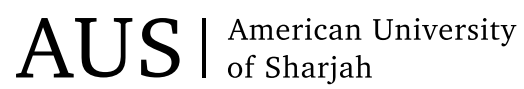


Graduate Catalog 2011–2012





OFFICE OF THE REGISTRAR

Graduate Catalog 2011–2012

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His Highness Sheikh Dr. Sultan Bin Mohammad Al Qassimi

Supreme Council Member, Ruler of Sharjah
Founder and President of American University of Sharjah

Chancellor's Message

I am delighted to welcome students, faculty members and staff to AUS for the academic year 2011–2012. During its short history, AUS has gained a widely recognized reputation for academic quality in higher education in the United Arab Emirates and beyond. As chancellor, I am gratified by our university's fine academic reputation. I also feel a tremendous optimism about our future. AUS will not rest on past accomplishments. On the contrary, the coming years will see a continuing commitment to institutional improvement so that AUS provides its students with the best possible undergraduate and graduate education in the Gulf region.

Students who attend AUS find that their experience at the university provides them with a high-quality education in their field of choice. Yet there is much more to an AUS education than only mastering the core competencies of a particular academic discipline. AUS strives to empower its students so that they enjoy an education that opens their minds and broadens their horizons. The AUS experience enables its students to participate with self-confidence and ease in the ever-expanding global environment. Whether graduates remain in the Gulf or take on challenges anywhere in the world, they will find that AUS has prepared them for success.

The AUS experience is an educational and developmental journey that transcends the classroom. A major part of AUS's training is learning skills that enable graduates to succeed throughout their lives. At AUS students learn to reflect deeply, to communicate effectively, to think clearly and to work successfully in teams or by themselves. AUS students become problem solvers and creative thinkers who are well prepared to assume leadership positions as their careers progress.

AUS students learn to respect diversity; they engage in dialog, discussion and debate in ways that expand their horizons and prepare them to succeed in diverse cultural environments. Yet, our students also learn to value their cultural heritage and stay true to their historical roots, even as they cooperate with colleagues from a wide variety of national backgrounds.

AUS trains its students to understand the long-term importance of personal integrity and professional ethics, for themselves and for society at large. AUS expects its graduates to become concerned adults who are aware of the challenges that their society faces and who make positive contributions to improve the world around them.

This catalog provides a first introduction to an AUS education, and it will serve as a continuing reference for students while they attend the university. It contains all of the information that students will need to chart their academic careers while at AUS. It lists available courses, outlines important regulations, and describes the academic and co-curricular services that the university offers. This same information is available on the university's website, www.aus.edu. This website should be considered the official source of such information, since it is updated more frequently than this catalog. I urge students to become familiar with the rules and regulations this catalog contains. Faculty members should also consult it to remain familiar with the information it provides.

During the years that you attend AUS as a student, you will see how your university continues to progress and build on past achievements. AUS will continue to enhance the quality of the education that it offers, increase the range of the services that it provides, and equip its students with all of the competencies and skills that enable them to succeed throughout their lives.



Peter Heath

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Mr. Mohammad Atif Ehsan, Director, Student Residential Life

The academic requirements of American University of Sharjah are under continual examination and revision for improvement. The student assumes full responsibility for compliance with the most up-to-date academic requirements.

Graduate Academic Calendar 2011–2012

Fall Semester	2011
August 14	Regular admission applications deadline for Fall Semester 2011 for applicants from outside UAE
August 28	Regular admission applications deadline for Fall Semester 2011 for applicants from inside UAE Assistantships applications deadline for Fall Semester 2011 for new students
September 8	Residential halls open
September 14	Registration for new students begins
September 18	First day of classes/Add and drop period begins
September 25	Late registration period begins
October 2	Late registration and add and drop period end 5 p.m. Deadline to pay Fall Semester 2011 tuition and fees without late payment penalty 5 p.m.
October 6	Applications due for Fall Semester 2011 graduation
November 5	Classes end for Eid Al Adha holiday 10 p.m.*
November 13	Classes resume at 8 a.m.
November 27	Classes end for Al Hijra holiday 10 p.m.*
November 29	Classes resume at 8 a.m.
December 1	Classes end for National Day holiday 10 p.m.
December 3	Classes resume at 8 a.m.
December 4	Deadline to withdraw from a course without grade penalty 5 p.m. Last day to move from thesis to project and vice versa
December 18–January 5	Advising and early registration for Spring Semester 2012
December 24	Classes end at 10 p.m. for Christmas holiday
December 26	Classes resume at 8 a.m.
December 31	Classes end at 10 p.m. for New Year holiday
January 2	Classes resume at 8 a.m.
January 8	Regular admission applications deadline for Spring Semester 2012 for applicants from outside UAE
January 10	Fall semester 2011 classes end 10 p.m.
January 11–18	Fall Semester 2011 study and examination period
January 21	Fall Semester 2011 Commencement
January 22	Regular admission applications deadline for Spring Semester 2012 for applicants from inside UAE Assistantships applications deadline for Spring Semester 2012 for new students
Spring Semester	2012
January 26	Residential halls open
February 1	Registration for new students begins
February 5	First day of classes/Add and drop period begins Classes end at 10 p.m. for Al Mawlid Al Nabawi holiday*
February 7	Classes resume at 8 a.m.
February 12	Late registration period begins
February 19	Late registration and add and drop period end 5 p.m. Deadline to pay Spring Semester 2012 tuition and fees without late payment penalty 5 p.m.
February 23	Applications due for Spring Semester 2012 graduation
March 31	Classes end for Spring Break 10 p.m.
April 8	Classes resume at 8 a.m.
April 22	Deadline to withdraw from a course without grade penalty 5 p.m. Last day to move from thesis to project and vice versa
May 1	Applications due for Summer Term 2012 graduation
May 6–24	Advising and early registration for Summer Term 2012 and Fall Semester 2012
May 17	Regular admission applications deadline for Summer Term 2012 for all applicants
May 27	Spring Semester 2012 classes end 10 p.m.
May 28–June 4	Spring Semester 2012 study and examination period
June 9	Spring Semester 2012 Commencement
Summer Term	2012
June 13–14	Summer Term 2012 registration
June 17	First day of classes/Add and drop period begins
June 18	Classes end at 10 p.m. for Al Israa Wal Miraj holiday*
June 20	Classes resume at 8 a.m. Late registration period begins
June 21	Late registration and add and drop period end 3 p.m. Deadline to pay Summer Term 2012 tuition and fees without late payment penalty 3 p.m.
July 15	Deadline to withdraw from a course without grade penalty 3 p.m. Last day to move from thesis to project and vice versa
July 29	Summer Term 2012 classes end 10 p.m.
July 30–August 1	Summer Term 2012 study and examination period
<p>*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 closing, the semester(s) may be extended.</p> <p>Note: Executive graduate programs might follow a different registration and payment timeline. This time line is announced by the office of the graduate program director after consultation with the Registrar and the Office of the Director of Finance.</p>	

