism are invoked with the aim of sensitizing the translator to the intricacies of the task. Throughout, the key notion of 'equivalence' is assessed and examined at various levels of language organization (word level, sentence level, text level, pragmatics, etc.) Issues covered include the translation of metaphor and idiomatic expressions, dealing with meaningful repetition, biased translation shifts. Prerequisite: TRA 102.

TRA 203 Modern Media Translation and Interpreting (3-0-3). Focuses on those modes and situations which relate to the translation and interpreting of the non-print media, film and television. Areas covered include: transcription and translation of narration and dialogue; translation of film scripts and sound tracks; subtitling; dubbing; interpreting for documentary and feature films, TV newscasts, video clips and commercials, teleconferences, telephone communication. Work on advertising, the translation of PR and promotional literature, publicity materials, etc. is also included. Prerequisite: TRA 101.

TRA 302 Contrastive Analysis (3-0-3). Examines the theoretical and practical principles of contrastive analysis and introduces students to basic techniques of identifying significant differences between English and Arabic. The comparison and contrasts established will span the entire spectrum from the level of words and sentences to discourse and genre. The interface between two or more languages will be viewed from linguistic and literary perspectives for a range of applications in translation and interpreting. Prerequisite: TRA 201.

TRA 303 Interpreting I: Focus on the Community (3-0-3). Introduces interpreting and distinguishes this skill from translation. The course is intended to develop the basic professional skills of Liaison Interpreting, with special emphasis on community interpreting (doctor-patient, court, official transactions). Other areas covered include business meetings, diplomatic/political negotiations, press interviews. The course aims to prepare students for these interpreting situations through nurturing the ability to understand and analyze a message in the source language and convey it in the target language in a straightforward and clear manner. Prerequisite: TRA 201.

TRA 305 Interpreting II: Focus on the Profession (3-0-3). Presents interpreting as a profession and prepares students for practical work. Students are introduced to different professional environments, professional ethics, interpersonal relations and conference organization. Consecutive interpreting is introduced, and notetaking techniques refined. In addition to the usual settings of court or doctor-patient interpreting, students receive training in organizing and convening a forum, selecting topics and delegates and interpreting formal and informal (e.g. after-dinner) speeches. Prerequisite: TRA 303.

TRA 401 Translation Evaluation and History (3-0-3). Aims to explore the conceptual map of translation studies and to reflect on important points in the history of translation. Emphasis is placed on both Western and Eastern translation traditions and on the role of translation in the development of culture and identity. Translation evaluation is introduced, and rigorous assessments schemes worked out. The course will draw on both literary and non-literary materials, as well as technical and non-technical texts. Prerequisite: TRA 301.

TRA 494 Special Topics in Translation (3-0-3). Focuses on salient issues in the theory and practice of translation and interpreting. Various themes are selected, and the arguments for and against the various proposals examined. Topics will differ in subject matter and scope, invoking paradigms ranging from linguistics to cultural studies, feminist translation and deconstruction. Prerequisite: TRA 401.

TRA 498 Applied Research (3-0-3). Introduces students to multidisciplinary research on translation and interpreting, and explores the relevance of this theoretical work to individual practice. Students identify salient issues in translation and interpreting, and design and conduct action research projects based on a practical situation and the state of current research in the chosen area. Prerequisite: TRA 494.

Translation Graduate Courses

TRA 500 Principles and Strategies in Translation & Interpreting (3-0-3) The course provides advanced training in principles and methods of translation & interpreting from English to Arabic and vice versa. A variety of text types are covered, ranging from legal to journalistic genres. Prerequisite: Admission to the program.

TRA 501 Professional Trends in the Practice of Translation (3-0-3) The course builds on the theoretical principles introduced so far, and deals with the constraints within which translations are made. Linguistic, cultural and translation-professional norms are explained and related to the work of the professional translator. Prerequisite: Admission to the Program.

TRA 502 Translation Research & Academic Writing (3-0-3) The course is designed with the dual purpose of introducing the students to the conventions of academic writing in both English and Arabic, and of promoting an 'action research' stance. These research skills are applied to the work of the translator and interpreter both as practitioners and as analysts. Prerequisite: Admission to the Program

TRA 503 Theoretical Models of Translation (3-0-3) The course provides the students with a conceptual map of translation studies, and outlines the various theoretical approaches to translation equivalence. Students are introduced to the range of factors, which govern the process of translation, and to the theoretical underpinnings, which have motivated different attitudes to translating and

translations. Prerequisite: TRA 500 or completion of level I

TRA 504 Discourse Semantics and Pragmatics in Translation (3-0-3) The course is intended to address the needs of the practising translator and interpreter within a discourse framework. Advanced training in semantics and pragmatics is provided, and linguistic analysis in these domains is re-considered from the vantage point of cross-cultural communication. Prerequisite: TRA 500 or completion of level I

TRA 505 Interpreting & the Profession (3-0-3) The course is designed to provide the students with high-level training in those interpreting skills most relevant to the translator at work. Advanced training in liaison and consecutive training is provided with a focus on professional standards and community needs. Theoretical insights into the process of interpreting are presented and placed within an overall, practice-driven model of the process. Prerequisite: TRA 504

TRA 506 Theoretical Perspectives on Translation Quality Assessment (3-0-3) The course is designed to enable students both to achieve competent standards of translation and to reflect on the process of deriving texts from English or Arabic. Emphasis will be placed on texts with a persuasive function in professional settings such as journalism, advertising and translation for the media. Prerequisite: TRA 503

TRA 556 Arabic Rhetoric for Translators (3-0-3) The course surveys the various rhetorical traditions and focuses on classical Arabic grammar and rhetoric. This is related to the concerns of the translator in dealing with modern standard Arabic and English composition. A text-linguistic model rooted in the rhetorical thinking of the Arabs is developed and applied particularly to the translation of sacred and sensitive texts. Prerequisite: Permission of instructor

TRA 558 Contrastive English/Arabic Linguistics (3-0-3) The course deals with how English and Arabic compare and contrast at various levels of linguistic organization: phonology, morphology, syntax and semantics. A discourse pragmatic perspective is promoted throughout to enable students look at the way texts are organized functionally. Prerequisite: TRA 556 or Equivalent

TRA 600 Area Studies & Translation Practicum (3-0-3) The course provides students with two forms of work experience: a topic-based approach which facilitates training in the terminology of certain fields of interest to the translator, and on-site, hands-on experience of becoming part of a translation or interpreting team. The topic-based approach relies on lectures and presentations given by experts on their chosen fields of specialization. The on-site experience is gained through work placements in collaboration with relevant professional organizations operating in the community at large. Prerequisite: Second year standing or permission of dept. chair

TRA 602 Translation Research Seminar (3-0-3) The Research Seminar is for all MA students nearing the conclusion of their program of studies, and who are about to commence work on their thesis. It allows them to share what they have learned throughout the course as they develop their thesis proposals. Students further refine their research skills, learn appropriate presentation formats, and enhance their professionalism in a supportive environment. Prerequisite: Second year standing.

TRA 699 M.A. Thesis (3-0-3) The MA thesis is an extended piece of individual research (10,000 words). Students will be responsible for a major translation or interpreting task, a critical evaluation of the problems encountered during the translation or the process of interpreting, and a detailed commentary of the strategies used to resolve the problems. The commentary must focus on a specific topic or area drawn from grammar, rhetoric, pragmatics, register, etc, and related to translation/interpreting. Emphasis is placed on the theoretical aspects of translating or interpreting. Prerequisite: Completion of coursework.

School of Architecture and Design

ARC *Architecture*

ARC 201 Architectural and Interior Design Studio I (12-0-6). (Cross-listed as IDE 201). Studio-based investigation of the fundamentals of making architectural form and space, with emphasis on design inquiry, exploration and process. Concentrates on classic instances of form sources in architectural and interior design: function, experience, structure, construction and context. Digital media are integral to the studio, and students receive instruction in software appropriate for design purposes. Prerequisite: admission to the professional program in Architecture or Interior Design, DES 100, DES 112, DES 121 or 122, DES 131, 132, MTH 003 or 111.

ARC 202 Architectural and Interior Design Studio II (12-0-6). (Cross-listed as IDE202). Continues the content and purpose of ARC 201, with increased emphasis on design development and physical and technical resolution. Digital media are integral to the studio, and students receive continued instruction and practice in software appropriate for design. Prerequisite: ARC 201.

ARC 213 Analysis and Methods in Architecture (3-0-3). Introduction to models of process and conception in architectural design, addressing fundamental concepts of method, spatial organization, material, structure and context as aspects of a comprehensive design intention. Course format includes lectures, seminars, field visits and readings. Assignments involve written and graphic communication. Prerequisite: Admission to the Architecture or Interior Design program, DES 100. (Formerly ARC212)

ARC 215 Descriptive Geometry (4-0-3). Introduction to concepts and practices of the precise description of form in space. Systematic treatment of projection systems, including orthographic, oblique and perspective projections. Instruction and assignments involve both traditional and digital design media. Course format includes lectures and supervised applications. Prerequisite: DES 100, DES 111 or consent of department.

ARC 224 Modern Foundations of Art and Architecture (3-0-3). Principles and practices fundamental to an understanding of the art and architecture of the modern era. Presentation integrates history and theory with practical design application and proceeds topically, rather than chronologically. Prerequisite: DES 121, 122. (Formerly ARC 220)

ARC 232 Survey of Materials and Practices in Construction (3-0-3). Broad survey of building materials and their properties, assembly sequences and methods of construction in the context of their influence on the form, cost and quality of the built environment. Taught utilizing a case study approach to demonstrate both the continuing evolution of the building process, and the timeless nature of the issues involved. Course format includes lectures and supervised applications. (Formerly ARC 231)

ARC 242 Structural Principles: Statics and Strength of Materials (2-3-3). (Cross-listed as CVE 272). Introduction to the graphic and mathematical description of structural behavior, as well as to the structural properties of the various materials used in typical architectural construction. Includes discussion of material quality and performance within the context of international standards (DIN, ISO, etc.). Taught in Department of Civil Engineering. Prerequisite: PHY 104. (Formerly ARC 240)

ARC 301 Architectural Design Studio III (12-0-6). Investigations into the spatial, structural, environmental and visual design of actual site projects. Exploration of the syntax of architecture and advanced means of representation, and integration of building systems into the design. Emphasis on site and context analysis. Several individual and group assignments are presented. Prerequisite: minimum average of (2.3) for ARC 201 and 202, ARC 202, ARC 224 and PHY 104.

ARC 302 Architectural Design Studio IV (12-0-6). Continuation of ARC 301, with emphasis on investigation of urban programs and sites, requiring not only the integration of form, structure, space and technologies, but the consideration of specific contextual issues of physical form and activities. Fundamental urban design and planning issues, methods and techniques are explored. Several individual and group assignments are presented. Prerequisite: ARC 301.

ARC 310 Modeling and Rendering (4-0-3). Presents a rationalized, geometrical approach to the conception and description of form. Selected examples of architectural form are first rigorously analyzed to re-derive their constructional logic, then 'built' as detailed electronic models. Students explore the potential of digital design technologies as instruments to achieve vivid, authentic, holistic simulations of architectural reality, appropriate to the testing of architectural ideas. Taught in a modified studio format. Prerequisite: DES 100, ARC 215, or consent of department.

ARC 311 Illustration and Rendering (4-0-3). Illustration and rendering techniques enabling students to express their ideas faster with more precise results. This course covers free hand color drawing techniques using markers, color pencils and watercolors. Prerequisite: DES 112.

ARC 312 Advanced Representation (4-0-3). Expanding on representational techniques. Focusing on the application and use of these techniques in the presentation and representation of design concepts and drawings compositions. Introduction to color drawing techniques using mixed media of hand drawing and computer generated drawings and illustrations, photomontage and collage. Prerequisite: DES 112.

ARC 325 Ideas in Architecture (3-0-3). An introduction to the conceptual basis of the work of specific architects, historical and contemporary architectural historians and theoreticians, and schools of thought in architecture with an emphasis on the understanding of both written and visual analysis of built form and design. Prerequisite: ARC 220. (Formerly ARC 321)

ARC 322 Global Issues in Architecture (3-0-3). Examination of our emerging understanding of global issues confronting humankind, including population growth, declining reserves of non-renewable resources, etc. Overview of the environmental impact of human communities through history. Introduction to concepts of energetics, including both the long-term operating economy of buildings, and the embedded energy invested in the physical form of the built environment. Prerequisite: ARC 224 and PHY 104.

ARC 333 Rough Construction Processes (2-3-3). In depth presentation of contemporary regional construction practices used to prepare the site and to erect the building's basic structure. These include site preparation, foundations, concrete, steel and timber structures, and masonry work. Production of preliminary construction drawings for small buildings. Prerequisite: ARC 232. (Formerly ARC 330)

ARC 343 Structural Analysis: Conceiving Forces in Buildings (2-3-3). (Cross-listed as CVE 371). An introduction to the concepts and procedures used to analyze and predict the behavior of buildings in response to static and dynamic loads on the structure. Extensive use of the computer and appropriate software to model, analyze, simulate and animate structural behavior. Taught in Department of Civil Engineering. Prerequisite: ARC 242. (Formerly ARC 341).

ARC 344 Structural Design in Concrete, Steel and Wood (2-3-3). (Cross-listed as CVE 372). An introduction to methods and concepts used by the structural engineer in the design of reinforced concrete buildings. Structural design is presented as a search for strategies appropriate to realize architectural form, synthesizing the structural imperatives of regularity and rationality with specific desires for formal relationships and environmental qualities. Taught in Department of Civil Engineering. Prerequisite: ARC 343. (Formerly ARC 342).

ARC 352 Environmental Energies and Building Form (2-3-3). Presents building form in the context of the environmental energies of light, heat, wind and sound. Together with moisture, these energies establish the invariant, often harsh, context within which built form must perform. Architectural form is presented as a strategy to mitigate the adverse effects of climate and locale upon the people and activities which the building houses. Prerequisite: PHY 104. (Formerly ARC 351)

ARC 365 Computer Aided Design (4-0-3). Systematic introduction to computer aided architectural design. Discussion and training focuses on a variety of CAAD applications in order to show the similarities (basic principles of CAAD) as well as the idiosyncrasies of the individual applications. Modeling of existing buildings utilizing CAAD applications from the core software suite utilized by SA&D. Topics include: objects, layers, classes, dimensions, units, scales, groups, symbols, different description models in 3D, levels of precision, different construction methods, work strategies. Prerequisite: DES 100, ARC 201. (Formerly ARC 371).

ARC 366 Applied Computer Aided Design (4-0-3). Systematic introduction to the basic practice of computer aided architectural design. Presentation and training focuses on two mainstream production CAAD applications: ArchiCAD and AutoCAD, with the intent to develop basic familiarity and proficiency with the applications most likely be encountered in offices during professional training. Introduction to AutoCAD occurs on PCs running the Windows NT operation system. Topics extend those introduced in ARC 365 to include detailed treatment of tool palettes and interplatform compatibility. Prerequisite: DES 132.

ARC 374 Environmentally Sustainable Design (2-3-3). (Cross-listed as IDE 374) Course develops a greater focus on holistic and sustainable approaches to design. Issues such as demand and supply of energy and water and the generation of waste will be covered. Principles of reduce, reuse and recycle will be reiterated. Predominant emphasis will be on practical strategies directly applicable in design. Material is presented as lectures and seminars, supplemented with readings.

ARC 397 Internship I (0). Minimum of six weeks of approved professional experience. Work undertaken must be documented in a formal report to the department by the beginning of the following term. Prerequisite: ARC 302.

ARC 401 Architectural Design Studio V (12-0-6). Study and analysis of large scale projects through a sequence of design problems of increasing complexity. Emphasis on the planning of buildings and the inter-relationship among form, structure, technologies, materials and detail. Prerequisite: ARC 224, 232, 242, 302, minimum average of C+ in ARC301 and 302.

ARC 402 Architectural Design Studio VI (12-0-6). Study and analysis of large scale projects through a sequence of design problems of increasing complexity. Emphasis on the planning of buildings and the inter-relationship among form, structure, technologies, materials and detail. Prerequisite): ARC 325, 333 , 352, 397, 401.

ARC 424 Evolution of Cities (3-0-3). Introduction to the origin, growth, and development of cities throughout history. Examines the various socio-economic, historic, political and environmental forces that help explain city form. Explores case studies of sites from ancient times to the present with particular emphasis on cities in Islamic and Middle Eastern cultures. Prerequisite: ARC 202.

ARC 434 Finish Construction Processes (2-3-3). In-depth examination of the trades and processes involved in finishing a building. These are the major components that are built following the erection of the building's basic structure. They include stairs, doors, windows, partitions, ceilings, floors, claddings, and joints. Discussion of design considerations and construction methods with hands-on experience on producing detailed drawings some elements. Prerequisite: ARC 333. (Formerly ARC 431).

ARC 453 Environmental Control Systems (2-3-3). An integrated presentation of environmental control systems (lighting, heating, ventilating, air conditioning, sanitary and acoustics) as they influence one another, and as they constrain interior design, space planning and building morphology. Prerequisite: ARC 352.

ARC 461 Professional Practice I: Project Management (3-0-3). (Cross-listed as IDE 461 and HRM 461) Introduction to the basic and advanced concepts of running design projects: Project Management. Exploring the design process and project phases analyzing in detail under the project management concept of delivering projects "on time, on budget, every time". Prerequisite(s): ARC 397 or IDE 397 or HRM 397.

ARC 462 Professional Practice II: Design Management (3-0-3). (Cross-listed as IDE 462, and HRM 462). Introduction to the basic and advanced concepts of running design projects: Project Management. Exploring the design process and project phases analyzing in detail under the project management concept of delivering projects "on time, on budget, every time". Prerequisite: ARC 397, or IDE 397 or HRM 397.

ARC 471 Site Planning (2-3-3). Prerequisite: ARC 302.

ARC 472 Introduction to Landscape Architecture (2-3-3). Prerequisite: ARC 302.

ARC 465 Advanced Computer Aided Design (4-0-3). Concentrates on the specific demands on CAD systems by the architecture and building professions. Application of CAD systems to the different phases of planning: preliminary design, design, construction documents, extraction of volumetric data and transfer to spreadsheet and/or database software, rendering software, post-rendering work in pixel-editing software, technical drawing layout software, etc. Prerequisite: ARC 365. (Formerly ARC 471).

ARC 494 Special Topics in Architecture (from two to four credits). Prerequisite: ARC 302.

ARC 497 Internship II (0). Minimum of eight weeks of on-the-job experience with an approved professional firm. Work undertaken must be documented
in a formal report to the department by mid-semester of the following term. Pre- or co-requisite: ARC 402.

ARC 501 Architectural Design Studio VII (12-0-6). Comprehensive design project integrating all aspects of design, theoretical, technological, urban and representational. Allowing students various scales of investigation within one design problem. Prerequisite: ARC 344, 402, minimum average in ARC 401, 402 of C+ required. (Formerly ARC505).

ARC 520 Architectural Criticism (2-2-3). Adresses a coherent understanding of contemporary architecture by focusing on readings, discussions, and presentations in order to mature the student's cognition to today's architectural strategies. Prerequisite: ARC 325.

ARC 530 Case Studies in Building Construction (2-3-3). Prerequisite: ARC 431. ARC 563 Professional Practice III: Construction Management (3-0-3). (Cross-listed as CVE 561 and HRM 563). In-depth study of the interrelationships among the various professional disciplines in the building and construction industry as they pertain to issues of management and planning of complex construction projects. Includes review of standard practices of tendering, contracting, quantity surveying, cost estimation, supervision, quality control and economy. Taught in Department of Civil Engineering. Prerequisite: ARC 397and ARC 461 or IDE 397 and IDE 461 or HRM 397 and HRM 461.