University Terminology

Academic Integrity	Refers to ethical behavior and principles such as honesty, responsibility, respect and fairness that guide conduct in an academic setting. For complete information, consult the Student Academic Integrity Code included later in this catalog.
Academic Status	Determined by regulations governing good standing, probation and dismissal
Academic Year	The period of time beginning with the first day of class of a fall semester up to, but exclusive of, the first day of class of the fall semester of the following year
Add and Drop	A period of time at the beginning of each semester/term when students can adjust schedules by dropping or adding courses or changing sections of a course
Admission	Formal acceptance as a student
Advisor	Faculty member/administrator assigned to counsel students on academic matters. The student is called the advisor's "advisee."
Alumni	Those who have graduated from American University of Sharjah
Audit, Course	Permission to attend and participate in a course without benefit of a grade or credit
Audit, Degree	Methodical examination and reviewing of students' compliance with their degree requirements
Bachelor's Degree	A four-year minimum undergraduate degree
Calendar, Academic	Annual listing of all official dates and deadlines for the academic year
Catalog Year	A student's catalog year denotes which specific set of graduation requirements will apply to that student. Unless altered, a student's catalog year is the year when the student was admitted to study at AUS.
Concentration	Subspecialization within a major that allows a student to focus on a particular aspect of the major
Corequisite	A course required to be taken simultaneously with another course
Course	A unit of study that may utilize lecture, discussion, laboratory, recitation, seminar, workshop, studio, independent study, internship or other similar teaching formats to facilitate learning for a student
Course Load	Total credits for which a student is registered in a given semester or term
Credit	The equivalent of a one-hour lecture, two to three hours of laboratory, or three hours of recitation work per week for one regular semester
Curriculum	A structured set of learning outcomes built in a specified set of courses
Department	An academic unit of a college or school
Directed Study	An investigation under faculty supervision beyond what is offered in existing courses
Dismissal	The involuntary separation of a student from the university for unacceptable conduct or unsatisfactory academic achievement. A student is academically dismissed when he/she fails to achieve academic good standing in two consecutive semesters.
Educational Records	Records directly related to the education of a student that are maintained by the Office of the Registrar
Elective Course	A course selected at a student's discretion after consultation with the advisor
Exchange Student	A study abroad student who is not formally admitted to American University Sharjah but is allowed to take courses at AUS for a maximum of one academic year within the context of an established formal exchange program
Extracurricular	Enrichment and leadership development activities that are part of student life but are not part of the academic program, such as student activities, athletics and music
Fee	Charges for services other than course tuition
Full-Time Student	A graduate student who is registered for nine or more credits in a given semester
Good Standing	Academic designation applied to a graduate student who has achieved a cumulative GPA of 3.00 or higher
GPA	Grade point average of the grades earned in AUS courses

Grade Points	Numerical value associated with each grade
Graduate Student	A student who is working toward completion of a master's degree
ID Card	University student identification card providing and controlling access to university facilities and services
Independent Course	A course listed in the catalog but offered in an independent study format
Independent Study	Independent course (IC) or directed study (DS) beyond the courses offered in a specific semester conducted by a student under the supervision of a designated faculty member
Major	A student's main field of study
Master's Degree	A post-bachelor's graduate degree
Matriculation	Enrollment as a degree-seeking student
Non-degree Student	Designation used for students who are enrolled in courses but are not pursuing a degree program
Petition	A written request seeking a waiver of or an exception to a university regulation, policy or deadline
Prerequisite	A course required to be completed prior to registration in another course
Prerequisite/Concurrent	A course that must be completed either along with or before enrolling in another course
Probation	A warning status resulting from the student's unsatisfactory conduct
Probation, Academic	Status of any graduate student who has less than a 3.00 cumulative GPA
Readmission	The act of admitting a student back to the university through the Office of Enrollment Management/Graduate Admissions after an interruption of studies for more than one semester. Academically dismissed students are not eligible for readmission.
Registration	The process of enrolling in classes
Regular Student	A degree-seeking student
Reinstatement	The exceptional act of approving an academically dismissed student to resume studies following dismissal. Academically dismissed students who have been away longer than one semester may not apply for reinstatement.
Required Courses	Courses other than free electives prescribed by the college/school necessary for the completion of a particular degree program
Residence	A student's tenure within the university inclusive of all interruptions of study
Schedule, Class	A list of courses offered during a semester that specifies the days, hours, locations of classes and the names of the instructors
Schedule, Student	A listing of the courses a student is taking in a given semester that specifies the days, hours, locations of classes and the names of the instructors
Semester	Either of the two 15-week periods of instruction followed by an examination period into which the academic year is divided
Suspension	The involuntary separation of a student from the university for unacceptable conduct. Suspension extends from one semester to a maximum of one calendar year.
Term	A period of instruction and exams that is shorter than a semester
Transcript	A student's historical academic record
Transfer Credit	Credit from course work completed at another institution that is accepted at AUS and which may or may not be applicable toward a specific AUS degree
Transfer Student	A student admitted to AUS after having met the AUS transfer student admission requirements. Credits completed at the student's previous university may or may not transfer to AUS.
Transient Student	A student who has completed an undergraduate or graduate degree at AUS or elsewhere and who registered at AUS for additional courses
Tuition	The fees charged for courses each semester or term
Visiting Student	A student enrolled at another accredited institution who receives permission to register at AUS (for up to two semesters) to earn credit to transfer back to his or her home institution
Withdrawal	The act of officially leaving the university for reasons other than graduation. Students may withdraw from individual courses without withdrawing from the university.

Directory

UAE Code 971, Sharjah Code 6

www.aus.edu

Department	Telephone	Fax	E-mail
Academic Achievement Center	515 2096	515 2097	aac@aus.edu
Achievement Academy/Bridge Program	515 2653/54	515 2638	academy@aus.edu
Admissions/Enrollment Management	515 1000	515 1020	admission@aus.edu
Architecture, Art and Design	515 2869	515 2800	deanarcdes@aus.edu
Arts and Sciences	515 2412	558 5067	deancas@aus.edu
Business and Management	515 2310	558 5065	deanofsbm@aus.edu
Chancellor	515 2205	558 5858	chancellors_office@aus.edu
Corporate Relations	515 2829	515 2065	odaa@aus.edu
Development and Alumni Affairs/VCDA	515 2547	515 2297	odaa@aus.edu
Engineering	515 2948	515 2979	dosoe@aus.edu
Finance	515 2185	515 2190	finance@aus.edu
Finance and Administration/VCFA	515 2192	515 2130	vcfa@aus.edu
General Information	558 5555	558 5858	info@aus.edu
Grants and Scholarships	515 2005/55/60/72	515 2040	scholarship@aus.edu
Health Center	515 2699	515 2690	clinic@aus.edu
Human Resources	515 2228	515 2139	hr@aus.edu
Information Technology	515 2119	515 2120	it@aus.edu
Institutional Effectiveness and Planning	515 2206	558 5858	ir@aus.edu
International Exchange Programs	515 4008	515 4010	ixo@aus.edu
Library	515 2252	558 5008	auslibrary@aus.edu
Operations	515 2299	558 5009	operations@aus.edu
Provost	515 2020	515 2150	provost@aus.edu
Public Affairs/VCPA	515 2207	515 2200	public_affairs@aus.edu
Registrar	515 2031	515 2040	registration@aus.edu
Research	515 2353	515 4025	research@aus.edu
Research and Graduate Studies/VPRGS	515 4024	515 4025	vrpgs@aus.edu
Sponsorship Liaison	515 1016	515 1020	sponsors@aus.edu
Strategic Communications and Media	515 2212	515 2288	communications@aus.edu
Student Accounts	515 2233/82	515 2190	studentaccounts@aus.edu
Student Affairs/VCSA	515 2166	558 5024	studentaffairs@aus.edu
Student Leadership Program	515 4772	515 4770	osaslp@aus.edu
Student Learning and Counseling Services	515 2767	515 2711	lcs@aus.edu
Student Residential Life	515 2244	515 2294	res-halls@aus.edu
Testing and Professional Development Center	515 1111	515 1011	testingcenter@aus.edu
Undergraduate Affairs and Instruction/VPUA	515 2281	515 2050	vpua@aus.edu
Emergency Numbers			
Maintenance Emergency	515 2100		
Medical Hotline (24 hours)	050 635 7651		
Security	515 2222		



LEGEND

- | | | | |
|-----------------------------|-------------------------------------|--------------------------------|--------------------------------|
| ① Main Building, Auditorium | ⑨ Languages, Health Center | ⑮ Outdoor Courts | ⑳ Faculty/Staff Housing (East) |
| ② Library | ⑩ Arts and Sciences: Physics | ⑯ Sport Fields | ㉑ Women's Dorm Reception |
| ③ Engineering School Left | ⑪ Arts and Sciences: Chemistry | ⑰ Campus Service Centre | ㉒ Men's Dormitories West |
| ④ Engineering School Right | ⑫ Business & Management | ⑱ Temporary Wellness Center | ㉓ Men's Dormitories East |
| ⑤ Student Center | ⑬ New Academic Building | ㉔ Youth Center | ㉕ Women's Dormitories |
| ⑥ Food Court | ⑭ School of Business and Management | ㉖ Faculty/Staff Housing (West) | |
| ⑦ Architecture & Design I | ⑮ Mosque | ㉗ Day Care Center | |
| ⑧ Architecture & Design II | ⑯ Sports Complex | ㉘ Leisure Center | |



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The University

Historical Preamble

American University of Sharjah (AUS) was founded in 1997 by His Highness Sheikh Dr. Sultan Bin Mohammad 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

American University of Sharjah (AUS) is a comprehensive, independent, non-profit, coeducational institution of higher education that fosters excellence in teaching, learning and research. Based on an American model of higher education and grounded in the culture of the Gulf region, AUS fosters a community that embraces cultural diversity and whose members are committed to the ideals of open intellectual inquiry, ethical behavior, and social and civic responsibility. An engaged, productive and effective member of society, AUS educates lifelong learners who display mastery in the core competencies of their areas of specialization, and who communicate clearly, think critically and solve problems creatively.

Overview

American University of Sharjah is an independent, not-for-profit, coeducational institution. Although consciously based upon American institutions of higher education, AUS is expected also to be thoroughly grounded in Arab culture and to be part of a larger process of the revitalization of intellectual life in the Middle East.

American University of Sharjah has succeeded in building a multicultural education environment 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 is emerging as a leading comprehensive coeducational university in the Gulf, serving students from the Gulf region and around the world. AUS students are introduced to a culture of high aspiration and achievement to aid them in leading productive and meaningful lives. AUS is also dedicated to the preservation of the physical environment, free from

pollution and neglect. This sense of environmental responsibility is passed on to AUS graduates in order to create ecologically aware citizens.

In keeping with its mission, AUS offers students 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 future leaders with a firm understanding of how society has reached its present state. The combination of traditional and innovative teaching methods provides an educational environment in which students can realize their individual potential and pursue their goals.

Through the College of Architecture, Art and Design, the College of Arts and Sciences, the College of Engineering, and the School of Business and Management, the university offers 25 majors and 52 minors at the undergraduate level, one graduate certificate program and 13 master's degrees.

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 conducted in English.

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.

AUS was established as an "American" university not only in its formal academic and organizational characteristics but also in the recognition that the total culture and philosophy of the educational community is as significant as the formal program of studies. Students learn the lessons of the classroom and the lessons of life in a coeducational, multicultural and multinational environment. From its inception, AUS was envisioned as a place that would "feel" like an American campus.

Accreditation and Licensure

American University of Sharjah is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools (3624 Market Street, Philadelphia, PA 19104 USA, 215 662 5606). AUS is also licensed by the UAE Ministry of Higher Education and Scientific Research, and all programs are recognized by the ministry and have been awarded either full or initial accreditation status. All bachelor's degree programs in the College of Engineering are accredited by the Engineering and Computing Accreditation Commissions of ABET, <http://www.abet.org>. All undergraduate and graduate programs offered by the School of Business and Management are accredited by the Association to Advance Collegiate Schools of Business (AACSB) (www.aacsb.edu).