ARC 573 Principles of Urban Planning and Design (2-3-3). Examining the basic theoretical frameworks that foster the making of livable cities. Exploring approaches, methods, and tools commonly used in the practice of urban planning and urban design. Hands-on exercises dealing with such problems as housing and community development, urban conservation, environmental protection and public space provision and design. Prerequisite: ARC 301.

ARC 590 Final Project Research (6-0-3). Students choose a design topic with the guidance of an advisor and approval of the faculty. Each student prepares an individual program for ARC 591, Final Project Design, concluding with a formal, bound document. Prerequisite: ARC 344, ARC402, ARC434, ARC 453. (Formerly ARC501).

ARC 591 Final Project Design (12-0-6). Individual resolution of the design problems initiated in ARC 590, prepared under the guidance of a selected faculty advisor, presented and defended in a formal public critique. Prerequisite: ARC 497, ARC501 with minimum of C+, ARC 590. (Formerly ARC590).

ARC 594 Special Topics in Architecture (from two to four credits). Prerequisite: ARC 402.

DES *Design*

DES 100 Digital Media in Design (4-0-3). Intended to introduce digital media as an integral part of design process and internet communications. Covers care and operation of hardware, an introduction to the function and features of the Mac operating system, use of the keyboard, mouse, and other input devices such as digital cameras and scanners, and output devices such as printers and plotters. The course introduces students to the integrated use of software appropriate for word processing, document layout, spread-sheets, communication and research, drawing and modeling. (Formerly ARC 211 or CMP 103 or ARC 230 or CMP 101 in 1997/98).

DES 111 Descriptive Drawing I (6-0-3). This basic course introduces the students to the fundamental principles of observational and analytical drawing. Various representational and analytical approaches are explored through assignments which encourage the development of skills needed to effectively represent and communicate visual information. (Formerly AA 111).

DES 112 Descriptive Drawing II (6-0-3). This drawing course will further introduce the student to the principles of drawing. Emphasis will be given to the development of an individual approach to representation and a wide variety of assignments will encourage the student to develop an understanding of a range of techniques and materials of drawing. Prerequisite: DES 111. (Formerly AA 112).

DES 121 History of Material Culture I (3-0-3). This course examines the artistic material culture of humanity through architecture, monuments, sculpture and painting. The technological, religious and social forces that shaped these works are explored. The first part of this course covers the time span from the Stone Age through the Ancient Middle East, Classical, Medieval and Islamic eras. (Formerly AA 121).

DES 122 History of Material Culture II (3-0-3). This course is a continuation of DES 121; it traces development of world artistic material culture from the fifteenth century to the present time. (Formerly AA 122).

DES 131 Design Foundations I (6-0-3), annually. In this course students are introduced to the principles, conceptual and critical skills, and the techniques of design. Students learn to observe the world critically and meticulously, to analyze both the broad structures and the small details of visual phenomena, and master skills needed to conceptualize and communicate their observations through traditional means (drawing, painting and drafting), as well as through digital and other media. They learn craft and acquire making skills with a variety of materials and methods. Class assignments, critiques and presentations will enable students to begin developing an aesthetic awareness coupled with critical thinking skills. (Formerly AA 131).

DES 132 Design Foundations II (6-0-3). This course continues the principles of design, with an emphasis on testing aesthetic and perceptual assumptions. Students develop problem solving techniques through individual design solutions. While Design I focuses on skills and the discovery and critical understanding of the phenomenal world, Design II is primarily concerned with manipulation and synthesis, and the design and creation of unique two and three dimensional design concepts. Prerequisite: DES 131. (Formerly AA 132).

DES 141 Introductory Painting (6-0-3). This course is a basic introduction to the fundamentals and principles of observational painting. Various representational strategies, methods, materials and techniques are explored, with exercises and assignments designed to develop skills needed to communicate visual information in a painterly context.

DES 142 Painting: The Practice of Color (6-0-3). This course is suitable to both beginners and intermediate level students interested in learning about color and paint. The course is designed to both build on the students' knowledge of the principles, techniques and critical skills introduced in Painting I, as well as introduce new students to the basic theories of color and paint application.

DES 151 Introduction to Printmaking (6-0-3). An introduction to the fundamental methods, materials and processes of printmaking. The emphasis is placed on technique, craft and development of proper studio working habits, studio safety and the development of accurate printing skills and printing consistency. Students will work on monochrome and polychrome projects working with single and multiple matrixes. They will learn the essentials of color printing and how to build color through CMYK methods.

DES 200 Communication Design (6-0-3). This course provides an introduction to the materials and techniques most commonly used by designers in the field of communication, and stresses the development of skill in these areas through the completion of class assignments and projects representative of the concepts discussed in class. Students will develop a deeper understanding of visual communication, and will become well versed in the capacities and restrictions inherent in the materials and techniques most commonly used by professional designers. Prerequisite: DES 100. Multimedia Design and Visual Communication majors may not take this course.

DES 230 Digital Media in Communication Design (6-0-3). This course is a continuation of DES 100 and will build on the development and skills associated with digital design. Working with the latest in industry-specific hardware and software, students will gain a more complete understanding of how digital media is used in electronic design, and will learn the capabilities available to communication designers. Emphasis will be given to the creation, preparation and presentation of finished digital media projects. Prerequisite: DES 100. Multimedia Design and Visual Communication majors may not take this course.

DES 310 Introduction to Video and Audio Production (6-0-3). This course provides a basic, hands-on introduction to the practical techniques of scriptwriting, video and audio production, and post production editing using computer-based, non-linear technology. The development of skills is accomplished through the completion of individual and group projects which are representative of the concepts discussed in class. Students will develop some practical abilities in the use of a comprehensive range of production equipment, while gaining a deeper understanding and appreciation of the materials and techniques most commonly used by professional producers, directors and editors of educational, commercial, industrial and dramatic media programs. Prerequisite: DES 100. Multimedia Design and Visual Communication majors may only take this course as a free elective.

DES 320 Introduction to Web Design (6-0-3). This course provides an introduction to Web site design. Students will learn to use a variety of graphic design and Web page authoring tools, and Internet technologies and other relevant issues will be discussed. Students are expected to learn and use software packages for developing real life Web pages. Prerequisite: DES 100. Multimedia Design and Visual Communication majors may not take this course.

DES 397 Internship (0-0-0). Minimum of six weeks of on-the-job experience with an approved professional firm. Prerequisite: consent of the chair.

DES 494 Special Topics in Design (from two to four credits).

HRM *Heritage Management*

HRM 201 History of Material Culture in the Arabian Gulf I (3-0-3). Tracing the historical development of art and architecture in the Arabian Gulf region, this course examines the material culture of the ancient Middle East, medieval Islam and its associated pan-Islamic and regional styles. Specific attention is paid to the art and architecture of the United Arab Emirates. Prequisite: DES 121, DES 122, DES 132.

HRM 202 History of Material Culture in the Arabian Gulf II (3-0-3). This course charts the development of art and architecture in the Arabian Gulf after the fifteenth century, including the impact of non-Arab colonization on the material culture of the Emirates. It also examines the development of contemporary artistic and architectural expression. Prequisite: DES 121, DES 122, DES 132.

HRM 321 Introduction to Issues in Heritage Management I (3-0-3). An introduction to relevant theories and history, this course defines the practice of Heritage Management. It also outlines the different disciplines and professions involved and their roles in the conservation of both movable and immovable cultural property. It further discusses the development of intergovernmental and non-governmental agencies for conservation and analyzes current critical thinking about defining and displaying heritage. Prerequisite: HRM 202.

HRM 322 Introduction to Issues in Heritage Management II (3-0-3). This course introduces students to the specific issues, skills and techniques associated with museum management, documentation, exhibition design, and the preservation and conservation of movable and immovable cultural property. Instruction is through a combination of faculty lectures, assigned readings, field trips and guest lectures and workshops. Prerequisite: HRM 321.

HRM 331 Traditional Regional Material and Climate (3-0-3). Introduces students to how traditional building types were molded by indigenous building materials and climate. Students visit and explore the existing sites to study design responses to lifestyle and climate traditionally employed in the region.

HRM 332 Theory and Practice of Building Restoration (3-0-3). Students explore the steps involved in the rehabilitation and restoration of historic buildings, including documentation, assessment, structural and material analysis, project planning, conservation and preservation intervention strategies. Discrete techniques to incorporate contemporary requirements regarding sanitary and air conditioning are explored. Instruction combines on-going readings and lectures, guest lectures, workshops and field trips. Prerequisite: HRM 331.

HRM 333 Exhibition Studies (3-0-3). The purpose of this course is to equip students with the essential planning, design and research tools to perceive, prepare and produce exhibitions. Students also explore elements of design lighting, material, construction, presentation, visual and textual arrangement and containment of artifacts. Students are introduced to computer applications to research and quantify information for designing exhibition and museum environments.

HRM 397 Internship (0-0-0). Minimum of six weeks of on-the-job experience with an approved institution or agency. Prerequisite: consent of the internship advisor.
HRM 405 Topical Practicum in Arts and

Heritage Management I (3-0-3). Students formulate a cooperative heritage management project under faculty supervision and in partnership with the local community. This course offers training in the identification, protection and management of cultural resources and pursues rigorous documentation in photographic, textual and drawn formats. Prerequisite: HRM 302.
HRM 406 Topical Practicum in Arts and

Heritage Management II (3-0-3). A continuation of HRM 421, students implement the project formulated in the previous term, producing, as the case may be, an exhibition, publishable document or preservation or restoration activity for the benefit of the community. Prerequisite: HRM 421.

HRM 461 Professional Practice I: Project Management (3-0-3). (Cross-listed as ARC 461 and IDE 461). Introduction to the basic and advanced concepts of running design projects: Project Management. Exploring the design process and project phases analyzing in detail under the project management concept of delivering projects “on time, on

budget, every time". Prerequisite(s): ARC 397 or IDE 397 or HRM 397.

HRM 462 Professional Practice II: Design Management (3-0-3). (Cross-listed as ARC 462 and IDE 462) Introduction to the basic and advanced concepts of running design projects: Project Management. Exploring the design process and project phases analyzing in detail under the project management concept of delivering projects "on time, on budget, every time". Prerequisite: ARC 397 or IDE 397 or HRM 397.

HRM 490 Final Project Research (6-0-3). Students design a research and presentation of a conservation project with the guidance of an advisor and approval of the faculty. Each student prepares an individual program for HRM 401, concluding with a formal, bound document. (Open to HRM majors only).

HRM 491 Final Project Design (6-0-6). Completion of the project formulated in HRM 490, under the guidance of a selected faculty advisor and presented and defended in a formal public critique. Prerequisite: HRM 490, HRM 405. (Open to HRM majors only). HRM 494 Special Topics in Heritage Management (from two to four credits). Prerequisite: HRM 322.

HRM 563 Professional Practice III: Construction Management (3-0-3). (Cross-listed as CVE 561 and ARC 563). In-depth study of the interrelationships among the various professional disciplines in the building and construction industry as they pertain to issues of management and planning of complex construction projects. Includes review of standard practices of tendering, contracting, quantity surveying, cost estimation, supervision, quality control and economy. Taught in Department of Civil Engineering. Prerequisite: ARC 397and ARC 461 or IDE 397 and IDE 461 or HRM 397 and HRM 461.

IDE *Interior Design*

IDE 201 Architectural and Interior Design Studio I (12-0-6). (Cross-listed as ARC 201). Studio-based investigation of the fundamentals of making architectural form and space, with emphasis on design inquiry, exploration and process. Concentrates on classic instances of form sources in architectural and interior design: function, experience, structure, construction and context. Digital media are integral to the studio and students receive instruction in software appropriate for design purposes. Prerequisite: Admission to the Architecture or Interior Design Programs, DES 100, 112, DES 121 or 122, 132, MTH 003 or MTH 111.

IDE 202 Architectural and Interior Design Studio II (12-0-6). (Cross-listed as ARC 202). Continues the content and purpose of ARC/IDE 201, with increased emphasis on design development and physical and technical resolution. Digital media are integral to the studio and students receive continued instruction and practice in software appropriate for design. Prerequisite: IDE 201.

IDE 223 History of Interior Design (3-0-3). An overview of interior design historical development as a collective expression of art, architecture, science and culture, however, as a by-product of its own time and as a resource for stimulating new ideas. The history of interior design draws upon several different fields of scholarly study. It is based in architectural history but incorporates unique interior space typology, specific elements of the interior decorative arts and ornamentation including furniture, metal work, glass, ceramics and textiles. Prerequisite: DES 121, DES 122.

IDE 231 Materials and Methods of Interior Design (2-3-3). Introduction to the aesthetic, practical and technical aspects of interior finish materials. Presents composition of materials, texture, installation and maintenance. Covering several categories of applied finishes - Floor finishes, Wall and ceiling finishes, Window treatments, furniture and joinery finishes, plus others. (Formerly ARC 233/IDE 203).

IDE 233 Interior Construction (2-2-3). This course covers basic interior detailing, millwork and cabinetry elements. These elements must be developed and coordinated to construct interior space. Detailing, technical drawings, specifications and scheduling are therefore integral to design development. Prerequisite: IDE 231. (Formerly IDE 204).

IDE 234 Soft Furnishings (2-2-3). Introduction to the aesthetic, practical and technical aspects of interior finish materials. Presents composition of materials, texture, installation and maintenance. Covering several categories of applied finishes: floor finishes, wall and ceiling finishes, window treatments, furniture and joinery finishes, plus others. prerequisite: IDE 233. (Formerly IDE 231).

IDE 251 Color and Light (2-2-3). Introduction to the fundamentals, principles and art of lighting and color, and their visual and physical effects in interior design. Content explores light and color as important elements in interior space through the study of related perceptual and physical factors. Introduces relevant terminology to define light and color as attributes of architectural and interior space: illumination levels and temperatures, light sources, fixtures, materials, etc. Prerequisite: PHY 104. (Formerly IDE 310).

IDE 301 Interior Design Studio III (12-0-6). Studio-based investigation focusing on advanced concepts used in the development and application of planning techniques and spatial concepts. Concentrates specifically on the design of medium-scale residential and commercial projects. Emphasis on research and analysis of existing structures, contextual development of interior solutions, building constraints, accessibility standards and specialized product and materials specifications. Prerequisite: IDE 202, PHY 104, minimum average of C+ in IDE 201 and IDE 202.

IDE 302 Interior Design Studio IV (12-0-6). Continues the content and purpose of IDE 301, with special emphasis on planning techniques and volumetric concepts for the design of large-scale residences and public spaces. Course components: research applied to selected client identities, design criteria for special population groups, building constraints and accessibility standards, project specifications and creative presentation methods. Prerequisite: IDE 301.

IDE 335 Furniture Design (2-2-3). Course explores the basic function and design of furniture and topics of human factors, i.e., anthropometrics and ergonomics related to furniture design. Each student will develop a unique furniture project and will define, research, design, draw, select material for and build a study model of the final furniture piece. Prerequisite: ARC 202 IDE 234 or ARC 232. (Formerly ARC 410)

IDE 352 Environmental Control Systems in Interior Design (2-3-3). An integrated presentation of environmental control systems (lighting, heating, ventilating, air conditioning, sanitary and acoustics) with special attention to the needs of Interior Designers. Systems are presented as they influence one another and as they constrain interior space planning and design. Prerequisite: PHY 104.

IDE 365 Computer-Aided Design (3)

IDE 374 Environmentally Sustainable Design (2-3-3). (Cross-listed as ARC 374). Course develops a greater focus on holistic and sustainable approaches to design. Issues such as demand and supply of energy and water, and the generation of waste, will be covered. Principles of reduce, reuse and recycle will be reiterated. Predominant emphasis will be on practical strategies directly applicable in design. Material is

presented as lectures and seminars, supplemented with readings. Prerequisite: PHY 104. (Formerly ARC 352).
IDE 390 Special Projects in Interior Design (4-0-3). Prerequisite: ARC 301.
IDE 394 Special Topics in Interior Design. (from 2 to 4 credits). Prerequisite: ARC 301.
IDE 397 Internship (0-0-0). Minimum of six weeks of on-the-job experience with an approved professional firm. Work undertaken must be documented in a formal report to the department by mid-semester of the following term. Prerequisite: IDE 302.

IDE 401 Interior Design Studio V (12-0-6). Comprehensive design project integrating all aspects of design, theoretical, technological , and representational, allowing students various scales of investigation within one design problem. Prerequisite: IDE 302, minimum average of C+ for IDE 301 and IDE 302. (Formerly IDE 405).

IDE 432 Advanced Detailing (4-0-3). Continuation of Interior Construction (IDE 233) focusing on advanced levels of detailing, design development, conceptual and technical drawing, specifications and craftsmanship. Prerequisite: IDE 233.

IDE 460 Exhibition Design (2-3-3). Equips students with the essential research, planning and design tools to conceive, prepare and produce persuasive exhibition and educational environments such as product shows, museums and gallery interiors. Explores issues of planning, lighting, stagecraft, narrative composition and human perception. Prerequisite: IDE 302. (Formerly IDE 503).

IDE 461 Professional Practice I: Project Management (3-0-3). (Cross-listed as ARC 461 and HRM 461). Introduction to the basic and advanced concepts of running design projects - Project Management. Exploring the design process and project phases analyzing in detail under the project management concept of delivering projects "on time, on budget, every time". Prerequisite: ARC397 or IDE397 or HRM397.

IDE 462 Professional Practice II: Design Management (3-0-3). (Cross-listed as ARC 462 and HRM 462) Introduction to the basic and advanced concepts of running design projects: Project Management. Exploring the design process and project phases analyzing in detail under the project management concept of delivering projects "on time, on budget, every time". Prerequisite: ARC 397 or IDE 397 or HRM 397.

IDE 490 Final Project Research (6-0-3). Students choose a design topic with the guidance of an advisor, and approval of the faculty. Each student prepares an individual program for IDE 491, Final Project Design, concluding with a formal, bound document. Prerequisite: IDE 302, IDE 335, IDE 352. (Formerly IDE 401).

IDE 491 Final Project Design (12-0-6). Individual design resolution based upon the research findings initiated in Final Project Research (IDE 490). The final project is developed under the guidance and advice of a faculty member and is presented and defended in a formal public jury. Prerequisite: IDE 401 with a minimum of C+, IDE 490.
IDE 494 Special Topics in Interior Design. (from two to four credits). Prerequisite: IDE 302.

MUM *Multimedia Design*

MUM 301 Multimedia Studio I (6-0-3). Interactive authoring using a variety of media, 3-D modeling and an introduction to animation. Prerequisite: VIS 202, 213 and 360.

MUM 310 Sound and Video I (6-0-3). An introduction to the development and production of video and sound projects. This class is a "hands-on" experience with production planning, pre-visualization, storyboarding, and the use of video camera and audio recording equipment during location production. Prerequisite: VIS 202, 213, and 360. (Formerly MUM 210).

MUM 312 Sound and Video II (6-0-3). A continuation of MUM 310 which emphasizes digital and analog audio recording, location production of audio and video, and non-linear/computer-based post-production processes and techniques. Prerequisite: VIS 202, 213, and 360. (Formerly MUM 211).