Campus Life

The Campus Complex

American University of Sharjah is situated in University City, which is located 16 kilometers (10 miles) from the center of Sharjah. The distinctive architecture of the domes and arches of the academic and administrative buildings is accentuated with graceful Arab motifs.

The center of the AUS campus comprises 12 academic buildings. The academic buildings house classrooms and lecture halls of various sizes; a state-of-the-art library; science, language, computer and engineering laboratories; workshops, digital studios and dark rooms; and offices for faculty, academic administrators and support staff.

The campus includes student residential halls (for men and for women) as well as a large Sports Complex and a Student Center. Approximately 40 percent of the student body lives in campus housing. Unlike most American universities, AUS requires faculty members and their families to live on campus. Thus, there is a large and continuous faculty presence at the heart of the campus, providing students with a learning and living environment that allows for on-going interaction with faculty members and their families.

The City of Sharjah

The location of the university enhances 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 shores 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 1998 UNESCO designation 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 over 27 museums with splendid collections of artifacts and art objects as well as exhibits on 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 expositions, including the annual book fair and the Sharjah International Biennial art exhibition. These resources permit AUS to broaden students' formal education in a way not possible elsewhere in the region.

Campus Services

Banking

Located on the ground floor of the Main Building, the Sharjah Islamic Bank offers banking services such as checking and saving accounts, ATM transactions and transfer of funds. ATMs are located at the bank, the Student Center and the Women's Welcome Center.

Bookstore

Located on the ground floor of the Library Building, the bookstore sells all required textbooks, other books, art supplies, stationery, notebooks and other general gift items.

Campus Cash Program

Students can use their ID cards for purchases at various AUS outlets through the Campus Cash program at no additional charge. To participate, a student must deposit an initial sum with the university cashier, who will credit that amount to the student's Campus Cash account. The Campus Cash program is very secure, and students may check their balances online. Students can use their ID cards at most AUS outlets. For program details, visit http://www.aus.edu/admin/operations/commercial/campuscash_outlets.php

Copy Center

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

Dining

A variety of local and international franchise restaurants, coffee shops and snack services are located in the Student Center and the Library Building. Most of these outlets offer campus delivery service.

Most residential halls are equipped with kitchenettes, which include refrigerators and hot plates, in addition to vending machines containing snacks and beverages.

Gifts and Memorabilia

Located on the ground floor of the Library Building adjacent to the bookstore, the AUS Gift Shop offers a variety of merchandise, memorabilia and gift items customized for AUS.

Government-Related Services/ International Students Services

The Public Relations Department handles all official government documents and transactions for students, faculty and staff, including passport custody, medical test assistance, the processing of visas and residence permits, driving licenses, car registration, traffic violations and accidents. It also provides official letters that might be required by various government and/or private organizations.

For immigration issues, contact government_relations@aus.edu. For international students issues, contact ois@aus.edu. For further information, visit www.aus.edu/publicaffairs/publicrelations/.

Hairdresser

A beauty salon is located in the Women's Welcome Center, and a barbershop is located in the Student Center.

ID Cards

Students must carry their IDs at all times and have them available upon request. ID cards must be validated by the Public Relations Department every semester (including summer term) to avoid charges. The Public Relations Department also issues AUS ID cards for faculty, staff and their dependents.

Laundry

Regular and dry-clean laundry services are available on the west and east sides of campus near the faculty housing.

Lost and Found

The lost and found is located at the Student Center reception desk. Items unclaimed after one semester will be given to charitable organizations, sold or destroyed.

Mail

AUS provides a full-service post office on the ground floor of the Main Building. Mail is sorted daily in the post office and distributed to all offices. It also maintains individual post office boxes for all resident students. 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

Mini-Mart

The Leopard Mini-Mart provides a large variety of grocery items, fresh fruits and vegetables, and other household items. One outlet is located

in the Student Center; a second outlet is located in the Women's Welcome Center.

Parking

Parking lots, free and paid, are provided for faculty, staff, students and visitors. Vehicles must be registered with the Public Relations Department/Security Division/AUS Parking Services located on the mezzanine floor of the Main Building, office MM33. Once the vehicle is registered, a car parking sticker is issued. Faculty, staff and students using rented cars or using cars on a temporary basis, as well as visitors, are issued temporary permits.

AUS parking stickers should always be visibly displayed on the car's windshield. These stickers must be renewed during the first two weeks of every academic year.

Parking regulations and details on issuing car stickers are posted at www.aus.edu/publicaffairs/publicrelations/security/policies_e.php. The university reserves the right to make changes in urgent situations without any prior notice.

Pharmacy

Located in the Student Center, the pharmacy is part of the health coverage program and offers a full range of medication and various health, hygiene and cosmetic products.

Safety

The Safety Enforcement Division, part of the Public Relations Department, is located on the mezzanine floor of the Main Building. This division provides information on occupational safety and health hazards, and promotes a safe and healthy environment on campus. The Safety Enforcement Division can be contacted at safety@aus.edu. More information on the services and responsibilities of the Safety Enforcement Division is available at www.aus.edu/publicaffairs/publicrelations/safety/.

Security

The Security Division, part of the Public Relations Department, is the recognized law enforcement agent on campus. It monitors security on the entire campus, including the residential halls and all university-owned buildings, and works to ensure that UAE laws and AUS regulations are implemented. If a violation occurs, the security officers have the right to withdraw any ID.

This division oversees the campus traffic and parking system and is authorized to enforce all related regulations. It also provides security personnel 24 hours a day on university premises, including the residential areas, and for campus events when requested.

The Security Division is located on the mezzanine floor of the Main Building and can be contacted at aus_security@aus.edu. For more information on the Security Division's services, please refer to www.aus.edu/publicaffairs/publicrelations/security/index.php.

Transportation

AUS offers a shuttle bus service between the student residential halls and other areas of campus. Students who wish to commute off campus may contact Transportation Services, which can provide transportation to the cities of Sharjah, Dubai, Abu Dhabi and Al Ain. For more information on all routes and schedules, contact Transportation Services at 515 2171 or visit www.aus.edu/admin/operations/hts/transportation.php. Transportation Services also provides information on local taxi and rental car services.

Travel

The Travel Office, located in the Student Center, offers efficient and cost-effective services designed to assist all AUS students, faculty and staff. The office handles all travel arrangements, negotiates the most favorable rates and provides information on special offers.

Facilities and Resources

Architecture, Art and Design Facilities

Beginning with the freshman year, College of Architecture, Art and Design (CAAD) students benefit from open studios and robust, state-of-the-art facilities. Students accepted into the second year have dedicated individual worktables and computer workstations with network connections. Dedicated ancillary spaces, which are shared by all curricula, include an exhibition gallery, lecture hall, digital classrooms and closed network studios, high-end Macintosh and Intel-based labs, and comprehensive printing facilities. For CAAD students and faculty, there are Lighting, Photography, Sound and Print labs, an Interactive Lab, and a new Materials Lab and Library. Facilities cover the history of making - from clay to new materials and techniques that comprehensively span the use of the hands and hand-tools to mechanical and digital fabrication. The newly created Digital Fabrication Lab will be amongst the most advanced facilities internationally.

Computer Learning Resources

The Information Technology (IT) Department serves the computer-related administrative, instructional, technical and research needs of students, faculty and staff. It also acts as the university's gateway to the Internet for academic purposes. Services provided include e-mail accounts and passwords, online courseware (Blackboard), wireless and local area networks and telephone services.

All classrooms are networked and equipped with data projectors and other technology that enable faculty members and students to enhance learning with digital and online content. Wireless network access is available in all academic areas of the campus.

AUS departments and programs offer a range of specialized computer laboratories with software to support student work. Additionally, the library features an information commons

with an expanded range of computers, software and related technology along with support for students' research and other academic work.

The university's computer network uses fiber-optic cables that interconnect the entire campus, including the residential halls and faculty housing. Additional information can be found in the IT section of the university website.

Development and Alumni Affairs

The Office of Development and Alumni Affairs (ODAA) fosters relationships between AUS and its alumni by providing opportunities for mutual involvement that contribute to the missions and interests of both. Since many of the alumni are situated within the neighboring community, the ODAA also seeks to publicize the university's programs, goals and achievements to the off-campus community, including alumni, parents and interested friends of the university.

The ODAA promotes a spirit of unity and of possible collaboration among current and former students on current as well as future projects. The alumni are valuable assets, and they are provided ways to aid in the further development of the university by drawing on their knowledge, skills, financial resources and their sense of deep loyalty to their alma mater.

The ODAA enhances the financial wellbeing of AUS by raising contributions for the AUS Endowment Fund and establishing fruitful contacts and mutual collaborations with the wider community, which in turn enhances the visibility of AUS and its stature in the UAE and beyond.

The ODAA also offers students and alumni comprehensive career services. It works closely with industry in the UAE and the region to promote interaction between potential employers and AUS students and alumni. It organizes corporate briefings, the Alumni Business Forum, the annual Alumni Reunion and the annual Career Fair, and provides information on job opportunities, internships and summer employment. The ODAA has a career resource library and an up-to-date

database of AUS alumni and employers in the UAE and Middle East.

For more information on the ODAA, please visit www.aus.edu/odaa, or contact Dr. Nada Mourtada-Sabbah, Vice Chancellor for Development and Alumni Affairs, 06 515 2547, vcda-office@aus.edu.

Laboratories

Engineering and Computing Laboratories

The College of Engineering has approximately 30 laboratories and workshops. All equipment and instruments are accessible to and extensively used by the students. Laboratory summaries are presented below and may be reviewed in detail on the college's website.

Chemical engineering laboratories focus on unit operation, software, environmental, petroleum, water, materials, fluid flow and heat.

Civil engineering laboratories are designed for conducting standard and advanced construction materials, structural, geotechnical, fluid mechanics, water and environmental tests pertinent to both teaching and research.

Engineering research activities are conducted in advanced laboratories related to computer engineering programming, digital systems, microprocessors, very large scale integration (VLSI), embedded systems, industrial computer applications, computer networks, software engineering, operating systems and databases.

Electrical engineering laboratories focus on electronics, electric power, control, measurements, machines, communications and signal processing, nondestructive testing and medical electronics.

Mechanical engineering has laboratories for engineering measurements, control, engine testing, advanced manufacturing, fluid mechanics, materials testing, dynamics and mechanical vibrations, computer-aided engineering, refrigeration and air-conditioning, thermodynamics and solar energy.

Mechatronics engineering has a well-equipped center providing an excellent work environment for multidisciplinary teaching and research. Lab activities enable students to integrate, with synergy, contemporary precision mechanics, state-of-the-art control systems, embedded computers and electronics.

The various departments share eight computer labs with more than 230 stations loaded with research-type software. All labs have dedicated lab instructors and engineers. Additionally, all engineering facilities offer wireless connectivity.

Interpreting and Translation Laboratory

The Department of Arabic and Translation Studies has a purpose-built interpreting facility. It features simultaneous interpreting booths, a consecutive interpreting table, Internet access and equipment for simulated video teleconferencing. This interpreting facility is also equipped with the latest technology and machine translation software, TRADOS and other relevant, including Internet-based, software needed in language engineering.

Mass Communication Laboratories and Studios

Students in the Department of Mass Communication benefit from high-tech digital classroom labs with Mac and PC computer stations featuring graphic design, desktop publishing, video effects, video editing and multimedia software. The Mass Communication TV Studio is a state-of-the-art facility that is dedicated to the development of student media skills. The studio consists of four digital wide-screen cameras, a wide-screen digital video mixer and a digital audio mixer. A variety of sets can be created quickly, including a broadcast news set.

Science Laboratories

The science programs benefit from up-to-date laboratories and equipment. Chemistry laboratories are equipped with standard chemical instrumentation, including balances, centrifuges, pH-meters, spectrophotometers, a rapid kinetic apparatus, glove box, and electrochemical and chromatographic equipment. The environmental sciences

and analytic chemistry laboratories are equipped with the latest sampling and analytical devices, including AA, GC-MS, ICP, FTIR, TOC, HPLC equipment and a 400 MHz Bruker Biospin NMR machine. The physics laboratories are supplied with up-to-date standard equipment, including computer interfaces, motion sensors, current sensors, voltage sensors, magnetic field sensors, linear air tracks, photogates, smart timers, projectile launchers, ballistic pendulums, rotational systems, digitometer, electric field mappers, current balance apparatus, signal/function generators, oscilloscopes, a Hall effect apparatus, lasers, spectral lamps, photoelectric effect apparatus, Geiger-Muller tubes, radiation counters, h/e apparatus, Frank Hertz apparatus, e/m apparatus, spectrometers, interferometers, X-ray machines, a Millikan oil drop apparatus, heat engines/gas law apparatus, a thermal expansion apparatus and an adiabatic gas law apparatus. The biology laboratories are equipped with the latest stereo inverted and compound microscopes, a microtome, an autoclave, a laminar flow sterile hood, PAGE and agarose electrophoresis equipment, cryostat and microtome units, a workstation with a computer connected to digital microscope cameras, a growth chamber, IDEXX Colilert and a manifold filtration unit for microbiological analysis, a gel documentation system, a UV trans-illuminator, refrigerated microcentrifuges, a trans-blot semi-dry transfer apparatus, a gel dryer, CO₂ cell incubator, -80 °C freezer, a tissue homogenizer, and a thermocycler for DNA amplification.