MUM 320 Web Design (6-0-3). This course provides an introduction to Web site design. Students will learn to use a variety of graphic design and Web page authoring tools, and Internet technologies and other relevant issues will be discussed. Students are expected to learn and use software packages for developing real life Web pages. Prerequisite: VIS 202, 213, and 360.

MUM 321 Photo-Journalism (6-0-3). (Cross-listed as VIS 321). This course explores the history and practice of photo-journalism. Students are expected to have sound black and white technical skills as the course focuses on developing personal awareness and vision within the medium of photography. Through a series of slides, lectures and small photographic assignments, the course will investigate subject matter through the development of the photographic essay. A lab fee of Dhs 150 is applied. Prerequisite: VIS 202, 213, and 360.

MUM 330 Interactive Design (6-0-3). This course focuses on special techniques for authoring and producing interactive and stand-alone applications. Students learn creative strategies employed to produce interactive media for entertainment, education, advertising and information industry. Prerequisite: VIS 202, 213, and 360.

MUM 331 Modeling and Animation (6-0-3). This course provides an introduction to 2-D and 3-D modeling, animation and various modeling and animation tools. The course shall help students advance into the realm of computer modeling, animation, and video and motion picture production. Students will be able to use high-end software and hardware for developing a professional quality portfolio. Prerequisite: VIS 202, 213, and 360.

MUM 394 Special Topics in Multimedia Design (6-0-3).The course and subject matter will be announced in the university course listings each semester. May be repeated for credit. Prerequisite: VIS 202, 213 and 360.

MUM 397 Internship for Multimedia (3-0-3). Minimum of six weeks of on-the-job experience with an approved professional firm. Prerequisite: MUM 301.

MUM 401 Senior Multimedia Studio (6-0-4). Advised senior project. Development of an involved multimedia project in an area of student interest. Prerequisite: MUM 301.

MUM 402 Senior Multimedia Portfolio (6-0-4). Senior project continued. Portfolio production with an emphasis on entering the job market. Prerequisite: MUM 401.

MUM 410 Advanced Sound and Video (6-0-3). Advanced studies in video and audio program development, production and non-linear/computer-based post-production for third and fourth year students. Prerequisite: MUM 310 or 312. (formerly MUM 311).

MUM 496 Independent Study (variable credit, 1 to 4 credit hours). This course involves investigation under faculty supervision beyond what is offered in existing courses. May be repeated to a maximum of 6 credits of Independent Study. Prerequisite: junior or senior standing and consent of the instructor.

VIS *Visual Communication*

VIS 201 Graphic Design Studio I (6-0-3). This course introduces the broad field of graphic design. It is design based and is an extension of DES 132. This course involves

the application of design principles to graphic forms. Prerequisite: DES100, 112 &132; DES 121 or 122; MTH XXX; and COM 101or 102. (Formerly GRA 201).

VIS 202 Graphic Design Studio II (6-0-3). As a continuation of VIS 201, this course places an increasing emphasis on identifying the design process. The course material is focused entirely on the components of graphic design. Prerequisite: VIS 201, 221, and 230.

VIS 213 Illustration Drawing (6-0-3). This course, building on skills introduced in foundation drawing, encourages students to utilize a wide variety of illustration media and techniques. Class projects focus on drawing from life, photo reference gathering techniques and visualizing concepts and ideas within the genre of commercial illustration. Prerequisite: VIS 201, 221, and 230.

VIS 221 Photography Basics (6-0-3). Introduction to basic photo skills and to some of the issues associated with the practice and history of photography. The course covers camera operation, black and white film developing, contrast control, depth of field, focal length and print finishing. A lab fee of Dhs. 150 is applied. Prerequisite: DES100, 112 &132; DES 121 or 122; MTH XXX; and COM 101 or 102.

VIS 230 Digital Media in Visual Communication (6-0-3). This course is a continuation of DES 100 and will continue the development of the skills associated with digital design. Working with PostScript illustration, bitmapped images and desktop publishing students will use industry specific software to create vector based and bitmapped images. An introduction to layout and desktop publishing will be included and class discussion will encourage students to explore various design concepts. Emphasis will be given to the creation, preparation and printing of finished designs. Prerequisite: DES 100, 112 & 132; DES 121 or 122; MTH XXX; and COM 101or 102.

VIS 301 Graphic Design Studio III (6-0-3). A development of VIS 202, this course focuses on what graphic design could/might be. This level emphasizes exploration and experimentation. Prerequisite: VIS 202, 213 and 360.

VIS 311 Illustration Design (6-0-3). By focusing upon illustration as a means of conveying ideas and concepts, this course introduces the student to various techniques of idea generation. Students are encouraged to arrive at visual equivalents to written and/or oral texts. Prerequisite: VIS 202, 213 and 360.

VIS 312 Illustration Genres (6-0-3). This course explores the potential of 19th and 20th century illustration genres as a means of visual communication. Set projects encourage the student to investigate the contemporary implications of various historical illustration styles. Prerequisite: VIS 202, 213 and 360.

VIS 320 Multiples I (Printmaking) (6-0-3). Students are introduced to a variety of techniques in traditional and alternative printmaking methods. These may include, but are not limited to, intaglio, linocuts, monoprints, collographs, photoetching, stamping, relief and alternative methods. Traditional mechanical reproductive processes as well as a basic history and theory of the graphic arts are investigated. Issues surrounding the mechanical reproduction of images using digital media to create a global visual culture are also considered. A lab fee of Dhs. 150 is applied. Prerequisite: VIS 202, 213 and 360. (Formerly VIS 222).

VIS 321 Photo-Journalism (6-0-3). (Cross-listed as MUM 321). This course explores the history and practice of photo-journalism. Students are expected to have sound black and white technical skills as the course focuses on developing personal awareness and vision within the medium of photography. Through a series of slides, lectures and small photographic assignments, the course will investigate subject matter through the development of the photographic essay. A lab fee of Dhs. 150 is applied. Prerequisite: VIS 202, 213, and 360.

VIS 322 Multiples II (Printmaking) (6-0-3). Students conduct further and more in-depth investigation into the processes of mechanical reproduction with possible concentration(s) in a specific printing medium. This course is a confluence of media, technologies and ideologies that include the information technologies, digital and analog photography, and many other methods and media of mechanical reproduction. Attention is paid to the role of the reproduced image in the economy and material culture and the structure and manipulation of meaning through image production and reproduction. A lab fee of Dhs. 150 is applied. Prerequisite: VIS 202, 213, and 360.

VIS 323 Photography for Communication (6-0-3). This course covers the theory and practice of image manipulation through the extension of the traditional boundaries of photography. A wide range of techniques and processes will be covered such as polarization, non-silver methods, toning and digital media. A lab fee of Dhs. 150 is applied. Prerequisitee: VIS 202, 213, and 360.

VIS 360 Fundamentals of Media Theory (3-0-3). A survey of the elements which make up film, video, audio, still images and an analysis of how these elements are used in the design of visual and textual message design and structure. Includes analysis of how information is crafted to create meaning as well as the history of the various media, to include the social, economic, cultural, political, ethical and theoretical bases of the media. Prerequisite: DES 112 and DES 132.

VIS 361 The Media Industry (3-0-3). A survey of the contemporary practical application(s) across the media industries in local, regional and global contexts. This includes investigation into the workings of the media industry and issues relating to digital and analog technologies in the free and controlled flow of information. Special attention will be given to media industry issues germane to the GCC region and the Islamic viewing audience and consumer. Prerequisite: COM 101 or 102.

VIS 394 Special Topics in Visual Communication (6-0-3). The course and subject matter will be announced in the university course listings each semester. May be repeated for credit. Prerequisite:VIS 202, 213 and 360.

VIS 397 Internship (3-0-3). Minimum of six weeks of on-the-job experience with an approved professional firm. Prerequisite: VIS 301.

VIS 401 Senior Graphic Design Studio (6-0-4). A senior level studio course in which the student will develop individual expertise in the approach to graphic design applications. In this course, students are required to make their first contact with various professional sources in order to obtain responses and commentary on their individual work. Prerequisite: VIS 301.

VIS 402 Senior Graphic Design Portfolio (6-0-4). This senior level portfolio course focuses on portfolio production and presentation within the field of graphic design. This course will stand as the culmination of four years of study in graphic design and the portfolio will embody that achievement. In this course, students are required to present their work to professional firms. Prerequisite: VIS 401.

VIS 410 Senior VisCom Studio (6-0-3). In this senior level course, students are encouraged to develop work that reflects and identifies their own personal stylistic strengths. Emphasis on an individual approach to topics in Visual Communication is encouraged and students are expected to approach the local market for initial responses to their work. Prerequisite: Any four of

the following: VIS 311, 312, 321, 323, 320, 322.

VIS 420 Senior VisCom Portfolio (6-0-3). In this senior level course, the student is encouraged to develop his/her own individual expertise and style toward the production of a professional body of work. As part of this course, students are required to prepare a portfolio and approach the commercial market for professional responses to their work. Prerequisite: VIS 410.

VIS 496 Independent Study (variable credit, one to four credit hours). This course involves investigation under faculty supervision beyond what is offered in existing courses. May be repeated to a maximum of 6 credits of Independent Study. Prerequisite: junior or senior standing and consent of the instructor.

School of Business and Management

ACC *Accounting*

ACC 201 Fundamentals of Financial Accounting (3-0-3). Introduces the principles and concepts underlying financial statements. Course includes an introduction to the accounting profession, control, concepts, business entities and all elements of basic financial statements. Prerequisite: first semester second year or approval of advisor.

ACC 202 Fundamentals of Managerial Accounting (3-0-3). Introduces the principles and concepts underlying managerial accounting. Course includes an introduction to management accounting information and cost accounting. Prerequisite: ACC 201.

ACC 301 Intermediate Financial Accounting I (3-0-3). Begins a two-course sequence providing an in-depth study of principles and elements associated with financial statements. This includes: financial statement analysis, income measurement, valuation of assets and equities and generally accepted accounting principles. Prerequisite: ACC 202.

ACC 302 Intermediate Financial Accounting II (3-0-3). Continuation of Intermediate Financial Accounting I; focus on accounting for long-term liabilities, stockholder's equity, cash flow analysis and international financial statements. Prerequisite: ACC 301.

ACC 303 Cost Accounting (3-0-3). Uses of accounting data for planning control and decision-making. Topics include: budgets and cost concepts, techniques and behavior. Prerequisite: ACC 202.

ACC 304 Auditing (3-0-3). A study of auditing theory, generally accepted auditing standards, audit procedures, audit reports and the responsibilities and ethics of the auditing profession. Topics include: risk, evidence and audit tests, internal controls, sampling, audit testing, subsequent events, professional liability, reporting statutory provisions, compilation and review services, and reporting under government auditing standards. Prerequisite: ACC 302.

ACC 305 Income Tax I. Introduces the U.S. federal income tax system as it applies to personal income taxes, and examines the legislative, judicial and regulatory bases of the Code, as well as exposure to the tax accounting concepts of income, examinations, exclusions, losses, expense, credits, property transactions and AMT as they apply to theory and practice. Prerequisite: ACC 302.

ACC 306 Income Tax II. Introduces the U.S. federal income tax system as it applies to corporations, partnerships, estates and trusts. Course includes a comparison and contrast of personal and corporate taxation, as well as an examination of corporate organization and capital structure, distributions and reorganizations, accumulated earnings rules. Prerequisite: ACC 305.

ACC 394 Special Topics in Accounting (3-0-3).

ACC 396 Independent Study in Accounting (3-0-3).

ACC 401 Advanced Financial Accounting (3-0-3). Theory and practices of accounting for partnerships, business combinations and consolidated financial statements. Advanced topics in financial accounting. Prerequisite: ACC 302.

ACC 407 Accounting Theory (3-0-3). Examines models, hypotheses and concepts underlying financial accounting practice. Emphasizes understanding the basis of traditional accounting principles and analysis of the relevance of decision-usefulness, economic consequences and game theory models to accounting standard setting. Specific issues related to earnings management and executive compensation, as well the social, political and economic influences on accounting standard setting are also considered. Prerequisite: ACC 401.

BIS *Business Information Systems*

BIS 001 Software Applications for Business (3-0-3). Introduces students to popular application software. Five types of applications are covered: Operating System (WINDOWS), e-Mail & Web, HTML editing (MS-FrontPage), Spreadsheet (MS-EXCEL), and DBMS (MS-ACCESS). This course will provide students with the essential computer literacy skills needed in higher-level courses.

BIS 201 Business Information Systems (3-0-3). This course is business-oriented and applies knowledge accumulated by students in BIS001 to solve basic business problems. It also introduces students to the logic of business programming. Students will be working on major case assignments throughout the semester to develop spreadsheet and database applications for business. Not counted for students in computer science and engineering majors, Prerequisite: BIS001.

BLW *Business Legal Issues*

BLW 301 Business Law (3-0-3). Examines business legal issues such as: legal concepts, philosophy and functions of court systems. Survey of contracts, sales, agents, legal forms of business and the regulation of businesses. Prerequisite: junior standing.

BLW 302 Advanced Corporate Law (3-0-3). Proprietorships, partnerships, limited partnerships and corporations; advantages and disadvantages of each form; factors in selection of which form to use; partnership agreements; how to create corporations; closed corporations vs. publicly-traded corporations. American and UAE corporate law are compared. Prerequisite: BLW 301.

BUS *General Business*

BUS 394 International Study Tour (3-0-3). Provides a firsthand opportunity to learn by experiencing the world of international business. Students will visit the headquarters locations of multi-national organizations and attend seminars given by the professionals of these corporations.

BUS 396 Resume Writing & Interviewing Skills (1-0-1). Introduces students to the essential skills necessary to obtain employment. Topics covered include self-evaluation techniques, interviewing skills, resume writing and job search strategies.

BUS 397 Business Internship (3-0-3). Students are placed, by the School of Business Internship office, in corporations for the purpose of utilizing the skills and knowledge acquired in the classroom.

Prerequisite: junior or senior standing.

FIN *Finance*

FIN 201 Fundamentals of Financial Management (3-0-3). Introduction to business finance, including global aspects; acquisition and use of short-term funds and long-term capital; overview of money and capital markets; management of assets, liabilities and capital accounts; financial analysis and time value of money; cash operation, and long-range budgeting; leasing; corporate securities; dividend policy; and cost of capital. Prerequisite: ACC 201 and QAN 201.

FIN 301 Financial Statement Analysis (3-0-3). Integrates and synthesizes the core business courses such as accounting, finance, marketing, management and statistics. Students use the case method to study and analyze corporations, and utilize computer based business information systems, such as EDGAR, to download and analyze financial statements. Prerequisite: ACC 202 and FIN 201.

FIN 302 Financial Markets and Institutions (3-0-3). The history, purpose, function and organization of the short-term money market and long-term capital market. An integrated view of the participating institutions and the markets in which they operate, their investment constraints and their resulting portfolios. Prerequisite: FIN 201.

FIN 303 Investment Analysis (3-0-3). Investment objectives. Methods of appraising corporate equity, debt and other securities. Portfolio theory and management, technical analysis, random walk theory and the role of institutional investors. Prerequisite: FIN 201.

FIN 304 Real Estate Finance (3-0-3). Terminology, legislation, principles and analytical techniques pertaining to financing of real estate. Perspective of lender, residential borrower and income property borrowers. Prerequisite: FIN 201.

FIN 306 Insurance and Financial Planning (3-0-3). An introduction to insurance, risk management and personal financial planning. Includes theory of insurance and risk management with specific applications to property, disability, health and life insurance. The course also discusses mutual funds, retirement planning, estate and tax planning, offshore banking and investments. Prerequisite: FIN 201.

FIN 394 Special Topics in Finance (3-0-3). Current topics in one of the following areas: Finance, Insurance or Real Estate. Topics varied and announced in Schedule of Classes. May be repeated once with change in topic area. Prerequisite: consent of instructor.

FIN 396 Independent Study in Finance (3-0-3).

FIN 401 International Finance (3-0-3). Covers financing international trade and investment, foreign exchange markets and exchange rate, balance of payments and current developments in international finance co-operations. Prerequisite: FIN303.

FIN 402 Futures and Options (3-0-3). Conceptual and practical aspects of the functioning of speculative markets in futures, options, and hard assets; stock option strategies, financial engineering, financial futures, stock index options and contemporary issues in futures and options. Prerequisite: FIN 303.

FIN 403 Commercial Banking (3-0-3). Covers the structure and internal organization of commercial banks and emphasizes the dynamic nature of assets, liability and equity management. It also covers the application of decision-making procedures to financial management situations, including evaluation of bank performance, capital acquisition, liquidity and loans. Prerequisite: FIN 302.

FIN 404 Portfolio Management (3-0-3). Provides the theoretical and operative framework for portfolio and advanced investment management. Students apply portfolio models and concepts to live market data to perform analytical skills and evaluate equities, fixed income securities and other investments. Asset pricing, diversification and other financial models are covered in detail. Prerequisite: FIN 303 and QAN 202.

FIN 405 Advanced Financial Management (3-0-3). Covers investments, financing and dividend policy decisions of the financial manager. Prerequisite: FIN 303 and QAN 202.

Information Systems

(See Management Information Systems)

INB *International Business*

INB 201 Fundamentals of International Business (3-0-3). An introductory course that studies the nature and scope of international trade and investment, international institutions, the international monetary system and exchange markets and some of the major issues involved in the functional aspects of international business. Prerequisite: ECO 201 and ECO 202.

MGT *Management*

MGT 201 Fundamentals of Management (3-0-3). This course surveys the basic concepts and issues of management and the various functions and activities of the manager. Topics may include plans, goals, decision making, change, motivation, human resources, ethics and social responsibility, groups and teams, organization design, leadership, and control. Prerequisite: Second semester, freshman standing (12 credits minimum). (Formerly MGT 101).

MGT 301 Organizational Behavior (3-0-3). Takes an in-depth look at human behavior in organizations. Incorporating current management theory and research, the course looks into the factors that influence individual and group performance. Topics may include perception, personality, attitudes, values, motivation, decision making, leadership, power and politics, conflict and negotiation, groups and culture. Prerequisite: MGT 201.

MGT 302 Managing Human Resources (3-0-3). Examines the foundations, functions and activities involved in the managing of human resources, striking a balance between current theory and practice. Topics may include manpower planning, recruitment and selection, policy and procedures, performance appraisal, compensation and benefits, training, safety and industrial relations. Prerequisite: MGT 201, junior standing.

MGT 303 Management and Leadership Development (3-0-3). Focuses on the necessary skills and abilities of the successful leader and manager. Students are not only introduced to these success factors, but are challenged to both assess and develop their own managerial and leadership skills throughout the course. Prerequisite: MGT 301.

MGT 360 Business Ethics & Social Responsibility (3-0-3). Introduces students to the ethical dimensions of business as they relate to the various stakeholders inside and outside the organization. Topics include business ethical theory, ethical decision-making, ethical dilemmas and corporate social responsibility. Cases and projects are used to examine these issues within the context of the local environment. Prerequisites: MGT201 and junior standing.

MGT 380 Project Management (3-0-3). Examines the concepts and techniques of managing projects in service and manufacturing settings. Topics may include project selection and evaluation, dynamics, motivation and evaluation of team members, scheduling, budgeting and closure. Prerequisite: ACC 202, MIS 201 and MGT 301.

MGT 394 Special Topics in Management (3-0-3).

MGT 396 Independent Study in Management (3-0-3).

MGT 403 Entrepreneurship (3-0-3). Focuses on the creation of new ventures: the people, the process and the dynamics. Topics include identifying and evaluating opportunities, success and failure factors, attitudes and characteristics of entrepreneurs, stand-alone and internal corporate ventures, and local and global issues in entrepreneurship. Students can expect to develop a viable business plan in the course. Prerequisite: senior standing.

MGT 406 Business Policy and Strategy (3-0-3). Applies the functional knowledge acquired in previous coursework to the analysis of strategic-level business problems and decisions. Business cases are used extensively in this course to highlight the diversity and complexity of organizational environments and systems. Topics include: missions and objectives, environmental analysis, formulating, implementing and assessing strategies and policies, international, social and ethical issues. Prerequisite: business major senior standing.

MIS *Management Information Systems*

MIS 201 Fundamentals of Management Information Systems (3-0-3). Covers information as an organizational resource. Topics include: decision making frameworks, transaction processing systems, decision support systems, external information systems, office automation, competitive information systems and financial systems. A technology update is provided in hardware and software basics, database management and telecommunications. Prerequisite: BIS 201.

MIS 202 Advanced MIS (3-0-3). Addresses, in particular, emerging issues in management information systems, be they related to hardware, software, telecommunications, application philosophies or combinations of these. Prerequisite: MIS 201.

MIS 301 Fundamentals of Database Management (3-0-3). Addresses the beginning technical, business and application development issues associated with managing and using an organization's data resources. Employing ORACLE-SQL as the database language, the course coverage includes: issues involved in organizational data management, the fundamentals of database design, data modeling, entity relationships, recursion, normalization and the relational model. Prerequisite: MIS 201.

MIS 302 Advanced Database Management (3-0-3). Addresses advanced technical, business and application development issues associated with managing and using an organization's data resources. Employing PL/SQL and Oracle as the implementing technologies, the course coverage includes: PL/SQL, data architecture, data structure and storage, data processing architecture, hierarchical and network models, object - oriented database management systems, organizational memory technologies and managing organizational memory. Prerequisite: MIS 301.

MIS 303 Introduction to Systems Analysis (3-0-3). Traditional analysis, logical design through a data flow analysis and the system development life cycle approach. Methods for structured analysis and design are covered. Data structures, definitions and normalization are also addressed. Emphasis is on gaining an ability to use the various tools associated with systems analysis. Prerequisite: MIS 201.

MIS 394 Special Topics in Management Information Systems (3-0-3). MIS 396 Independent Study in Management Information Systems (3-0-3).

MIS 401 Business Data Communications (3-0-3). Deals with the fundamental concepts of data communications. The design and management of computer-based networks for business applications, hardware, software and security in business environments are discussed. The topics covered include business data requirements, transmission media, transmission techniques, multiplexing and data compression, WANs, LANs, data encoding and flow control, network protocols, electronic commerce and network security. Prerequisite: MIS 201.

MIS 402 Knowledge Management (3-0-3). Explores the theoretical foundation of knowledge and its value to the organization. The nature of intellectual capital and valuation of an organization's knowledge assets will also be examined. Prerequisite: MIS 201.

MIS 403 Applied Systems Design (3-0-3). Builds on previous courses and allows students to apply the tools studied in MIS 303. It follows the life cycle process to produce specifications for a current system, develop the physical design for the system and, to the extent possible, implement the system. The use of project teamwork is emphasized. Prerequisite: MIS 303.

MIS 404 Internet Business Applications (3-0-3). An overview course that examines how the Internet and the World Wide Web are used for marketing and business purposes. Students will study well-established US and UAE companies that have established a marketing presence on the Internet. Projects include building a web site to market a specific product and establishing a simulated business on the Internet. Prerequisite: MIS 201.

MKT *Marketing*

MKT 201 Fundamentals of Marketing (3-0-3). Introduces the concept of making marketing decisions in business and in non-profit organizations. Particular attention is devoted to analyzing customer needs; segmenting markets; and developing product, promotion, pricing and distribution strategies. Relationships between consumers, business and governments are explored. Prerequisite: ECO 201 and ECO 202 .

MKT 301 Consumer Behavior (3-0-3). Study of marketing, psychology, sociology and cultural anthropology to determine motivations for product purchases. A multimedia approach is used to illustrate the use of behavioral science theory to create new products and promotional campaigns. Prerequisite: MKT 201.

MKT 302 Marketing Research (3-0-3). Examines research tools students can use to aid them in making marketing decisions. Students learn to define research problems, to select projects and to analyze data. The execution of a consumer survey is a major component of the course. Students use computer statistical packages to analyze research data. Prerequisite: MKT 201 and QAN201.

MKT 303 E-Commerce (3-0-3). An overview course that examines how the Internet and the World Wide Web are used for marketing and business purposes. Students will study well-established US and UAE companies that have established a marketing presence on the Internet. Projects include building a web site to market a specific product and establishing a simulated business on the Internet. Prerequisite: MKT 201 and MIS 201.

MKT 304 Sales Management (3-0-3). An introduction to professional sales force management. This course is designed to develop student skills in planning a sales program, organizing the selling effort and in recruiting, training and motivating the sales force. Prerequisite: MKT 201.

MKT 305 Retailing Management (3-0-3). Explores the management of large and small retail institutions. Topics include buying, merchandising, pricing, promotion, inventory management, customer service, control, and location selection. Prerequisite: MKT201.

MKT 309 International Marketing (3-0-3). Provides a comprehensive understanding of the issues and challenges inherent in the formulation and implementation of international marketing strategies. This course examines and analyzes environmental forces affecting international marketing decisions; selection of international target markets, and the design and development of international marketing plans. Prerequisite: MKT 201.

MKT 394 Special Topics in Marketing (3-0-3).

MKT 396 Independent Study in Marketing (3-0-3).

MKT 401 Marketing Strategy (3-0-3). An analysis of current marketing management issues. Students develop a marketing plan for an outside organization, analyze case studies and participate in computer simulation exercises. Prerequisite: MKT 301, MKT 302 and MIS 201.

QAN *Quantitative Methods*

QAN 201 Introduction to Statistics (3-0-3). Descriptive statistics, probability distributions and estimation to include the use of statistical software. An applications oriented course that will prepare the student for more advanced study.

QAN 202 Quantitative Analysis for Decision Making (3-0-3). An applications-oriented course in a wide range of fields including: accounting, advertising, finance and real estate, general management, macroeconomics, microeconomics, marketing, human resources, production and operations management, public administration and quality control. Topics include but are not limited to: classical techniques of and hypothesis testing, non-parametric analysis, regression and correlation, decision theory and time series and forecasting. Prerequisite: QAN 201.

Graduate Courses in Business Administration

MBA *Master of Business Administration*

MBA 601 Managerial Economics (3-0-3). Application of economic theory to management problems, using basic economic tools and techniques of economic analysis to analyze decision-making problems faced in private businesses, government agencies and non-profit organizations.

MBA 602 Managing People and Organizations (3-0-3). Incorporating current management theory and research, the course looks into the factors that influence individual and group performance. Topics discussed range from individual attitudes and motivation to leadership, change, culture and organizational structure.

MBA 603 Accounting Concepts and Applications (3-0-3). Addresses the use of accounting as a management tool, including the strengths and limitations of accounting as an information system. Financial and managerial aspects of accounting with focuses on the underlying concepts of accounting, the role of accounting in management planning and control and the usefulness of accounting data for evaluating the results of operations and decision making.

MBA 604 Applied Managerial Statistics (3-0-3). The decision-aiding tools that can be applied by managers to gain insight into decision problems range from simple graphic displays of data to sophisticated statistical tests. Students use real-world data sets and PC- based software to describe sets of measurements, construct probability distributions, estimate numerical descriptive measures and build multiple regression models. Prerequisite: a college-level finite mathematics course is highly recommended.

MBA 605 Financial Management (3-0-3). Financial theory and techniques of analysis, including valuation theory, theories of risk measurement, managing a firm's investment decisions and capital structure, sources of financing for a firm, and financial planning and analysis. Prerequisite: MBA 601, MBA 603.

MBA 606 Management Information Systems (3-0-3). The theoretical, technological, practical and managerial foundations of management information systems. Includes: information technologies, systems development, the impact of information systems on business organizations, information technology as a competitive tool, and the management of information systems within domestic and multinational corporations. Introduces students to current systems and software.

MBA 610 Business Research Applications (3-0-3). Introduces the student to the basic tools of business research by explaining various research methodologies and techniques. Numerous illustrations, portraying actual research in management, marketing, finance, accounting and other areas of business, show how to perform the research function. Prerequisite: MBA 604.

MBA 611 Advanced Financial Management (3-0-3). This course examines, at an intermediate level, the problems of managing short-term assets including cash, marketable securities, accounts receivable and inventory, managing the acquisition and disposal of long-term assets, and financing decisions including leverage, leasing, mergers and international issues. Students become familiar with both the basic theories in each of these areas and various strategies for integrating the theory with practice. Prerequisite: MBA 603 and MBA 605.

MBA 612 Leadership and Change (3-0-3). The role of leadership is investigated in the context of global change. Particular attention is given to leadership issues as they pertain to organizational development, culture and the dynamics of change.

MBA 613 Accounting for Management (3-0-3). The role of accounting information in facilitating the functions of management. Topics covered are decision-making, planning, performance evaluation, budgeting, cost control and international transfer prices. Prerequisite MBA 603.

MBA 614 Marketing Management (3-0-3). An introduction to current marketing management techniques and the tools necessary for effective marketing decision-making. Provides global perspectives on marketing management and international marketing issues. Interactive learning techniques include the case method and active class participation. Issues including ethics, minorities and the ecological environment are incorporated. Course content requires familiarity with microeconomics theory, basic concepts of accounting and Quattro-Pro (or a similar spreadsheet program).

MBA 615 Innovation and Entrepreneurship (3-0-3). The practices and techniques used to stimulate and sustain innovation and the entrepreneurial spirit are considered. The process of new venture formation and the issues involved are examined in both the contexts of existing

firms and free-standing new ventures. Prerequisite: MBA 602, MBA 605 and MBA 614.

MBA 616 Electronic Commerce (3-0-3). Electronic commerce is the conduct of intra-organizational transactions, messages and inquiries through purely electronic means, as opposed to paper and/or voice. This course presents a survey of consumer and business-to-business electronic commerce models, systems and technical solutions. Includes hands-on projects and assignments. Prerequisite MBA 606.

MBA 617 Ethics and Legal Issues (3-0-3). An intensive introduction to the legal and ethical issues confronting the global business manager. This course addresses the legal system, legal processes and several areas of substantive commercial law relevant to the business manager. In addition, it discusses the developing recognition of legal and ethical issues, and their managerial implications. Examines product liability, the administrative legal process of regulation, antitrust and the contract as the fundamental legal instrument of global commercial relations.

MBA 618 Strategic Management in a Global Environment (3-0-3). Focuses on developing and applying strategic management to successfully position organizations in a competitive global environment. Course is integrated with previous course experiences to hone decision-making, analysis, and oral and written communication skills. Students work in small teams to analyze a real company's external environment, perform an internal corporate audit and build detailed action plans including implementation issues and financial forecasting. Prerequisite: MBA 612.

MBA 619 Capstone: A Diagnostic Practicum (3-03). A capstone activity course that develops diagnostic skills and the ability to apply management concepts and theories to concrete, real life situations. Participants working with a faculty advisor, define, research, examine, and analyze a business problem in their own unit, and present a written and oral report of the project. The oral presentations provide feedback from other participants, faculty, and invited guests who might act as consultants to the class. Prerequisites: Enrolled in final semester of program.

EMB *Executive Master of Business Administration*

EMB 70l Economic Analysis in an Interdependent Environment (3-0-3). Presents basic tools used for market analysis and managerial decision making, including the behavior of firms and consumers, and the analysis of pricing policies. Emphasis is placed on economic applications in the financial, industrial, and service sectors. The course also examines the underlying forces that contribute to the present economic climate in the domestic and global arenas.

EMB 702 Theories of Management and Organizational Behavior (3-0-3). This course focuses on current organizational issues that have a direct impact on management in various industries. The emphasis is on human development issues and the development of effective work elements, as well as the personnel concerns that must be resolved for successful leadership. Topics cover organizational structure and design, leadership, motivation, organizational development, ethics, and social responsibility of business.

EMB 703 Financial Management 1 (Accounting) (3-0-3). Covers financial and managerial accounting concepts and models. The course focuses on the use of accounting to support human resource management, financing policy and management, financial disclosure, valuation of resource allocation, planning, capital management, production, costing, marketing, control, and performance evaluation decisions.

EMB 704 Information Systems Strategy (3-0-3). The objective of this course is to give the student knowledge about the way organizations use information systems to improve their own operations, to improve decision making, knowledge utilization and communication, and/or to add value to their products and services. The issues that will be addressed are: Identifying opportunities where IT can make a difference for a firm; the role of information systems in a firm's corporate strategy; information technology architecture; measuring the benefits/value of investments in information systems; electronic commerce; how information systems impact organizations and individuals; how organizations can use information technology to add value to their products and services; the ethical, social and organizational issues raised by information systems.

EMB 705 Marketing Management (3-0-3). This course centers on the marketing concepts and its impact on strategic decision- making processes. A study of the functions and basic concepts of marketing goods and services is presented. Product, pricing, promotion, and distribution decisions are major topics. Emphasis is on the application of the strategic marketing process in the turbulent global business environment. Other topics include demand measurement, market segmentation, buyer behavior, and global marketing strategies.

EMB 706 Financial Management 2 (Finance) (3-0-3). A study of the theoretical and practical approaches to effective financial management. Planning, analyzing and controlling investment, and short and long term financing are examined for decision-making purposes. Emphasis is placed on the application of these methods in the aviation-related industries. Topics include, but are not limited to, capital budgeting, risk and diversification, asset liability management, airport financing, aircraft financing, and international finance. (prerequisites: Financial Management 1).

EMB 710 Analytical Methods (3-0-3). This course utilizes descriptive and inferential analytical techniques for business applications. Topics include estimation of quantitative and qualitative population parameters, hypothesis testing, Analysis of Variance, Chi-Square, simple and multiple linear correlation and regression analysis and linear programming..

EMB 711 Corporate Finance (3-0-3). This course covers the theory and practice of financial management of firms. Techniques of capital budgeting under certainty and uncertainty are presented. Valuation of projects is emphasized Other topics include theory of capital structure; cost of capital; mergers and acquisitions, etc.

EMB 7l2 Management in the International Environment (3-0-3). This covers topics in international management including cross-cultural issues that are evaluated from the perspective of interpersonal relationship in a diverse domestic and foreign environment, and in the context of evolving global trends. Managing workforce diversity is examined from culture-based and comparative perspectives. A critical review of the trends and issues. challenging the corporate manager in a global environment will be undertaken.

EMB 713 Investment Analysis (3-0-3). The courses examines the role and functioning of securities market, security valuation techniques, and the theory and practice of portfolio management. The management of an actual portfolio of investments is one of the main features of this course.

EMB 714 Advanced Systems Strategy and Implementation (3-0-3). This is an integrative study of the functions and responsibilities of top management and the strategies that affect the character and success of companies, especially those operating in a developing economy. The course, conducted by case study and assigned readings related to

various industries, is problem oriented to develop the viewpoint of top management charged with responsibility for the enterprise as a whole.

EMB 715 Entrepreneurship (3-0-3). Participants study how to identify and evaluate entrepreneurial and entrepreneurial opportunities in the inner and outer environments and in a global context. Applications cover the creation and management of stand-alone ventures and those developed within corporations. Various simulation and case study techniques are employed to provide the student with an entrepreneurial environment.

EMB 716 E-Commerce (3-0-3). An overview course that examines how the internet and the world wide web (WWW) are used for marketing and business purposes. Students will study well established US and UAE companies that have established a marketing presence on the internet. Projects include building a web site to market a specific product and establishing a simulated business on the Internet.

EMB 717 Corporate Communication Strategy (3-0-3). This course focuses on written and oral communication aspects of the participants. Emphasis is placed on the use of technology in business communication. Topics include effective business writing, presentation, listening, and negotiating skills. Stressed will be the study and practice of advanced techniques of argumentative writing.

EMB 718 Strategic Management (3-0-3). Integration of knowledge in functional areas of business and in the simulation of management experiences. Various methods of simulating a management environment are employed, including live case studies from a number of industries and computerized management problems. Topics covered are SWOT analysis, goal-setting, planning systems, and organizational control.

EMB 719 Capstone: A Diagnostic Practicum (3-0-3). A capstone activity course that develops diagnostic skills and the ability to apply management concepts and theories to concrete, real life situations. Participants, working with a faculty advisor, define, research, examine, and analyze a business problem in their own unit, and present a written and oral report of the project The oral presentations provide feedback from other participants, faculty, and invited guests who might act as consultants to the class.

School of Engineering

CHE *Chemical Engineering*

CHE 203 Principles of Chemical Engineering (2-4-4). Introduction to the analysis of chemical process systems using mass conservation equations, stoichiometry, and steady scale calculations. Process flow sheets. Ideal and real gas relationships. Steady state energy balances with and without chemical reactions. Heat of solution and mixing. Humidity charts. Simultaneous material and energy balances. Unsteady state material and energy balances. Prerequisite: CHM 101.

CHE 204 Chemical Engineering Thermodynamics I (2-2-3). Terms and definitions. First and second laws of thermodynamics. Reversibility and absolute zero of temperature. Ideal cycles and processes. Definitions and use of internal energy, enthalpy, entropy and free energy. Maxwell relations. Prerequisite: PHY 101, CHM 102.

CHE 215 Fluid Flow (2-2-3). Introductory concepts of fluid mechanics and fluid statics. Fluid properties. Basic equations of fluid flow. Flow measurements. Flow of fluids in pipes and other shapes. Velocity distribution. Laminar and turbulent flow. Dimensional analysis. Co-requisite: MTH 205.

CHE 304 Chemical Engineering Thermodynamics II (2-2-3). Fugacity and Fugacity coefficients. Gibbs-Duhem equation. Ideal and non-ideal solutions. Phase and chemical equilibria. Thermodynamic consistency of vapor-liquid equilibrium data. Standard and excess free energies. Excess mixture properties. Equilibrium constants for gas and liquid phase reactions. Prerequisite: CHE 204.

CHE 307 Heat Transfer (2-2-3). Mechanisms of heat transfer. Conduction in various geometries, transient conduction. Forced and natural convection. Radiation. Analysis of heat exchangers. Prerequisite: CHE 215.

CHE 321 Chemical Reaction Engineering (2-2-3). Chemical reaction kinetics. Interpretation of experimental rate data. Design of batch and continuous reactors. Effect of temperature and pressure. Heterogeneous catalysis. Prerequisite: CHM 331, CHE 215.

CHE 329 Mass Transfer I (2-2-3). Mechanisms of mass transfer. Laws of diffusion. Mass transfer coefficients. Theories of mass transfer. Application of thermodynamics and transport concepts to the design of continuous contact and staged mass transfer processes. Absorption. Drying. Prerequisite: CHE 215, CHE 307.

CHE 330 Simulation Techniques in Chemical Engineering (2-2-3). Illustration of solving Chemical Engineering problems in fluid, heat and mass transfer by using a variety of mathematical tools including analytical and numerical approaches. Fourier series, Laplace and z transforms. Computer simulations in chemical process design. Prerequisite: MTH 205, CHE 205.

CHE 332 Engineering Economy (1-2-2). Interest rates, preset value, future value, and depreciation. Economic life, financing business ventures, financial statement analysis. Replacement of capital assets. Alternative investment. Development of spread sheet programs for project evaluations.