Library

The AUS Library, an 11,000-square-meter state-of-the-art facility, provides collections, services and programs to support the curricular and research needs of the university community. The AUS Library provides a wide range of resources and services to meet the specialized needs of graduate students. The library has a growing collection of 125,000 items that includes reference materials, books, DVDs, and magazines and scholarly journals. In addition to its print collections, the library provides

access to over 50,000 e-books, thousands of electronic journals and over 50 online databases. Through the library's website, AUS users can search the online catalog, access databases, read e-books and full-text journal articles, and find other digital resources whether on or off campus. The website also provides instructional aids such as subject guides and tutorials to help students use the library more effectively. Library facilities include a technology-intensive Information Commons, group study rooms, media viewing rooms, and an abundance of reading and study areas. For students who need a silent study environment, the library offers three "No Talking Zones" in which talking, whispering and mobiles are prohibited. Working with professors, AUS librarians offer hands-on workshops on performing library research, conducting a literature review, evaluating sources and websites, and using both print and electronic tools more effectively. Graduate students can request books or journal articles not available in the library through the interlibrary loan service. Further information regarding the library is available at <http://library.aus.edu>.

Strategic Communications and Media

The Strategic Communications and Media Department is responsible for developing, overseeing and implementing a comprehensive communication strategy for AUS. The communications plan is aligned with the university's vision, mission and strategic directions and is designed to achieve AUS's short- and long-term objectives by successfully targeting and communicating with key university audiences and core constituencies. The department works closely with the institution's leadership to advance AUS's local, regional and international positioning aspirations; actively support all aspects of its institutional advancement agenda; solidify its current favorable public image; efficiently manage its media, print and electronic communication tools; successfully engage internal and external constituents; ensure campus-wide communications discipline; and create a culture of

collaborative production and effective dissemination of quality information.

Research and Grants

AUS supports and promotes the research and consulting activities of its faculty members. In addition, AUS offers its students opportunities to work on faculty research projects, to present papers with faculty at international conferences and to assist faculty in developing research grants.

AUS upholds its ethical and legal responsibility to administratively review all proposed research projects involving humans or animals as participants to ensure compliance with internationally recognized principles and regulations governing the protection of research participants. All research studies at AUS involving the participation of humans must be submitted to and approved by the AUS Institutional Review Board (IRB) before any study is undertaken; research involving animals must be approved by the Animal Care Committee.

For further information on the university's research and grant opportunities, please visit the AUS website.

Research Centers

AUS has established a number of research centers as part of its commitment to research and community outreach.

Earthquake Observatory

The AUS Earthquake Observatory uses state-of-the-art equipment and software to record and analyze the region's earthquake activity. The Earthquake Observatory also provides expert opinions on earthquake hazards and related risk in the UAE and the Gulf region; assessment of seismic hazards at construction sites and petrochemical and industrial facilities; assessment of seismic risk of existing structures and recommendations for strengthening and retrofitting; analysis and design of earthquake-resistant structures; evaluation of local site effects; preparation of macrohazard and microhazard zonation maps; evaluation of dynamic soil properties;

training workshops for engineers on the analysis and design of structures for earthquake loading; and expertise on the development of earthquake-resistant design codes.

Institute of Materials Systems

The Institute of Materials Systems (IMS) was established to promote materials research and education. It collaborates with governmental and private sectors in areas of materials research and applications, focusing on quality control, performance, development and use of standard procedures, and quality assurance materials used in the region. Objectives of the institute are to conduct scientific research focused on materials properties and applications in harsh environments; assist governmental departments in establishing local and regional codes of practice; provide independent technical evaluation and consultation services on materials-related issues; enhance education through seminars, conferences and short courses; and establish collaboration with similar centers of excellence worldwide.

Institute of Urban and Regional Planning and Design

The Institute of Urban and Regional Planning and Design advances urban planning as it relates to the local culture and identity of the UAE and the Arab Gulf region, and promotes sustainability as integral to all activities pertinent to urban planning and urban design. The institute's objectives are to advance production and accumulation of knowledge in urban and regional planning and urban design; develop and offer educational and training opportunities in urban and regional planning and urban design; collaborate with local governmental, not-for-profit, non-governmental and private agencies concerned with urban planning and development to advance quality of practice and research; advance public discourse on urban planning through public forums (e.g., seminars, conferences, symposia); and increase public awareness in urban planning and urban design.

Mechatronics Center

The Mechatronics Center leads

research and development in advanced engineering systems to address high-tech technology transfer in the region. It promotes multidisciplinary research activities between faculty members and graduate students at AUS, and industry and governmental agencies that require extensive integration of instrumentation, control systems, electronics, intelligent software and computers. The Mechatronics Center offers excellent networking opportunities with leading industries in the region as well as top academic institutions worldwide. Areas of expertise within the center include embedded and distributed process control, remote monitoring, nonlinear and intelligent control systems, robotics and autonomous systems, unmanned vehicles and machine vision.

Testing and Professional Development Center

The AUS Testing and Professional Development Center serves as a central point of testing for both the AUS campus and the community. The center accommodates the placement tests for newly AUS admitted students as well as university testing. The center is part of the Prometric Strategic Testing Network and offers the ETS Internet-based TOEFL as well as an institutional paper-based TOEFL.

AMIDEAST, one of the region's most prominent international testing administrators, is an AUS testing partner and has a permanent office on the AUS campus to administer TOEFL tests (paper-based) on a regular basis, as well as other recognized international tests.

University Health Center

The University Health Center (UHC) provides primary health care to all AUS students, and faculty and staff members and their dependents. The center is open Sunday–Thursday from 8:30 a.m. to 4:30 p.m. and provides 24-hour accident and emergency care as well. Depending on the severity of the illness, patients are referred to hospitals for further treatment. Great emphasis is

placed on making the campus a healthy and safe place to study, work and live through providing preliminary physical examinations to all students and employees as a mandatory part of the registration/employment process and then followed by continued quality care throughout their time at AUS.