CHE 421 Chemical Process Dynamics and Control (2-2-3). Principles of process dynamics and control in chemical engineering applications. Transfer functions, block diagram, input disturbance. Frequency response and stability criteria. Single and multi-loops. P, PI and PID controllers. Digital control. Prerequisite: CHE 329.

CHE 429 Mass Transfer II (2-2-3). Application of mass transfer principles to the design of multi-stage systems and countercurrent differential contacting operations. Distillation. Extraction. Membrane separation. Prerequisite: CHE321, CHE 329.

CHE 451 Chemical Engineering Laboratory I (0-4-1.5). Hands on chemical engineering experiments illustrating the application of chemical engineering principles and calculations. Fluid flow, heat exchangers, drying, absorption, kinetics of chemical reactors, process control experiment and chemical pumps. Prerequisite: CHE 307, CHE 329.

CHE 452 Chemical Engineering Laboratory II (0-4-1.5). An extension of CHE 451. Preparation of detailed experiment reports and oral presentations. Experiments include ; Distillation, Extraction, Membrane separation, Filtration, Diffusion, process control experiment and Evaporation. Prerequisite: CHE 451.

CHE 460 Wastewater Treatment (2-2-3). Characteristics of wastewater, BOD, COD, THOD. Treatment by physical, chemical and biological processes. Activated sludge and effluent disposal. Local and State regulations. Industrial applications. Prerequisite: CHM 101, CHE 329.

CHE 461 Air Pollution (2-2-3). Environmental pollution, acid gas removal, Sulfur Oxides, Nitrogen Oxides and Carbon gases removal. Removal of volatile organic compounds. Design of main process equipment and control devices. Aerosols. Prerequisite: CHM 101, CHE 329.

CHE 462 Chemical Process Safety (2-2-3). Applications of engineering principles to process safety and hazards analysis, mitigation and prevention with emphasis on the chemical process industries. Hazards identification, risk analysis, accident investigations. Prerequisite: CHE 321.

CHE 463 Process Synthesis, Simulation and Optimization (2-2-3). Advanced techniques in process design and synthesis. Systematic methods in process optimization and cost reduction. Process integration and energy optimization. Modeling applications. Prerequisite: CHE 490.

CHE 464 Membrane Separation (2-2-3). Definition and classification of membranes. Permeation and diffusion. Mechanism of membrane transport. Equilibrium relationships. Separation in the liquid phase. Engineering aspects of membrane separation. Prerequisite: CHE 329.

CHE 465 Desalination (2-2-3). Principles of desalination. Evaporation, Vapor compression desalination, membrane technology and ion exchange. Seawater chemistry. Scale formation in separation equipment. Dual-purpose power desalination co-generation plants. Prerequisite: CHE 329.

CHE 490 Chemical System Design I (2-2-3). Application and integration of material from other chemical engineering courses to the design of plants and processes representative of the chemical and related process industries. Layout and cost estimation. Prerequisite: CHE 321, CHE 329.

CHE 491 Chemical Systems Design II (0-6-3). A supervised project of defined chemical engineering significance. Work includes data collection, analysis, calculations, design and presentation of the work in a detailed technical report. Student must present and defend her/his work in an oral presentation. Prerequisite: CHE 490.

CHE 494 Selected Topics in Chemical Engineering (3-0-3) Selected topics of current interests and recent trends in the field of Chemical Engineering. Prerequisite: consent of instructor.

CHE 496 Independent Study (1 to-3credit hours). Students may select problems of particular interest in some areas of theoretical or practical chemical engineering. Students are encouraged to do creative work on their own under supervision of a faculty member. Prerequisite: approval of supervisor.

COE *Computer Engineering*

COE 210 Introduction to Computing I (2-3-3). Overview of computer architecture and programming languages. Elements of a C program. Statements and expressions. Formatting and data types. Top-down design approach. Modular programming. Relational and logical operators. Selection structures. Repetition and loop statements. Declaration and initializations of arrays and strings. Recursion. Pointers and function arguments. Structures. Introduction to UNIX. UNIX C compiler. Prerequisite: MTH 103.

COE 211 Introduction to Computing II (3-0-3). Builds programming skills with an emphasis on disciplined program and coding. Introductiion to onject-based programming concepts including class design and implementation. Programming in C++ and Java. Prerequisite: COE 210.

COE 221 Digital Systems (3-3-4). Number systems. Representation of information. Introduction to Boolean algebra. Combinational circuits analysis and design. Sequential circuits analysis and design. Sequential circuits analysis and design. Co-requisite: ELE 211.

COE 222 Computational Methods in Electrical and Computer Engineering (3-3-4). Design and analysis of programs in C. Computing using structured programming concepts. Numerical errors. Curve fitting. Linear systems of algebraic equations. Numerical solutions of differential equations. Optimizations techniques. Search methods. Applications to electrical and computer engineering. Prerequisite: MTH 205.

COE 311 Data Structures (3-0-3). Design, implementation and run-time of important data structures and algorithms. The data structures, considered include sorted arrays, linked lists, trees and hash tables. An approach based on abstract data types will be emphasized. Programming assignments in C++. Prerequisite: COE 211.

COE 331 Microprocessors (3-3-4). Hardware and Software model of microprocessors; Programming of microprocessors. Memory systems, Memory interface and Memory Access (DMA). Input/output programming and interface. Design of microprocessors-based systems. Prerequisite: COE 221.

COE 332 Embedded Systems (3-0-3). Micro-controllers hardware architectures and software models, instruction sets and programming. EPROM, EEPROM, Inputs/Outputs, ADC/DAC Interface and Programming, timer systems and interrupts, embedded systems building blocks, design and test. Introduction to DSP hardware architecture, software model and instruction set. Class projects. Prerequisite: COE 331.

COE 370 Data Communications (3-0-3). Basic concepts on communications and information, signal characteristics and frequency representation, transmission media, data encoding, serial and parallel interfaces, asynchronous and synchronous protocols, voice band modems and digital modulation schemes, multiple access techniques, data link protocols (HDLC), circuit switching and packet switching, introduction to wide area networks (WANs) and local area networks (LANs), the Internet. Prerequisite: ELE 212 and MTH 221.

COE 371 Computer Networks I (3-3-4). Network classifications, architecture and topologies. Layered reference models. Functional description of layers. Switching and routing. Network protocols. Network control: traffic management and congestion. Examples of networks such as the Internet. Prerequisite: COE 370.

COE 381 Operating Systems (3-0-3). Introduction to operating systems. Process management, process scheduling; inter-process communication. Memory management techniques. Virtual memory; 1/0 management; deadlock avoidance; file system design. Security issues. Examples from commonly-used operating systems (e.g. Windows and UNIX). Co-requisite: COE 331.

COE 411 Computer Architecture and Organization (3-0-3). Introduction and historical overview. The five classic components of a computer. Performance measures for computers. CPU description at the instruction level. CPU organization. CPU types. CPU design: register transfer language, hardwired and micro-program control, CISC and RISC processors. Instruction and hardware study of a commercial microprocessor. Prerequisite: COE 331.

COE 420 Software Engineering I (3-0-3). An introduction to the basic principles and practices of software engineering. Emphasis will be placed on programming language support for software engineering principles, especially techniques for data abstraction, code reusability and "programming in the large". Other topics include software life cycle models; general design, implementation, and testing issues; specification and design methodologies; and model-based approaches to software design. Prerequisite: COE 311.

COE 421 Software Engineering II (3-0-3). This course will focus on the application of principles, tools and methods taught in COE 420, Software Engineering I. Students work in teams to develop a software system, following a process similar to an industry experience. Prerequisite: COE 420.

COE 422 Database Systems (3-0-3). An introduction to the basic principles of database management systems. Data models; hierarchical, network and relational; query languages; physical representation of data in secondary storage. Prerequisite: COE 211.

COE 423 Computer Networks II (3-0-3). Latest developments in computer networking and communications are covered in this course. Prerequisite: COE 371.

COE 424 Design of Digital Computers (3-0-3). Design of arithmetic units. Design of hardwired and micro-programmed control units. Design of semiconductor memories. Direct memory access circuits. Design of a small computer. Prerequisite: COE 331.

COE 425 Modern Computer Organization (3-0-3). Memory organization: memory hierarchy, cache memory, virtual memory and memory management. Pipelining: pipeline hazards. Multiple functional units. Superscalar and vector processors. Parallel processing: SIMD Computer - MIMD computers - MIMD classification. Interconnection networks, interprocessor arbitration, interprocessor communication. Software for multiprocessors - commercial computer design examples. Design project. Prerequisite: COE 411.

COE 427 Internet Computing (3-0-3). This course introduces the student to the underlying infrastructure of the Internet and

the WWW. Topics include: Internet protocols, routing and Internet and Web-based non-trivial applications. Prerequisite: COE 371.

COE 428 VLSI Design (3-0-3). Exposes students to digital VLSI design and simulation tools with simple examples. Use of commercial state-of-the-art industrial CAD/CAE tools. Prerequisite: COE 221 and ELE 241.

COE 429 Computer Graphics (3-0-3). Hardware and software aspects of graphics generation. Programming assignments will provide practical experience in implementing and using standard graphic primitives and user interfaces. Prerequisite: COE 210.

COE 431 Computer Applications in Industry (3-0-3). Microprocessor-based data acquisition and control. Computer process control. Programmable logic controllers. Computer aided design. Class Project. Prerequisite: COE 331.

COE 432 Design and Analysis of Algorithms (3-0-3). Builds upon existing skills in the mathematical analysis of algorithm complexity, including lower bounds, worst-case and average-case behavior. General techniques in algorithm design (such as divide and conquer, greedy and dynamic programming approaches) in the context of problem domains like graph, sorting and optimization problems. Introduction to the topic of NP-complete problems. Prerequisite: COE 311.

COE 433 Distributed Systems Design (3-0-3). Principles of distributed systems, their communication and synchronization structures, and special issues related to distributed control such as election and mutual exclusion, clock synchronization, Byzantine agreement, distributed routing and termination. Prerequisite: COE 411.

COE 434 Mobile Computing (3-0-3). This course introduces the student to the challenging field of mobile computing. Topics include: Location management, routing in ad hoc wireless network, file systems issues and caching strategies. Prerequisite: COE 411 and COE 371.

COE 490 Design Project I (0-3-1). Introduces design methodology in computer engineering through lectures and an open-ended, in-depth design project of significance in computer engineering. The project includes the design of a system process or component to achieve the functional objectives representative of problems encountered by practicing computer engineers. Students will work in teams to define, complete, validate and document their design project. They will work in close accord with one or more faculty members. The course emphasizes engineering ethics and communication skills. Prerequisite: senior standing.

COE 491 Design Project II (0-6-2). Continuation of COE 490. Prerequisite: COE 490.

COE 494 Selected Topics in Computer Engineering (3-0-3). Selected topics in the field of Computer Software and Hardware Engineering that deal with new trends and practical issues. Prerequisite: Permission of instructor.

COE 496 Independent Study (1-3 Credit hours). Study of topics relating to the special needs and interests of individual students. Prerequisite: Permission of instructor.

CVE *Civil Engineering*

CVE 201 Civil Engineering Lab I (0-3-1). Techniques of engineering measurements and laboratory experimentation and recording. Calibration principles. Introduction to experiment data acquisition, processing, analysis and simulation. Laboratory use of testing automation and electronic instrumentation for testing isotrpoic and anisotropic materials. Materials include: wood, selected ductile and brittle metals and hardened concrete. Tension tests on ductile and brittle materials. Compression tests. Illustration of strain hardening, creep, fatigue and relaxation. Hardness and impact tests. Deflection of beams, frames and trusses. Characteristics of stress-strain diagrams. Evaluation of materials constants. Experiments include data analysis, evaluation and presentation.

CVE 210 Introduction to Civil Engineering (1-3-2). Manual and computer-aided drawing and design. Prerequisite: NGN 111.
CVE 221 Materials of Construction and Quality Control (2-3-3). Physical and mechanical properties of construction materials; aggregate, Portland cement, concrete, bituminous materials and paving mixtures used in construction and maintenance of roads and pavements. Proportioning of concrete mixtures including admixtures. Concrete trial mixes on construction site. Concrete curing methods. Design of paving mixtures. Production, specifications, tests and quality control of local construction materials. Wood, ferrous and non-ferrous metals, glass, plastics and masonry units. Fiber reinforced concrete. Prerequisite: NGN 231.

CVE 231 Engineering/Environmental Geology (2-3-3). Basic principles of physical geology pertinent to environmental and civil engineering. Identification of minerals. Origin and types of rocks and sediments. Weathering. Land forms. Geologic structure. Air photos and geologic maps. Effects of geologic features and processes on constructed facilities planning and design. Earth systems and cycles, earth structure and materials. Hazardous geologic processes. Earth resources: minerals, soil, water, energy alternatives. Human impact on the environment: waste disposal, contaminants in the geologic environment, atmospheric change. Physical and engineering properties of rocks. Laboratory work on basic geologic identification and mapping techniques. Field trips and applications projects.

CVE 241 . Elementary Surveying (2-3-3). Introduction to geodetic positions, coordinate systems, datum, basic measurement procedures, and use of surveying instruments. Principles and practice in measuring distance, elevation, and angels. Leveling, traverse, and earth work computations. Introduction to GPS and GIS. Prerequisite: MTH 104.
CVE 242 Field Plane Surveying (0,3,1). Fundamental principles of surveying, basic measuring procedures and use of surveying instruments, basic data analysis and evaluation. Prerequisite: CVE 241.

CVE 272/ARC 242 Structural Principles: Statics and Strength of Materials (2-3-3). Introduction to the graphic and mathematical description of structural behavior, as well as to the structural properties of the various materials used in typical architectural construction. Includes discussion of material quality and performance within the context of international standards (DIN, ISO, etc.). Taught in Department of Civil Engineering. Prerequisite: PHY 104.

CVE 301 Theory of Structures (2-2-3). 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. Analysis of statically indeterminate structures including continuous beams and frames using the following: consistent displacement, virtual work and energy, three-moment equation, slope deflection and moment distribution methods. Use of commercial software for structural analysis. Prerequisite: NGN 223.

CVE 302 Construction Materials Lab (0-3-1). Application of basic measurement techniques and instrumentation to the experimental investigation of construction materials: aggregate, bitumen, pavement materials, asphalt mixes, cement, concrete materials, concrete mixes. Written reports

covering the planning, execution, results and conclusions of the investigation. Emphasis on teamwork. Co-requisite: CVE 221.

CVE 303 Geotechnical Engineering Lab (0-3-1). Experiments in fluid and soil mechanics. Laboratory experiments to explore fluids and geotechnical test equipment and techniques. Applications of testing principles to the measurement of fundamental aspects of soil behavior from classification to engineering properties. Emphasis on rigorous techniques to measure mechanical behavior under various boundary conditions. Exposure to error estimation. Laboratory studies utilizing standard test methods and equipment to assess physical, mechanical, chemical and hydraulic properties of fluids and soils for application in civil engineering design. Laboratory measurements of fluid static and dynamic properties and flow visualization. Co-requisite: CVE 331.

CVE 311 Reinforced Concrete Design (2-2-3). Loads on structures. Design criteria and factors of safety. Analysis and design of reinforced concrete beams, short columns, one-way slabs, and footings using ultimate strength method. Bond development of reinforcement. Design project and use of computer software. Prerequisite: CVE 301.

CVE 312 Structural Steel Design (2-2-3). Loads on structures. Design criteria and philosophies. Analysis and design of structural steel elements found in buildings and bridges including tension members, compression members, beams, columns, beam columns and connections. Prerequisite: CVE 301

CVE 321 Numerical Methods and Computer Applications in Civil Engineering (2-2-3). Introduction to numerical analysis. Application of computers to solution of civil engineering problems using various numerical methods. Foundation subjects in modern software development techniques for numerical algorithms. Mathematical modelling. Basic problem solving techniques using computational methods. Numerical solution of non-linear equations. Solution to systems of algebraic, non-linear and differential equations. Numerical differentiation and integration. Object-oriented software design, data structures, sorting and searching algorithms. Finite difference method. Introduction to finite element method. Case studies. Prerequisite: MTH 205..

CVE 322 Civil Engineering Cost Analysis (2-0-2). Analysis of civil engineering proposals, utilizing time-value and related factors. Feasibility and optimum life comparisons. Utility rate derivation, utility/cost method. Prerequisite: NGN 111.

CVE 331 Geotechnical Engineering Principles (2-3-3). Physical properties of soils, classification systems, soil structure and soil water systems, effective stress principle, stresses in soil due to applied loads. Compressibility, consolidation and swell. Permeability and seepage analysis. Soil compaction. Stress-strain-shear strength relationships of soils, failure criteria and direct and triaxial shear testing. Soils used in construction. Prerequisite: NGN 223 and CVE 231.

CVE 333 Geotechnical Engineering Design (2-3-3). Subsurface exploration and site investigation and evaluation. Bearing capacity of shallow foundations in different types of soils, settlement analysis: consolidation and immediate. Design of shallow foundations including: footings and raftings and pile caps. End bearing and friction of deep (piles and caissons) foundations. Settlement of piles. Introduction to design of piles. Dewatering and ground water control. Introduction to soil dynamics and machine foundations. Extensive use of computer aided design in team-projects. Prerequisite: CVE 331.

CVE 341 Hydraulic Engineering (2-2-3). Review of basic conservation principles of continuity, energy and momentum. Similitude and hydraulic models. Incompressible flow in pipes. Fluid dynamic drag. Analysis and design of hydraulic projects using modern computational procedures. Team projects involving steady and unsteady flow in pipelines and pipe networks, open channel and pipe network hydraulics, water supply canals and bridge and culvert hydraulics. Collection and distribution of water; pumps and pumping stations. Design of water supply distribution network; design of water supply in buildings. Introduction to ground water hydraulics. Prerequisite: NGN 241.

CVE 342 Fluid Dynamics Laboratory (0-3-1). Introduction to laboratory techniques, calibration principles, reports and fluid measurements; determination of fluid properties; visualization of types of flow; experiments in closed conduit flow of air, water and oil; fluid drag and turbomachinery tests; open channel and gravity wave demonstrations. Prerequiste: CVE 341

CVE 351 Water and Wastewater Treatment (2-2-3). Quantity and quality of water and sewage; chemical, physical and biological processes that affect materials in engineered and natural systems; water quality modeling; water and wastewater treatment; sewerage systems; flow in sewers; sewage disposal. Design of sanitary and storm sewers; theory of wastewater treatment processes; design of unit operations; on-site wastewater treatment; waste stabilization ponds, water re-use; industrial wastewater. Design of intake works. Solid and hazardous waste disposal; air quality. Theory of water treatment processes; design of water treatment units. Treatment of sea and brackish water. Prerequisite: CHM 101, Co-requisite: CVE 341.

CVE 360 Urban Transportation Planning (2-2-3). Urban transportation systems planning techniques: data collection, trip generation, trip distribution, factors underlying the choice of mode, traffic assignment, modeling and evaluation techniques, use of planning software packages, development of alternatives, and evaluation of civil engineering projects. Prerequisite: NGN 111 (or Statistics Course).

CVE 361 Transportation Engineering (2-2-3). Highway functions. Principles and methods in planning, design and operation systems. Driver and vehicle performance capabilities. Highway classifications. Highway geometric design controls and criteria. Location studies. Design of highway cross-section, horizontal and vertical alignments. Design of at-grade intersections, grade separation and interchanges. Highway drainage elements. Flexible and rigid pavement design principles. Introduction to traffic analysis and transportation planning. Prerequisite: CVE 241, Co-requisite: CVE 331.