The UHC is staffed with a highly qualified medical team, which includes general practitioners, a psychologist and registered nurses. The UHC is equipped with an ECG machine to monitor heart ailments, nebulizers for respiratory problems, a respiratory function test (spirometer), glucometers to check blood sugar levels, and an observation room (day care) to closely monitor patients. The UHC has access to on-campus laboratory and pharmacy to assist in serving the AUS Community.

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. UHC programs include lectures and awareness campaigns on health-related issues such as first-aid training and CPR courses, substance abuse, mental health, smoking cessation and healthy eating.

Health Insurance Plans for Students

Health insurance is available for graduate students. Two plans are provided. For information, visit www.aus.edu/admin/uhc.

University Sports Complex

The Sports Complex facilities include indoor sports courts (basketball, tennis, squash and volleyball), multipurpose halls and exercise and gymnastic halls for use in both organized sports and free recreation; a 50-meter swimming pool; saunas; a fitness center with free weights and exercise machines; an exercise hall for aerobics, table tennis and martial arts events; outdoor courts (tennis, volleyball and basketball); a soccer field; a cricket ground; a cricket practice net; and a baseball field.

The AUS athletic facilities are available for the benefit of the entire AUS community. The Sports Complex fosters the continuing development

of collegiate sports in the UAE through organizing and hosting athletic championships, symposia and training courses. Students, staff and faculty members are entitled to free participation, regardless of their abilities, in a variety of sports and leisure activities including fitness training, football, basketball, badminton, handball, volleyball, table tennis, tennis, squash, track and field games, martial arts and other athletic pursuits.

Details on the university's athletic facilities are available in the *Student Handbook* and at www.aus.edu/osa/athletics/.

Student Life on Campus

Code of Conduct

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 (OSA) establishes and enforces those rules and regulations. The full text of the Student Code of Conduct is provided in the *Student Handbook* and at www.aus.edu/policies/documents/Student_Code_of_Conduct.pdf.

As part of OSA, Judicial Affairs is responsible for educating students about their rights and responsibilities, creating awareness within the AUS community about the Student Code of Conduct, and implementing the code in a fair and consistent manner. Allegations of misconduct under the Student Code of Conduct are resolved by Judicial Affairs in a manner consistent with the core

values of fairness, honesty and integrity. Judicial Affairs is located on the first floor of the Student Center in offices A254–256 and 233–234.

Judicial Affairs also offers mediation services, which assist students in resolving conflicts through mediation. Students are trained in mediation and awarded a certificate on successful completion of mediation sessions. For more information, please refer to the *Student Handbook* or visit www.aus.edu/osa/judicialaffairs.

Community Services

AUS Community Services is a link between students and the various needs found in society. Community Services allows students to experience first-hand the value of serving others through charity, awareness and outreach programs. It involves them personally in community events that 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 are listed in the Student Affairs section of the university website and in the *Student Handbook*. Students who are interested in learning more about these programs should visit the Community Services Office located in the Student Center (office A222), call 515 2794 or send e-mail to communityservices@aus.edu.

Cultural Events

Drama performances and musical events, ranging from classical and regional to jazz and rock, are brought to campus through the Cultural Events Committee. For more information, visit www.aus.edu/culturalevents/.

Graduate Student Employment Opportunities

AUS offers graduate students several employment/learning opportunities on campus: employment through graduate assistantships, as research assistants on faculty research projects (both internally and externally funded grants) and as work-study students. For more information, please refer to section

4.0 Graduate Student Employment Opportunities in the Graduate Student Handbook section of this catalog.

Office of Student Affairs (OSA)

The Office of Student Affairs is responsible for making student life interesting and noteworthy at AUS. Student Affairs transforms student life with a purpose, engaging them in extracurricular activities outside the classroom. OSA offers non-academic student support services and state-of-the-art facilities that enable students to accomplish their personal and educational goals. Students are engaged in diverse programs, activities and events and provided services through Student Athletics and Recreation, Student Development and Organizations, the Student Multicultural Learning Program, the Student Leadership Program, Student Residential Life, Student Learning and Counseling Services, and Judicial Affairs. More information on Student Affairs is available through www.aus.edu/osa/. You can also visit the Vice Chancellor for Student Affairs Office located in the Main Building, Second Floor M-217, call 515 2166 or email studentaffairs@aus.edu.

Residential Life

The main objective of the Student Residential Life Department of OSA is to support and complement the mission of the university and its academic programs by creating a comfortable and safe environment that contributes to the success of resident students' educational progress and personal growth. The AUS residential halls offer a unique multicultural environment in which students from different parts of the world can learn from one another.

Because residential hall living is seen as a positive educational experience, students are encouraged to live on campus. Living on campus complements the overall learning experience by fostering independence and tolerance of others in students. Priority in room allocation is given to undergraduate students.

The university offers a variety of rooms at different rates. All residential hall rooms have Internet and direct

telephone connections. In addition, the residential halls offer students many resources, including study rooms, computer labs, dining areas, recreational areas, TV rooms, laundry facilities and fitness centers. The Women's Welcome Center, located in front of the women's residential halls, features a hair salon, a TV room/reception area and a mini-mart.

Living on campus is encouraged because it allows students to make the most of what AUS has to offer, such as sports and dining facilities, the library and laboratories. Furthermore, it gives students convenient access to the many activities that take place during the day and in the evening. The university offers a convenient bus service between the residential halls and other areas on campus.

The residential halls for male and female students are completely separate. All hall residents are expected to spend every night in the halls. To ensure the security of all students, the residential halls are protected by security patrols. Residential halls staff members are available around the clock for the safety and comfort of all residents. Regulations for the residential halls are available in the *Student Handbook* and on the university website.

Student Activities

Under the supervision of the Student Development and Organizations Department, students are encouraged to organize many events that offer cultural entertainment to the entire university community. These events include the Global Day festivities, Club Fair, music nights, poetry nights, competitions, the UAE National Day celebration and many more. The Student Development and Organizations Department is located in the Student Center. Visit www.aus.edu/osa/activities/ for details.

Student Athletics and Recreation

The Office of Student Affairs believes that students should have ongoing opportunities to develop their talents through a wide variety of sports. To achieve this goal, full-time and part-time coaches and trainers are available in the AUS Sports Complex to help students develop team play,

sportsmanship and healthy lifestyles. More than 20 activities are available, featuring both team and individual sports and leisure activities, which offer broad-based competitive and instructional programs for both genders. Details on the university's athletic facilities are available in the *Student Handbook* and at www.aus.edu/osa/athletics/.