CVE 363 Highway Design (2-2-3). Driver and vehicle characteristics, stopping and passing sight distances, cross section elements, vertical and horizontal alignment, intersections and interchanges, surface drainage, types of pavements, and principles, theoretical concepts, and design of flexible and rigid pavements. Prerequisite: CVE 241 and CVE 360.

CVE 371/ARC 343 Structural Analysis: Conceiving Forces in Buildings (2-3-3). An introduction to the concepts and procedures used to analyze and predict the behavior of buildings in response to static and dynamic loads on the structure. Extensive use of the computer and appropriate software to model, analyze, simulate and animate structural behavior. Taught in Department of Civil Engineering. Prerequisite: CVE 272/ARC 242.

CVE 372/ARC 344 Structural Design: Concrete, Steel and Wood (2-3-3). An introduction to methods and concepts used by the structural engineer in the design of reinforced concrete buildings. Structural

design is presented as a search for strategies appropriate to realize architectural form, synthesizing the structural imperatives of regularity and rationality with specific desires for formal relationships and environmental qualities. Taught in Department of Civil Engineering. Prerequisite: CVE 371/ARC 343.

CVE 401 Environmental Engineering Lab (0-3-1). Experiments in environmental engineering and surface and ground water hydrology. Laboratory work: sampling, physical, chemical and bacteriological analysis of water and wastewater. Laboratory sessions utilizing standard test methods and equipment for measurement of important environment parameters. Sampling methods and data presentation. Experiments in water surface run off and subsurface infiltration and flow, experiments in closed conduit, open channel tests. Co-requisite: CVE 351.

CVE 410 Computer Methods in Structural Analysis (2-2-3). Introduction to Linear Algebra, Virtual Work Method, Stiffness and Flexibility Methods, Matrix formulation of the stiffness and Flexibility Methods, Direct Stiffness Method. Wind and Earthquake Loading in Tall Buildings. Introduction to Finite Element Method. Computer analysis of 2-D and 3-D Framed Structures and High Rise Buildings. Emphasis on team-based learning through specific design projects. Prerequisite: CVE 301

CVE 411 Structural Concrete Design (2-2-3). Introduction to flooring and structural systems. Design of reinforced concrete members including: two-way floor systems, beams for torsion, slender columns, combined footings and shear walls. Introduction to prestressed concrete, prestress materials and losses and design of prestressed beams. Computer analysis and design of structures. Emphasis on team-based learning through specific design projects. Prerequisite: CVE 311.

CVE 412 Finite Element Method (2-2-3). Basic principles of continuum mechanics. Formulation of finite element methods for analysis of problems in solids, structures, fluid mechanics and heat transfer. Conservation laws and variational principles. Kinematics of deformations, strain and stress measures, constitutive relations. Elastic, in-elastic and plastic deformations of solids. Field equations. Discretization of governing equations using finite element methods. Solutions of selected boundary value problems. Computer coding techniques and use of an existing general purpose finite element analysis program. Prerequisite: CVE 301 and CVE 321 or consent of instructor.

CVE 413 Design of Bridges (2-2-3). Design of Highway Bridges: History, classification, and aesthetics of bridge structures; design philosophy; loading, girder distribution factors, and load combinations; design of concrete deck slab and reinforced concrete box girders; design of noncomposite steel beams and composite steel girders; fatigue considerations; design of prestressed concrete girders; design piers, bearings and abutments. Prerequisite: CVE 311 and CVE 312

CVE 434 Structural Steel Design (2-2-3). Design of structural steel elements found in buildings and bridges including tension, compression and flexural members; members under combined axial and bending stresses, plate girders, slender columns; column base plate, bolted and riveted connections, welded connections, built-up members, connections in buildings, design for shear, composite beams, and tubular members. Design of roof trusses, space framed structures, and steel girder and cable stayed bridges. Introduction to plastic design. Prerequisite: CVE 311.

CVE 437 Advanced Concrete Technology (2-3-3). Design of special concrete mixes, curing methods, admixtures, fiber-reinforced concrete, polymer concrete. Hot and cold weather concrete. Concrete construction in hot weather with special reference to the Middle East. Design of concrete mixes based on experience with local construction materials. Concrete deterioration and durability aspects. Maintenance and repair materials and methods. Ready mixed concrete. Precast concrete. Concrete production and quality control. High performance concrete materials and their use in innovative design solutions. Prerequisite: CVE 221 and CVE 302.

CVE 441 Advanced Soil Mechanics (2-3-3). Stress-strain and strength properties of dry and saturated cohesionless and clayey soils. Basic shear strength principles. Loading induced pore pressure and its influence on strength and compressibility. Stress path concept. Drained and undrained loading. Classes of stability problems. Effective and total stress analysis procedures. Factors affecting shear strength parameters. Lateral earth pressure theories and methods of slope stability analysis. Secondary consolidation. Undrained settlement. Engineering properties of compacted soils. Analysis of earth retaining structures and slope stability under drained and undrained conditions. Prerequisite: CVE 303 and CVE 331.

CVE 442 Advanced Foundation Engineering (2-3-3). Site investigation with emphasis on in-situ testing. Computer-aided profile data reduction and recording. Interpretation of field and laboratory data. Design of retaining structures, earth structures, braced cut excavations, sheet-pile walls, reinforced earth structures and deep foundations including: drilled piers, drive piles, caissons and shafts. Pile load test. Piles subjected to lateral loading. Offshoring. Design of staged construction embankments. Emphasis on design of locally used geotechnical structures. Problematic soil and ground improvement. Extensive use of computer aided design in team-projects. Prerequisite: CVE 333.

CVE 445 Environmental Geotechnology (2-3-3). Definition of hazardous waste. Waste characteristics. Geotechnical aspects of hazardous waste management and remediation. Geochemistry and contaminant transport. Characterization and remediation of contaminated sites. Site investigation techniques and remediation technologies. Monitoring requirements. Design and operation of land-based waste containment structures, landfills, impoundments and mine-waste disposal. Prerequisite: CHM 101, CVE 303 and CVE 331.

CVE 446 Geotechnical Dam Engineering (2-3-3). Regional geoscience and seismotectonic investigations. Related subsurface exploration programs. In-situ permeability testing. Seepage in composite sections, anisotropic and multi-layered materials. Flow through earth dams. Methods of stability analysis of soils and rocks slopes. Design of dam foundations. Foundation treatment. Grouting in the ground. Introduction to earthquake analysis and design of earth and rockfill dams. Special considerations: liquefaction problems, sinkholes, land subsidence, foundation defects and dispersive soils. Compaction methods. Monitoring and staged construction. Case studies. Computer aided design projects. Co- requisite: CVE 333.

CVE 447 Irrigation and Drainage Engineering (2-3-3). Soil/plant/water relationships. Crop water requirements. Methods of irrigation (surface, sprinkle, drip, subsurface). Irrigation scheduling; water logging and salinity control, drainage criteria. Artificial drainage systems. Operation and maintenance of irrigation systems. Prerequisite: CVE 303 and CVE 341.

CVE 448 Port and Harbor Engineering (2-3-3). Wave characteristics and transformation, wind generated waves, wave forces and concepts and theories of wave structure interaction. Water level fluctuations (tides). Structural dynamics and design of ocean structures. Vibration of submerged structures. Planning and layout of port facilities. Coastal and ocean structures. Underwater systems. Naval architecture.

Design of seawalls, breakwaters, fixed offshore installations and pipelines. Dredging. Introduction to design of ocean engineering structures and facilities. Design of selected coastal structures. Hydraulic considerations. Introduction to selected coastal engineering problems. Prerequisite: CVE 301 and CVE 341.

CVE 450 Environmental Pollution Engineering and Control (2-2-3). Pollution of water bodies and control. Self purification process. Measurement of water quality, water quality for various beneficial uses. Effect of consumption and growth. Measurement of air quality; air pollution control, guidelines and standards. Environmental impact assessment. Global atmospheric change and its effects. Ozone depletion. Hazardous substances and risks. Prerequisite: CVE 351 and CVE 401.

CVE 455 Environmental Impact Assessment, Protection and Public Health (3-0-3). Humanity and environment. Communicable and non-communicable diseases. Technology-environment interactions. Environmental concerns. Environmental risk assessment. Comprehensive environmental planning and management of impact studies. Assessment of impacts of engineering projects on environment. Small water and wastewater systems. Solid waste and hazardous spills management. Environmental monitoring. Prerequisite: CVE 351 and CVE 401.

CVE 456 Traffic Engineering (2-2-3). Characteristics of road users, characteristics of traffic stream: speed-flow-density, traffic volume, traffic accidents, travel time and delay, parking, capacity and level of service of freeways, signalized intersections, at-grade intersection design. Transportation models. Prerequisite: CVE 360.

CVE 457 Airport Planning and Design (2-2-3). Airport master planning, forecasting air travel demand, design of airports, including lighting, terminal facilities, noise-level control, aircraft control, airspace utilization, and automobile parking. Prerequisite: CVE 360.

CVE 458 Pavement Design (2-2-3). Soil engineering for highway design. Pavement design parameters. Material characterization, techniques used in construction, and appropriate test methods. Asphalt concrete mix design. Design methods of flexible highway pavements; design of rigid pavements; pavement distress types and their maintenance and rehabilitation. Earthwork operations and equipment. Prerequisite: CVE 221 and CVE 331.

CVE 459 Engineering Urban Systems Planning (2-2-3). Urban planning from an engineering point of view. Land use patterns. Planning data collection and analysis. Location and design requirements for various land uses. Interrelationship of transportation and land use and methods of plan development. Transportation planning. Component of the passenger transportation system. Modeling the demand for transportation services. Methods of improvement of system control. Planning, design and operations of water resources systems using mathematical simulation and optimization methods and models. Economic analysis and operation research techniques applied to urban system planning. Prerequisite: CVE 341, CVE 361.

CVE 461 Advanced Surveying (2-2-3). Photogrammetry and modern surveying and mapping techniques. Global Positioning Systems (GPS) and Geographic Information Systems (GIS) applications in Civil Engineering. Prerequisite: CVE 241.
CVE 463 Construction Management (2-2-3). Management in construction industry. Development and organization of projects. Management organizations. Preconstruction planning, scheduling, estimating and design. Bidding and award. Selection of a professional construction manager. Project control. Work breakdown structure. Linear scheduling. Critical Path Method. Precedence diagram methods. Resource leveling. Least-cost scheduling. Scheduling software. Project cost control.

CVE 464 Building Construction (2-2-3). Masonry construction. Steel frame construction. Cast-in-place concrete framing systems. Precast concrete framing systems. Roofing. Glass and glazing. Cladding. Interior finishes. Interior walls and partitions. Finish for ceilings and floors. Preconstruction site investigation. Earthwork methods. Construction equipment. Drilling and blasting of rocks. Soil compaction methods and equipment. Material handling and transportation. Formwork. Cranes. Construction methods of: shallow and deep foundations, bracing and excavation support, retaining and earth structures. Contract documents. Specifications and bill of quantities. Different types of contract and construction related drawings. Method statetment for construction. Work inspection and quality control. Prerequisite: CVE 221, CVE 301, Co-requisite: CVE 333.

CVE 466 Engineering Hydrology (2-2-3). Qualitative approach to the hydrologic cycle. Quantitative hydrology, analysis of precipitation data, estimation of evaporation. Evapo-transpiration and infiltration. Rainfall-runoff relationships. Stream flow hydrographs. Reservoir and stream routing. Surface-groundwater interactions. Darcy equation, well equation, well design. Steady and transient pumping tests; modeling of aquifer system. Introduction to design of dams, reservoirs, spillways, urban storm-water drainage and flood damage mitigation sea water intrusion in coastal aquifers. Water engineering design projects. Prerequisite: CVE 341.

CVE 467 Project Estimating, Planning and Control (3-0-3). Cost estimating for construction. Economic analysis and evaluation of engineering projects. Systems analysis, synthesis and optimizations. Applications to civil engineering projects. Introduction to investments, interest, financial mathematics and financing methods. Profit determinations. Factors influencing planning, design, execution and maintenance of engineering projects. Project estimating, planning and controls. Introduction to contracting; bidding and awarding. Labor and equipment costing and productivity. Job costs, project cost control. Materials procurement. Introduction to project management. Prerequisite: NGN 111.

CVE 468 Systems Construction Management, Scheduling and Control (2-2-3). Basic elements of management of civil engineering projects. Roles of all participants in the process. Coordination with various authorities. Emphasis on contractual aspects, contract documents. Construction planning and scheduling. Supervision management, management organization, delegated duties and authorities. Project administration, work breakdown structure. Procurement schedule. Resources: labor, equipment, material, and plants; manpower-equipment schedule. Program of execution. Quality control systems. Quality assurance program, inspection formats and operations. Materials submittals. Measuring and testing, safety and security; variations; claims; progress reports and bill of quantities. Settlement of disputes. Prerequisite: NGN 111.

CVE 490 Civil Engineering Design Project I (0-3-1). Develop an open-ended, in-depth design project of civil engineering significance that includes the design of a civil engineering system meeting desired objectives within one of the civil engineering practice areas. Prerequisite: senior standing.

CVE 491 Civil Engineering Design Project II (1-6-3). Design of project defined in and developed in CVE 490. Students work in close accord with one or more faculty members, preferably in a team environment. Students apply civil engineering principles to the design and preparation of the plans and specifications of a civil engineering project.

This includes implementation throughout project work of analysis and design addressing: functions, loads, layouts of force systems, analysis, specifications, cost comparisons and maintenance. The project outcomes must demonstrate that students have attained the level of competency needed for entry into the civil engineering profession. Prerequisite: CVE 490.

CVE 494 Selected Topics in Civil Engineering (2-2-3). Selected topics in the field of civil, environmental and urban systems engineering. Prerequisite: Consent of instructor

CVE 496 Independent Study (1 to 3 credit hours). Involves investigation under faculty supervision beyond what is offered in existing courses. Prerequisite: approval of instructor

CVE/ARC 563 Professional Practice III: Construction Management (3-0-3). In-depth study of the interrelationships among the various professional disciplines in the building and construction industry as they pertain to issues of the management and planning of complex construction projects. Includes review of standard practices of tendering, contracting, quantity surveying, cost estimation, supervision, quality control and economy. Taught in Department of Civil Engineering. Prerequisite: ARC 397 and ARC 461.

ELE *Electrical and Electronic Engineering*

ELE 211 Electric Circuits I (2-3-3). Physical concepts and mathematical analysis of electric circuits. DC, transient, and sinusoidal steady state analysis of circuits. Laboratory experiments and use of PSpice, and MATLAB. Prerequisite: PHY 102.

ELE 212 Electric Circuits II (2-3-3). Magnetically coupled inductors and ideal transformer. Introduction to three phase circuits. Laplace transform, application of Laplace transform in circuit analysis. Frequency response analysis. Two port networks. Prerequisite: ELE 211.

ELE 241 Electronics I (3-0-3). Review of semiconductor physics. PN junction. Diode circuits. Special diodes. Bipolar junction transistor (BJT). Biasing, small signal analysis and design of BJT amplifiers. Biasing, small signal analysis and design of MOSFET amplifiers. Differential and operational amplifiers. Prerequisite: ELE 211.

ELE 241L Electronics I Lab (0-3-1). Prerequisite: ELE 241.

ELE 251 Electrical Energy Conversion (3-0-3). Magnetic circuits. Single phase transformer and equivalent circuit. Three-phase transgotmers. Basic concepts of electromechanical energy conversion. Dc and AC machines. Co-requisite: ELE 212. (Prerequisite: NGN 225 for non-ELE Students Only).

ELE 311 Electromagnetics (3-0-3). Vector algebra. Vector calculus. Electrostatic boundary conditions, magnetostatic fields. Magnetic materials. Maxwell's Equations. Transmission lines. Prerequisites: MTH 205 and PHY 102.

ELE 321 Signals and Systems (3-0-3). Signals and systems, continuous and discrete. Systems modeling. Convolution of discrete-time and continuous signals. The Fourier series and Fourier transform. Generalized Fourier transform. Discrete-time Fourier transform. Frequency domain analysis of systems. The Laplace transform and the transfer function representation. The Z-transform and discrete-time systems. Introduction to design of digital filters and controllers. Prerequisites: ELE 212 and MTH 221.

ELE 332 Measurements and Instrumentation (3-0-3). Basic measurement concepts. Error and statistical analysis. Electrical measuring instruments. Field measurements such as displacement, temperature, pressure, flow, level. Transducer interfacing. Digital instrumentation. Data acquisition and control. Noise reduction techniques. Prerequisite: ELE 212 and ELE 241.

ELE 332L Measurements and Instrumentation (0-3-1). Prerequisite: ELE 241.

ELE 341 Electronics II (3-0-3). Power amplifiers. Frequency response characteristics of amplifiers. Feedback and stability. Oscillators. Active filters. Pulsed waveforms and timing circuits. Digital to analog conversion (D/A). Analog to digital conversion (A/D). Prerequisite: ELE 241.

ELE 341L Electronics II Lab (0-3-1). Prerequisite: ELE 341.

ELE 353 Control Systems I. (3-0-3). Mathematical models of systems. Feedback control system characteristics. Transient response analysis. Performance and stability of feedback control systems. Root locus analysis. Frequency response analysis. Design of feedback control systems. Prerequisite: MTH 205 and ELE 212.

ELE 353L Control Systems I Lab (0-3-1). Prerequisite: ELE 353.

ELE 361 Communications I (3-0-3). Review of Fourier series and Fourier transform. Random variable and stochastic processes. Review of communication systems. Continuous wave modulation: amplitude modulation and angle modulation. Pulse modulation and sampling theory. Multiplexing techniques. Performance of various modulation schemes in the presence of noise. Introduction to digital communications. Prerequisite: ELE 321.

ELE 371 Power Systems Analysis (3-0-3). Power system concepts and per unit quantities. Transmission line, transformer and rotating machine modeling. Steady-state analysis and power flow. Theory of symmetrical components and application to analysis of power systems during fault conditions. Power system stability. Prerequisite: ELE 251.

ELE 371L Electric Machines and Power Systems Lab (0-3-1). Test and analysis of electric power and machines devices and the design of systems using these devices. Prerequisite: ELE 351. Co-requisite: ELE 371.

ELE 424 Digital Signal Processing (3-0-3). Treatment of sampling/reconstruction. Quantization. Discrete-time signals and systems. Digital filtering. Z-transforms. Transfer functions. Digital filter realizations. Discrete Fourier transform (DFT) and fast Fourier transform (FFT). Finite impulse response (FIR) and infinite impulse response (IIR) filter design. Digital signal processing (DSP) applications. Prerequisite: ELE 432.

ELE 425 Opto-electronics (3-0-3). Nature of light. Laser light, principles of laser action, characteristics of gas laser, organic dye laser and solid state laser. Optical fibres. Photo-detectors. Imaging systems. Display devices. Applications of opto-electronics. Prerequisite: ELE 341.

ELE 426 Imaging Systems (3-0-3). Imaging techniques including: Ultrasound imaging, Convention X-Ray imaging, Computerized Tomography, Magnetic Resonance Imaging, Microwave Imaging, Thermal Imaging, Nuclear Imaging and other imaging techniques. For each of the addressed imaging techniques, the following will be covered: Radiation propagation and interaction with materials. Generation and detection. Image construction and reconstruction. Radiation protection. Prerequisite: ELE 311.

ELE 432 Medical Instrumentation I (3-0-3). Principles of medical instrumentation. Biomedical sensors and transducers. Temperature, displacement, acoustical, chemical and radiation

measurements. Bio-potential amplifiers and signal processing. The origin of bio-potentials. Bio-potential electrodes. Measurement of biopotentials such as ECG, EEG and EMG. Blood pressure measurements. Electrical safety. Prerequisite: ELE 332L and ELE 341.

ELE 433 Medical Instrumentation II (3-0-3). Blood flow measurements. Respiratory system measurements. Chemical biosensors. Clinical laboratory instrumentation. Therapeutic devices. Prerequisite: ELE 432.

ELE 435 Medical Signal and Image Processing (3-0-3). Sampling and signal acquisition. Physiological signal detection. Noise reduction. Adaptive signal processing. Analysis of medical images. Mathematical formulation of images. Image transformation and reconstruction. Noise reduction and image filtering and enhancement. Prerequisite: ELE 432.

ELE 439L Medical Electronics Systems Lab (0-3-1). Various medical electronics applications. Co-requisite: ELE 341L, ELE 439

ELE 444 Control Systems II (3-0-3). State-space modeling and analysis. Controllability and observability. State feedback design and pole placement. Dynamic observers and output feedback design. Multivariable systems in the frequency domain and design by Nyquist array techniques. Introduction to optimal control systems. Introduction to nonlinear control systems. Prerequisite: ELE 353.

ELE 446 Selected Topics in Communication Engineering (3-0-3). Selected topics in the field of Communication Engineering that deal with new trends and practical issues. Prerequisite: ELE 361.

ELE 452 Digital Communications (3-0-3). Model of digital communication systems. Base-band transmission and line coding techniques. Geometric interpretation of signals. Band-pass transmission and digital modulation techniques. Optimum detection of known signals in AWGN channels. Error correcting codes. Modulation and coding trade-off Inter-symbol interference. Synchronization. Prerequisite: ELE 361.

ELE 453 Microwave Engineering (3-0-3). Electromagnetic plane waves. Microwave transmission lines, smith chart and stubs. Microwave wave guides and components. Microwave linear beam tubes. Microwave transistors and tunnel diodes. Avalanche transit-time devices. Gunn diodes. Prerequisite: ELE 311.

ELE 454 Antennas and Propagation (3-0-3). Linear antennas, transmission and receiving, near fields. Mutual and self impedances, radiation pattern. Dipole antenna, telescopic antennas. Loop antenna. Antenna arrays. YAGI antennas and the corner reflector. Circular and Parabolic dish antennas. Aperture antennas. Prerequisite: ELE 311.

ELE 457 Satellite Communications (3-0-3). Technical aspects of satellite communication, economical aspects of satellite communication. Design considerations of low, medium and high power transponders. Antenna types, and ground station design. Prerequisite: ELE 361 and ELE 311.

ELE 458L Communications Systems Lab (0-3-1). Various communication engineering applications. Prerequisite: ELE 361.

ELE 471 Digital Control Systems (3-0-3). Discrete-time systems and the Z-transform. Sampling and reconstruction. Open-loop and closed-loop discrete-time systems. System time-response characteristics. Stability analysis techniques. Digital controller design. State-space representations of discrete-time systems. Pole-assignment design and state estimation. Linear quadratic optimal control. Prerequisite: ELE 353.

ELE 472 Nonlinear Control (3-0-3). Analysis of nonlinear systems. Phase plane analysis, limit cycle, describing function and its applications. Stability analysis of nonlinear systems using Liapunov, input/output and asymptotic methods. Design methods of nonlinear controllers: linearization, absolute stability theory, sliding modes and feedback linearization. Prerequisite: ELE 353.

ELE 473 Industrial Instrumentation and Control (3-0-3). Review of measurements systems. Field instrumentation. Input/output instruments characteristics. Instruments grounding and cabling techniques. Signal processing and transmission. Smart sensors. Data acquisition and display. General purpose control devices. Programmable logic controllers and industrial controllers. Closed control systems analysis and design. Introduction to distributed control systems. Prerequisites: ELE 353 and ELE 332.

ELE 475 Distributed Control Systems (3-0-3). Distributed computer systems architecture. System elements. Data communications links. Software algorithms. Reliability. Applications. Prerequisites: ELE 353 and ELE 361.

ELE 476L Instrumentations and Control Systems Lab (0-3-1). Various instrumentations and control applications. Prerequisite: ELE 353L, ELE 332L.

ELE 481 Power System Protection (3-0-3). Fuses. Voltage and current transducers. Fundamental relay operating principles and characteristics. Over current protection. Comparators and static relay circuits. Differential protection and its application to generators, transformers and bus bars. Motor protection. Pilot wire protection of feeders. Standard protective schemes for system coordination of relays. Prerequisite: ELE 371.

ELE 482 Electric Power Distribution Systems (3-0-3). Concepts and techniques associated with the design and operation of electrical distribution systems. Load characteristics. Distribution substations. Choice of voltage levels. Loss minimization and voltage control. Calculation of impedances of unbalanced three-phase systems. Analysis techniques of radial systems. Prerequisite: ELE 371.

ELE 485 Power Electronics (3-0-3). Electric power conditioning and control. Characteristics of solid state power switches. Analysis and applications of AC power controllers, controlled rectifiers, and DC choppers and DC-AC converters. Prerequisites: ELE 251, ELE 241, MTH 205.

ELE 486 Power Electronics and Drives (3-0-3). Application of semiconductor switching power converters to adjustable speed DC and AC motor drives. Steady state theory and analysis of electric motion control in industrial, robotic and traction systems. Prerequisite: ELE 485.

ELE 487 Power Quality and Harmonics (3-0-3). Causes, analysis and solutions of poor power quality problems. Analysis of voltage sag and voltage surge. Surge protection. Harmonic effects and control. Harmonic filter design. Typical wiring and grounding problems. Monitoring of power quality. Application of Standards. Prerequisite: ELE 371

ELE 488 Power Engineering Lab (0-3-1). Various power systems and power electronics applications including issues related to power transmission and distribution and adjustable speed motor drives. Prerequisite: ELE 371, ELE 371L.

ELE 490 Electrical and Electronic Engineering Design Project I (0-3-1). Introduces design methodology in electrical engineering through lectures and an open-ended, in-depth design project of significance in electrical or electronic engineering. The project includes the design of a system process or component to achieve the functional objectives representative of problems encountered by practicing electrical engineers. Students will work in teams to

define, complete, validate and document their design project. They will work in close accord with one or more faculty members. The course emphasizes engineering ethics and communication skills. Prerequisite: senior standing.

ELE 491 Electrical and Electronic Engineering Design Project II (0-6-2). Continuation of ELE 490. Prerequisite: ELE 490.

ELE 494 Selected Topics in Electrical Engineering (3-0-3). Selected topics of current interest in Electrical Engineering. Prerequisite: consent of instructor.

ELE 496 Independent Study (1-3 Credit hours). Study of topics relating to the special needs and interests of individual students. Prerequisite: Permission of instructor.

MCE *Mechanical Engineering*

MCE 115 Workshop (0-3-1). Introduction to using basic machines and developing hand skills in the workshop, safety in the workshop; basic hand tools, basic machining operations, welding, casting, woodwork, sheet metal work, measuring instruments.

MCE 215 Engineering Drawing (0-6-2). Orthographic projections of machine elements, auxiliary views, section views, dimensioning, fits and tolerances, detailed and assembly drawings, computer aided drafting.

MCE 231 Manufacturing Processes (2-3-3). Introduction to manufacturing methods of metals and plastics: metal casting, forming, machining, welding and plastic processing. Includes laboratory experiments and demonstrations. Prerequisites: MCE 115, NGN 231.

MCE 241 Thermodynamics I (2-2-3). Properties of matter, processes in fluids, energy and first law of thermodynamics, second law of thermodynamics, entropy and availability analyses, basics of vapor power and gas power cycles and chemical equilibrium. Prerequisite: PHY 101.

MCE 311 Engineering Measurements (2-3-3). Basic concepts of measuring methods, static and dynamic characteristics of signals, types of errors, assessing and presenting experimental data, uncertainty analysis, measurement system behavior, sampling, digital devices and data acquisition, selection and use of temperature, pressure, fluid flow, force, stress, strain, torque and power instrumentation, lab experiments and demonstrations. Prerequisites: NGN 225, NGN 241.

MCE 316 Kinematics & Dynamics of Machinery (2-2-3). Analysis and synthesis of linkages (displacement, velocity, acceleration and force analysis), cam-follower, gear train systems, introduction to machine dynamics. Prerequisite: NGN 222.

MCE 321 Mechanical Design I (2-2-3). Stresses and deflection of engineering members. Statistical considerations in design. Steady and variable loading. Design of screws, fasteners and connections. Welded joints. Mechanical springs. Prerequisite: NGN 223.

MCE 322 Mechanical Design II (2-2-3). Design of clutches, brakes and couplings. Power transmission equipment: shafts, axles and spindles. Flexible mechanical elements: flat and V-belts, wire ropes and chains. Rolling and journal bearings. Spur, helical, bevel and worm gears. Design project. Prerequisite: MCE 321.

MCE 335 Computational Techniques (2-2-3). Use of computational techniques for solving engineering problems with the aid of a digital computer: error types and analysis, roots of nonlinear equations, solution of linear simultaneous equations, least square regression, interpolation, numerical integration and differentiation, numerical integration of ordinary and partial differential equations. Prerequisite: MTH 205.

MCE 341 Thermodynamics II (2-2-3). Energy-system analysis including modified power cycles, refrigeration cycles, and air conditioning processes, thermodynamic relations and development of thermodynamic properties, thermodynamics of non-reacting and reacting mixtures, chemical reaction. Prerequisite: MCE 241.

MCE 344 Heat Transfer I (2-3-3). Mechanisms of heat transfer, steady-state conduction in various geometries, transient conduction, forced and natural convection, radiation, analysis of heat exchangers. Prerequisites: NGN 241 and MCE 241. MCE 410 Control Systems (2-2-3). Mathematical models of systems, state variable models, feedback control system characteristics, performance and stability of feedback control systems, the root-locus method, stability in the frequency domain, design of feedback control systems, introduction to control system design in the state space domain, lab experiments and demonstrations. Prerequisites: NGN 222, NGN 225, MTH 205.

MCE 418 Modeling and Simulation of Dynamic Systems (2-2-3). Introduction to multi-domain systems. Mechanical, thermal, fluid, electrical, electronic, electromechanical system dynamics, emphasis on modeling and simulation of hybrid systems using modern computer-aided tools. Prerequisite: senior standing

MCE 423 Mechanical Vibrations (2-2-3). Systems with single and multiple degrees of freedom. Damped and undamped free vibrations, forced vibrations. Eigen values and eigen vectors of multiple degrees of freedom system. Prerequisites: MTH 205 and NGN 222.

MCE 430 Fundamentals of Computer-Aided Design and Manufacturing (2-2-3). Application of modern computer-aided graphics techniques and the use of state-of-the-art, computer-aided design/drafting packages. Topics include principles of computer-aided design/drafting and interactions with computer-aided manufacturing, creation of a drawing environment; database and file management, editing, modification, displaying, dimensioning, plotting and printing; special editing techniques; 3-D modeling, solid modeling, shading, and rendering; and file transfer. Prerequisite: MCE 215.

MCE 435 Advanced Mechanics of Materials I (2-2-3). Basic material properties and their use in design. Stress-strain-temperature relations, inelastic material behavior, energy methods, torsion of non-circular bars, non-symmetric bending of straight beams. Curved beam theory. Thick-walled cylinders. Prerequisite: MCE 321.

MCE 436 Advanced Mechanics of Materials II (2-2-3). Linear plate theory. Stress concentration. Introduction to fracture mechanics. Fatigue, creep and contact stress problems. Introduction to finite element analysis. Prerequisite: MCE 435.

MCE 439 Computer Integrated Manufacturing (2-2-3). Introduction to the development of control systems. Developments in manufacturing systems. Programming principles of NC and CNC systems. Manufacturing cells. Flexible manufacturing systems. Control of flexible manufacturing systems. Prerequisite: MCE 231.

MCE 440 Advanced Manufacturing Processes (2-2-3). Analysis of the machining process, economics of machining, modeling of material deformation in metal forming operations, non-traditional manufacturing processes, plastic processing, powder metallurgy. Prerequisite: MCE 231.

MCE 443 Introduction to Engineering Fracture Mechanics (2-2-3). Griffith criterion. Mechanisms of fracture and crack growth. Elastic crack-tip stress field. Plane stress and plane strain. R-curve and J-

integral. Determination of stress intensity factors. Applications. Prerequisite NGN 231, MCE 321.

MCE 445 Energy Systems (2-2-3). Types of power plants and energy conversion systems, thermodynamics of power plants, combined power plants, system components, design parameters, plant evaluation, efficiency calculation methods, modifications to improve system performance, cogeneration plants, thermodynamics of cogeneration plants, system equipment, some practical schemes, power plants economics, design concepts, power plants control, and environmental impact of power plants. Prerequisites: MCE 341, MCE 344.

MCE 446 Refrigeration and Air Conditioning (2-2-3). Introduction and classification of air conditioning systems, applied psychometrics, Design of conventional and unconventional environmental systems: air conditioning, refrigeration, control systems, and thermal energy storage. Prerequisites: MCE 341, MCE 344.

MCE 447 Internal Combustion Engines (2-3-3). Fundamental principles of engine operation and applications, including cycle analysis, design, performance of combustion engines; operating characteristics of spark-ignition and diesel engines; introduction to air-breathing engines, fuels, oxidants, and propellants; and combustion, dissociation, ionization, and engine emissions. Prerequisite: MCE 341.

MCE 448 Advanced Heat Transfer (2-2-3). Advanced conduction: basic equation and boundary conditions, analytical and numerical solutions of transient 1-D conduction and steady 2-D conduction. Convection: basic relations of convection, analytical solutions of some simple flows (forced and natural convection). Heat transfer in condensing and boiling processes. Radiation: energy exchange by radiation, advanced topics in radiation. Finite difference analysis of heat transfer problems. Prerequisite: MCE 344.

MCE 449 Renewable Energy Systems (2-2-3). Solar radiation. Collectors and concentrators. Solar heating for domestic and industrial uses. Passive heating and cooling of buildings. Solar refrigeration and desalination, solar pumping, solar electricity (PV-central receiver systems), solar ponds. Wind energy, statistical description of wind, Weibul distribution. Maximum power obtainable from the wind. Horizontal and vertical-axis wind turbines. Ocean tides. Ocean waves OTEC. Biomass and biogas. Geothermal energy. Economic evaluation of renewable energy systems and comparison with conventional and/or alternative power generating systems. Prerequisite: MCE 344.

MCE 450 Energy Conservation and Management (2-2-3). Analysis of Energy systems, including fossil fuels, steam, cogeneration, waste heat recovery, refrigeration and air conditioning systems, conservation in electrical load, lighting, building envelop, and insulation; economic energy analysis, energy auditing, monitoring and targeting, Technical approaches and analyses, control, and energy management systems. Prerequisites:MCE 341.

MCE 454 Electronic Heat Transfer (2-2-3). Mechanisms of heat transfer, conduction and convection in electronic components, thermal characteristics of chips, heat transfer in multi-chip module, flow field in packaging configuration, single fins and fin array heat transfer, and heat sinks. Prerequisite:MCE 344.

MCE 464 Introduction to Robotics (2-2-3). Overview of robotics. Robot coordinate systems. Direct and inverse kinematics. Introduction to manipulator dynamics. Robot sensors and control strategies. Introduction to force control and compliance. Requirement of digital control of robots. Prerequisite:MCE 311, MCE 316.

MCE 466 Introduction to mechatronics (2-3-3). Modeling and control of actuators and electro-mechanical systems, mechanical engineering applications of microprocessors and analog electronics to modern mechatronic systems. Prerequisites: NGN222, MCE311.

MCE 473 Applied Finite Element Analysis (2-2-3). Introduction to Finite Element Method and its application in different mechanical engineering problems: theoretical and computational basics of finite element method, element formulation and assembly of global matrices. Applications include: static loading of beams and beam structures, free vibration of beam and beam structures, 2-D plane stress and plane strain elasticity, and 2-D steady state heat conduction. Using a commercial FE software in solving various engineering problems. Prerequisite:MCE 321 Co-requisite: MCE 344.

MCE 476 Design Optimization (2-2-3). Outline of classical design methods. Introduction to the formulation of optimization problems. Mathematical optimization. Optimal design methods. Practical design considerations. Term project. Prerequisite: MCE 322, MCE 335.

MCE 477 Composite Materials (2-2-3). Advanced composite materials and applications. Stress-strain relationship for an orthotropic lamina. Laminate analysis. Static strength of laminates. Micro-mechanical analysis of laminae. Analysis of laminated beams. Design applications. Computer programs. Prerequisites: NGN 223, NGN 231.

MCE 480 Plastics and Plastic Processing (2-2-3). Properties and engineering applications of thermoplastic and thermosetting polymers, plastic manufacturing processes, equipment and mold design. Prerequisite: MCE 231.

MCE 482Intermediate Fluid Mechanics (2-3-3). 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, introduction to the numerical solution of 2-D viscous flows. Use of commercial CFD software. Prerequisites: NGN 241, MCE 241 and MTH 205.

MCE 487 Turbomachines (2-2-3). Classification of turbomachines, dimensional analysis, specific speed, model testing, basic laws. Incompressible flow turbomachines: centrifugal and axial flow pumps, Euler's theory, characteristics and laboratory testing, cavitation in pumps, system matching and hydraulic turbines. Compressible flow turbomachines: centrifugal compressors and fans, surge and choking in a compressor stage, axial flow compressors and gas turbines. Prerequisites NGN241 & MCE241.

MCE 488 Introduction to Computational Fluid Dynamics (CFD) (2-2-3). Discretization techniques and solution algorithms finite difference solutions to classical model equations pertinent to wave phenomena, diffusion phenomena, or equilibrium, boundary and initial conditions and stability considerations, application to equations of fluid mechanics and heat transfer, using software packages in solving CFD problems. Prerequisites: NGN241, MCE 335.

MCE 489 Fluid Power (2-2-3). Components of a Fluid Power system. Properties of hydraulic fluids. Hydraulic pumps. Fluid power actuators: hydraulic cylinders and hydraulic motors. Control valves. Applications of hydraulic circuits. Introduction to pneumatics. Prerequisite: NGN 241 or CHE 207.

MCE 490 Design Project I (0-6-2). An open-ended, in-depth design project of mechanical engineering significance that

includes the design, manufacturing and testing of a complete system of current interest to mechanical engineering. Students work in close accord with one or more faculty members in a team environment. Students are required to present their findings at the end of the project in the form of a seminar and in a formal written report. The project outcomes must demonstrate that students have attained the level of competency needed for entry in the mechanical engineering profession. Prerequisite: Senior Standing.

MCE 491 Design Project II (0-6-2). Continuation of MCE 490. Prerequisite: MCE 490.

MCE 494 Selected Topics in Mechanical Engineering (3-0-3). Selected topics that meet student interests and reflect recent trends in the field of Mechanical Engineering. Prerequisite: consent of instructor.

MCE 496 Independent Study (1 to 3 Credit hours). Involves investigation under faculty supervision beyond what is offered in existing courses. Prerequisite: consent of instructor.

NGN *Engineering*

NGN 110 Introduction to Engineering (1-3-2). Common concepts in each of the engineering disciplines at AUS. Selected engineering systems, subsystems, processes and devices used in each discipline are reviewed. Introduction to engineering sketching. Use of data acquisition software, data sampling, data collection and graphical representation. Role and responsibilities of engineers. Introduction to engineering ethics. Prerequisite: admission to the School of Engineering.

NGN 111 Engineering Statistics (2-0-2) Summarizing data and descriptive statistics; designing experiments; sampling distributions; introduction to statistical inference (estimation and hypothesis testing); simple regression and correlation; using statistical software; probability. Examples from the five engineering disciplines are used. Prerequisite: NGN 110.

NGN 221 Statics (2-3-3). Fundamental concepts and principles of mechanics, vectors and force systems. Concepts of free-body-diagram. Principles of equilibrium of particles and rigid bodies in two and three dimensions. Analysis of structures: trusses, frames and machines. Shear and bending moment in beams, center of gravity, centroids and area moment of inertia. Friction. Prerequisite: PHY 101.

NGN 222 Dynamics (2-3-3). Fundamental concepts of kinematics and kinetics with application to motion 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. Energy and momentum methods. Prerequisite: NGN 221.

NGN 223 Mechanics of Materials (2-3-3). Stress and strain. Mechanical properties of materials. Axial load, torsion, bending and transverse shear. Combined loading. Stress transformation. Deflection of beams and shafts. Buckling of columns. Prerequisite: NGN 221.

NGN 224 Engineering Mechanics - Statics and Dynamics (2-3-3). Particle statics and dynamics. Vector mechanics. Free body diagrams. Two- and three-dimensional force equilibrium systems, rectilinear and curvilinear motion, Coriolis effects, considerations of work and energy, periodic motion. Prerequisite: MTH 104, PHY 101.

NGN 225 Electric Circuits and Devices (2-3-3). Electrical quantities and variables. Circuit principles. Signal processing circuits. DC and AC circuit analysis. Diodes, transistors, operational amplifiers and digital devices. Microprocessors. Not applicable to the major requirements in electrical engineering. Prerequisite: PHY 102.

NGN 231 Materials Science (2-3-3). Introduction to material science, relationships between structure and properties of materials. Atomic bonding, crystalline structures, crystal defects and imperfections. Phase diagrams and equilibrium microstructural development. Mechanical properties of materials, alloys, polymers and composites. Electrical and magnetic properties of materials, semi-conductors and ceramics. Prerequisite: CHM 101.

NGN 241 Fluid Mechanics (2-3-3). Fundamental concepts. Properties of fluids: specific gravity, viscosity and surface tension. Fluid statics: pressure and its measurement, hydrostatic forces on submerged surfaces, stability of floating bodies. Basic equations of motion: continuity, momentum and energy equations, Bernoulli's equation. Measurement of static and stagnation pressure, velocity and flow rate in closed conduits and open channels. Flow in closed conduits (internal flow), laminar and turbulent flow. Flow over immersed bodies (external flow). Lift and drag. Dimensional analysis and dynamic similitude. Prerequisite: MTH 104, NGN 221.

NGN 397 Professional Training (0) Minimum of six weeks of approved professional experience. Work undertaken must be documented in a formal report to the department by the beginning of the following term. Prerequisite: approval of the training coordinator for the major.

NGN 461 Management for Engineers (3-0-3). Engineers as managers. Nature of organizations. Functions of organizations. The tools of engineering management: engineering organizational models including cluster and matrix organization. Leadership, team-work and creativity, personnel management, finance, communication skills. Ethical and professional standards, total quality management. Case studies.

NGN 462 Engineering Project Management (3-0-3). Projects in engineering organizations. Project initiation. Effective project management, the project life cycle, planning and scheduling, resourcing, cost estimating. Project monitoring and control. Introduction to computer packages. Case study.

NGN 463 Quantitative Engineering Management I (2-3-3). Models in operational management. Linear programming: formulation of linear programming models, standard forms. Principles of the simplex method and nonlinear programming problems. Use of linear and nonlinear solvers with applications in various engineering fields including network analysis, resource allocation, transportation problems, product mix applications. The dual simplex method. Term project.

NGN 464 Engineering Economics (3-0-3). Economics concepts and theories of planning. Bases and methods of economic analysis of engineering projects. Application of these principles in understanding economic activity of private and public engineering companies at various micro and macroeconomic levels. NGN 465 Quality Control for Production Systems (3-0-3). Control charts and diagrams (types, construction, application and implementation), control charts for variables, control charts for attributes, acceptance sampling: lot by lot acceptance sampling by attributes, acceptance sampling plans and standards, quality costs-product liability, quality improvement, implementation of quality control system, quality engineering.

NGN 466 Quantitative Engineering Management II (2-3-3). Continuation of NGN 463 with emphasis on nonlinear optimization, statistical process control, and random processes in industrial and urban systems. Introduction to simulation with applications in manufacturing systems, traffic systems and maintenance management. Reliability and cost benefit analysis. Term project. Prerequisite: NGN 463.

Full–Time Faculty

A

Aassila, Mohammed, Ph.D., University of Strasburg, 1997; Assistant Professor of Mathematics

Abdalla, Jamaleldin, Ph.D., UC Berkeley, 1989; Associate Professor of Civil Engineering

Abdel-Fatah, Akmal, Ph.D., University of Texas at Austin, 1999; Assistant Professor of Civil Engineering

Abdel-Hamid, Amr, Ph.D., Syracuse University, 1969; Professor of Mechanical Engineering and Vice Chancellor

Abdel-Malek, Kamal, Ph.D., McGill University, 1992; Associate Professor of Arabic Language and Literature

Abdul-Hamid, Husein, Ph.D., American University, Washington D.C., 1996; Assistant Professor of Statistics

Abdul Hadi, Zayid Abdullah, Ph.D., UniversitÈ Laval, 1987; Associate Professor of Mathematics

Abu-Muhanna, Yusuf, Ph.D., State University of New York at Albany, 1979; Associate Professor of Mathematics

Abu-Yousef, Imad, Ph.D., McGill University, 1996; Assistant Professor of Chemistry

Abu Al-Foul, Bassam, Ph.D., University of Utah, 1994; Assistant Professor of Economics

Abualrub, Taher, Ph.D., University of Iowa, 1998; Assistant Professor of Mathematics

Abukhaled, Marwan, Ph.D., Texas Tech University, 1995; Assistant Professor of Mathematics

Ahmed, Rana, Ph.D. Duke University, 1991; Associate Professor of Electrical and Computer Engineering

Ahmed, Saad, Ph.D., Georgia Institute of Technology, 1981; Associate Professor of Mechanical Engineering

Al-Ali, Abdul Rahman, Ph.D., Vanderbilt University, 1990; Associate Professor of Computer Engineering

Al-Issa, Ahmad, Ph.D., Indiana University of Pennsylvania, 1998; Assistant Professor of English

Al-Mohamad, Hussam, Ph.D., University of Paris XI, Centre d'Orsay, 1985; Associate Professor of Computer Science

Al-Musawi, Muhsin, Ph.D., Dalhousie University, 1978; Professor of Arabic

Al Assaf, Yousef, Ph.D., Oxford University, 1988; Associate Professor of Electrical Engineering

Al Bataineh, Afaf Badr, Ph.D., Heriot-Watt University, 1998; Assistant Professor of Arabic

Al Ghoussein, Tarek, M.A., University of New Mexico, 1989; Assistant Professor of Photography

Al Hasani, Nadia, Ph.D., University of Pennsylvania, 1990; Associate Professor of Architecture

Al Homoud, Azm, Ph.D., Massachusetts Institute of Technology, 1990; Professor of Civil Engineering

Al Khazali, Osamah, Ph.D., University of Memphis, 1997; Assistant Professor of Finance

Al Nashash, Hasan, Ph.D., Kent University, 1988; Associate Professor of Electrical Engineering

Andreasian-Thomas, Noretta, Ph.D., Academy of Science of Estonia, 1987; Assistant Professor of Physics

Arent, Russell, Ph,D,, University of Minnesota, 1998; Assistant Professor of English

Atiyah, Wadih, Ph.D., American University, Washington, D.C., 1995; Dean, School of Business and Management

Aubrey, Jonathan, M.A., School for International Training, 1999; Instructor - IEP

Auda,Gasser, Ph.D., University of Waterloo, 1996; Assistant Professor of Comp. Sc.

B

Badry, Fatima, Ph.D., University of California, Berkeley, 1983; Professor of English and Linguistics

Bahloul, Maher, Ph.D., Cornell University, 1994; Assistant Professor of English

Bahloul, Raja, M., M.A., Cornell University, 1994; Instructor in Intensive English

Bantey, Paul, B.F.A., The University of Arts, 1981; Instructor in Visual Design

Barlas, Gerassimos, Ph.D., National Tech. University, Athens, 1996; Assistant Professor of Comp. Sc.

Barnett, Andy H., Ph.D., University of Virginia, 1978; Professor of Economics,

Ben-El-Mechaiekh, Hichem, University of Montreal, 1988; Professor of Mathematics

Birks, Peter, M.A., Griffith University, 1998; Instructor of Information Systems

Blank, Lee, Ph.D., Oklahoma State University, 1970; Professor of Engineering and Dean, School of Engineering

Bley, Jorg, Ph.D., Florida Atlantic University, 1996; Assistant Professor of Finance

Blythe, Stephen, Ph.D., University of Arkansas, 1979; Associate Professor of Accounting

Boddicker, Ann, M.A., University of Northern Iowa, 1996; Instructor - IEP

Bridgeman, Cathleen, Ph.D., University of South Carolina, 2000; Assistant Professor of English

Bulos, Bassim Raif, Ph.D., Columbia University, 1972; Associate Professor of Physics

Byas, Karl, B.S., University of North Carolina, Charlotte,1990; Lecturer in Digital Media

C

Caesar, Judith, Ph.D., Case Western Reserve University,1976; Assistant Professor of English

Carlstedt, Edward, M.A., University of Leicester, 2000; Instructor - IEP

Castela, Antonio, M.A., University of Sydney, 1992; Assistant Professor of Architecture and Design Management

Christensen, Kaud, Ph.D., Technical Universitu of Denmark 1993; Associate Professor of Chemical Engineering

Collins, Anthony, M.A., University of California, Los Angeles, 1993; Assistant Professor of Multimedia

Cook, Robert D., Ph.D., University of California at Los Angeles, 1967; Professor of Chemistry and Dean, College of Arts and Sciences

Cook, Wadad, M,Sc., Universite de Sherbrooke , 1992; Instructor of Marketing

Crain, Richard, M.A., Northern Arizona University, 1997; Instructor of English

D

Daghfous, Abdelkader, Ph.D., Penn State University, 1997; Assistant Professor of Management Information Systems,

Dhaouadi, Rached, Ph.D., University of Minnesota, 1990; Assistant Professor of Electrical Engineering

Driscoll, Tina Joyce, M.A., University of Warwick, 1997; Instructor in Intensive English Program

E

Egan, Matthew J., M.F.A., University of South Dakota, 2000; Assistant Professor of Foundations

Ekholm, Dene, M.B.A., Fairleigh Dickenson University, 1974; Executive in Residence

El Fakih, Khaled, M.Sc., Lebanese American University, 1995; Instructor of Computer Sciences

El Kadi, Hany, Ph.D., University of Alberta, 1993; Assistant Professor of Mechanical Engineering

El Keib, Abdurrahim, Ph.D., North Carolina State University, 1984; Professor of Electrical Engineering (LOA)

El Morr, Christo, Ph.D., University of Technology of Compiegne, 1997; Assistant Professor of Mangement

El- Tarhuni, Mohamed, Ph.D., Carleton University, 1997; Assistant Professor of Electrical Engineering

F

Faiq, Said, Ph.D., Salford University, 1991; Assistant Professor of English

Fallon, James, Ph.D., University of Texas at Austin, 1980; Associate Professor of English and Linguistics

Farah, Anthony, M.S.A., Central Michigan University, 1994; Instructor in Information Systems

Fay, Mary Ann, Ph.D., Georgetown University, 1996; Assistant Professor of History

Fernalld, Holly, M.A., Colorado State University, 1998; Instructor in Intensive English

Fox, John, Ph.D., SUNY, Albany, 1975; Professor of Anthropology

Frasco, Gregg, Ph.D., Cornell University, 1988; Assistant Professor of Economics

French, Roderick S., Ph.D., George Washington University, 1971; Professor of Philosophy and Chancellor

G

Gadalla, Mohamed, Ph.D., University of Alabama, 1988; Associate Professor of Mechanical Engineering

Gallois, William, Ph.D., University of Bristol, 1999; Assist. Prof of History

George, Daniel, Ph.D., University of California, 1997; Assistant Professor of Management

Ghrayeb, Ali, Ph.D., University of Arizona, 2000; Assistant Professor of Electrical Engineering

Giesen, Leslie, TESOL, American University of Beirut, 1983; Instructor in Intensive English

Giesen, Martin, Ph.D., Heidelberg University, 1973; Professor of Art History and Dean, School of Architecture and Design

Gill, Jaswinder, M.Ed., University of British Columbia, 1991; Instructor in Intensive English

Golley, Nawar Al-Hassan, Ph.D., Nottingham University, 1994; Assistant Professor of English

Grant, James, D.B.A., Mississippi State University, 1978; Professor of Marketing

Guessoum, Nidhal, Ph.D., University of California at San Diego, 1988; Assistant Professor of Physics

Gunn,Cindy Lou, M.A., School for International Training, 1993; Instructor - IEP

Gunning, Patrick J., Ph.D., Virginia Polytechnic Institute, 1974; Professor of Economics

Gyeszly, Stephen, Ph..D., Michigan State University, 1974; Associate Professor of Mechanical Engineering and Associate Dean

H

Hamad, Ahmad, Ph.D., Auburn University, 1997; Assistant Professor of Chemical Engineering

Hasan, Asad, Ph.D., University of Kansas, 1993; Assistant Professor of Physics

Hatim, Basil, Ph.D., University of Exeter, 1981; Professor of English and Translation

Henry, Patrick, M.A., Columbia University, 1989; Instructor in Intensive English

Hewitt, David Bryan, M.F.A. Cornell University, 1979; Assistant Professor of Design

Hicks, John, M.A., University of Nebraska, 1982; Instructor in Intensive English

Holt, Dale, Ph.D., Claremont Graduate University, 1973; Assistant Professor of Public Administration

Horger,Christopher, M.A., University of Arizona,1992; Instructor of English

Houser, Carol, M.A., California State University, Sacramento, 1994; Community Services

Huber, Wm Dennis, D., D.B.A., University of Sarasoter, 2001; Assistant Professor of Accounting

I

Ibrahim, Taleb, Ph.D., Auburn University, 1997; Assistant Professor of Chemical Engineering

J

Jarrah, Mohammad, Ph.D., Stanford University, 1989; Associate Professor of Mechanical Engineering

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K

Kamel, Sameh, Ph.D., Michigan State University, 1999; Assistant Professor of Public Administration

Kanishka, Mustafa, M.Arch., University of Utah, 1980; Associate Professor of Architechture

Karake-Shalhoub, Zeinab, Ph.D., George Washington University, 1987; Professor of Information Systems

Katodrytis,George, A.A. Dipl., Architectural Association, UK, 1985; Assistant Professor of Architecture

Khan, Abdul Khaliq, Ph.D., Georgia Institute of Technology, 1995; Assistant Professor of Electrical Engineering

Khan, M. Muqeem, M.A., Ohio State University, 1996; Assistant Professor of Digital Design

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Khoury, Suheil, Ph.D., Michigan State University, 1994; Assistant Professor of Mathematics

Kienke, Chris, M.F.A., Southern Illinois University, 2000; Assistant Professor of Foundations

Knudstrup, Mike, Ph.D., Florida State University, 2000; Assistant Professor of Management

Kostopoulos, George, Ph.D., Arizona State University, 1971; Professor of MIS

Kuehn, Kermit, Ph.D., University of Nebraska-Lincoln, 1993; Assistant Professor of Management

Kuehn, Ralph, D.B.A., Florida State University, 1981; Associate Professor of Information Systems

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Lashley, Lynette, Ph.D., Northwestern University, 1988; Professor of English and Communication

Lazor, Dinah, M.S., Florida State University, 1974; Assistant Professor of Interior Design

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Magrath, Amanda, M.A., Portsmouth University, 1998; Instructor in Intensive English

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Mitchell, Kevin, M. Arch., University of Washington, 1996; Assistant Professor of Architecture

Mokhtar, Ahmed, Ph.D., Concordia University, 1998; Assistant Professor of Architecture

Mond, Robert, M.A., United States International University, 1990; Instructor in Intensive English

Mottola, Louis, Ph.D., University of Northern Colorado, 1972; Associate Professor of Management

Mourtada, Sabbah Nada, Ph.D., Sorbonne (Paris II), 1997; Assistant Professor of Political and International Studies

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N

Nassir, Ghazi, Ph.D., Florida State University, 1989; Assistant Professor of English

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O

Olson, Dennis, Ph.D., University of Wyoming, 1982; Professor of Finance

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Parker, David, M.Arch., Harvard University, 1991; Assistant Professor of Architecture

Pilkington, Mark, M.A., Royal College of Art, London, 1977; Assistant Professor of Design

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Qaddoumi, Nasser, Ph.D., Colorado State University, 1998; Assistant Professor of Electrical Engineering

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Rab, Samia, Ph.D., Georgia Institute of Technology, 1997; Assistant Professor of Architecture and Heritage Management

Randle, Jay, M.A., North Carolina State University, 1971; Associate Professor of Architecture and Associate Dean.

Richardson, Joseph, Ph.D., University of Florida, 1985; Associate Professor of Civil Engineering

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Sabet, Mehdi, M. Arch., Virginia Poly. Institute, 1978; Associate Professor of Interior Design

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Shannon, John, Ph.D., The Ohio State University, 1995; Assistant Professor of English

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Suleiman, Ahmad, Ph.D., University of New Orleans, 1993; Professoor of Chemistry

T

Tabsh, Sami W., Ph.D., University of Michigan, 1990; Associate Professor of Civil Engineering

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Tayim, Hassan, Ph.D, University of Illinois, 1967; Professor of Chemistry

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Tesunbi, Samuel K., Ph.D., Howard University, 1994; Assistant Professor of English

Toledo, Hugo, Ph.D., Auburn University, 1999; Assistant Professor of Economics

Tucker, Lewis R., Ph.D., Penn State University, 1975; Assistant Professor of Marketing

Tyson, Rodney, Ph.D., University of Arizona,1994; Associate Professor of English

V

Van Wyk, Dirk, M.A., University of Calgary, 1970; Associate Professor of Visual Communication

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W

Walker, Peter, Ph.D., University of Lancaster, 1970; Professor of Mathematics

Wallace, Noelle, M.A., University of California, Davis, 1987; Instructor in Intensive English

Weathers, Michelle, M.A., University of Southern California, 1987; Instructor in Intensive English

Weiss, Gregor, M. Arch., University of California, Berkeley, 1984; Associate Professor of Architecture and Design

Williams, Ronald, M.B.A., Lincoln University, 1998; Instructor of Accounting

Wills, Krystie, M.A., Michigan State University, 1994; Instructor - IEP

Wilson, Deborah, M.A., School for International Training, 1981; Instructor in Intensive English

Woods, Lawrence, Ph.D., Australian National University, 1989; Associate Professor of Political Sci/Inter Relations

Z

Zayani, Mohamed, Ph.D., Indiana University, 1996; Assistant Professor of English3

Zsargo, Rita, M.A., School for International Training, 1996; Instructor in Intensive English

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