The university's intramural sports program complements students' academic, social and cultural education. Involvement in intramural sports activities allows students to develop new friendships and enjoy the benefits of exercise.

In line with its continuous endeavor to foster collegiate sports in the UAE, the Sports Complex offers students the opportunity to participate in collegiate athletic championships, symposia and training courses it organizes and hosts.

Student Center

The Student Center plays a broad role in the extracurricular life of the university. It is a comfortable and inviting place where students relax. In addition to housing the Student Development and Organizations Department, the Student Center contains several meeting rooms, student lounges, a women's lounge, the Student Council office, offices for student organizations, activity rooms, a TV room, multipurpose rooms, the Internet Café, a student courtyard, a full-size eight-lane bowling alley, the Leopard Mini-Mart, a barbershop, a pharmacy, a travel office and numerous food outlets. Students can surrender found items or look for ones lost at the Lost and Found based at the Student Center reception desk.

Student Council

His Highness Sheikh Dr. Sultan Bin Mohammad Al Qassimi 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. The AUS Student Council is an elected body that articulates student

views and interests in the university. The Student Council is a vehicle for ensuring that students can have a voice in formulating university priorities and policies. It also provides a structure for greater student involvement on campus. The Vice Chancellor for Student Affairs advises the Student Council. For more information, please see the *Student Handbook* or visit www.aus.edu/osa/council/index.php.

Student Development and Organizations Department (SDOD)

Student Development and Organizations Department (SDOD) promotes student intellectual growth, skills and all-round personality development by engaging them in multicultural programs, registered student organizations, volunteer programs, student employment, and varied events and activities locally, regionally and internationally. SDOD offers resources and services that aid student participation and development and builds the university's reputation through student achievements. For more information, please see the Student Handbook or visit www.aus.edu/osa/activities/index.php.

Student Leadership Programs

The Student Leadership Program (SLP) fosters ethical leadership and offers a wide range of opportunities that develop students' leadership, personal and communication skills and prepares them for a lifelong commitment to leadership and citizenship. Student Leadership Program offers Peer Leaders Program, Civic Leadership and Responsibility Program, Emerging Leaders Program, Special Function Leaders Program, Student Training and Workshop Series and Women Leadership and Enrichment Program.

Student Leadership Program is located in the Student Center, First Floor, A249, 250 and A239. For more information visit www.aus.edu/osa/leadership_program/index.php, e-mail osaslp@aus.edu or call 515 4772.

Student Multicultural Learning Program

The Student Multicultural Learning Program helps students gain firsthand knowledge of cultural diversity and expand their understanding of the cultural, historical and sociological backgrounds of the UAE and of other countries around the world. Besides cultural diversity, students also learn about diversity in business, government, politics and lifestyles that exist in other societies around the globe. For more details visit www.aus.edu/osa/.

Student Organizations

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

The Student Development and Organizations Department is the central support for the numerous student organizations on campus. Its role includes supervising and providing assistance with program planning and implementation. The student organizations at AUS span a wide range of interests, including sports, music, literature, recreation, culture and social issues. There are also many cultural/ethnic/national organizations that reflect the varied backgrounds of AUS students. These organizations offer students opportunities for leadership development and for involvement in university life. Student organizations have easy access to all the facilities they may need to plan, organize and implement their activities. Each organization has access to an office that is equipped with all necessary tools to conduct their business. Conference rooms, meeting rooms and a multipurpose room are also available for student organizations' use.

Interest-oriented and ethnic/national clubs represent the diversity of the AUS community's professional and extracurricular interests and cultural backgrounds. They organize numerous professional and cultural activities throughout the academic year and play a vital role in fostering a rich multicultural

environment on campus. For a complete listing of student clubs, visit www.aus.edu/osa/activities/clubs_orgs.php.

Participation in student organizations is strongly encouraged. Students are also encouraged to form organizations/clubs that promote their interests and hobbies.

Student Publications

Practical writing experience is available to AUS students through three student publications, the *Leopard*, *Realms* and *Tatra*. Students interested in contributing to or working on these publications should contact the Student Development and Organizations Department for further information.

The *Leopard* Newspaper: "A Reason to Roar": The *Leopard* is an official university newspaper and a voice of AUS students. The leopard is the official AUS mascot and was chosen because the UAE preserves and protects the Arabian leopard, which is currently on the brink of extinction.

***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 their creative work. *Realms* aims to foster an interest in creative writing and literature and to help students view the English language as a means of expressing their thoughts and feelings and not merely as an academic tool.

***Arabian Leopard*:** The *Arabian Leopard* newspaper gives students the chance to develop and proudly present their Arabic writing skills and creative writing.

Students with Physical Challenges

Student Learning and Counseling Services provides assistance to AUS students who are physically challenged. Students who need further information should contact Student Learning and Counseling Services in the Student Center (offices A202–207) or call 515 2732.

Student Educational Services

Cisco Academy

AUS hosts a Cisco regional networking academy in the College of Engineering. The academy trains students and professionals to design, build and maintain computer networks and prepares them for industry-standard certification. For more details, see the College of Engineering section of this catalog, or visit www.aus.edu/engr/cisco/ or e-mail ciscoacademy@aus.edu.

International Exchange Programs

The Office of International Exchange Programs works with AUS students who wish to study at universities in other countries either for a semester or a year. The office also facilitates the admission of international students coming to AUS to study.

For more information on exchange students admission to AUS, please see the Exchange Student Admission section in Admission to Undergraduate Studies later in this catalog.

For information on study abroad opportunities for AUS students, please see the section entitled AUS Students Studying Abroad under Registration and Course Information in the Academic Policies and Regulations section of this catalog.

Learning and Counseling

Student Learning and Counseling Services (SLCS) offers support services to enhance the success of students. These services include assisting with academic growth, educational and career goals, problem solving, decision making, understanding and appreciation of oneself, and interpersonal relationships.

Counseling is strictly confidential. The information shared with a counselor will not be disclosed to another individual or organization without the written consent of the student. Services are free, voluntary and available to all undergraduate and graduate students currently enrolled at AUS. Appointments may be arranged by calling 515 2767,

or by visiting the SLCS on the first floor of the Student Center. For more information, please contact SLCS at lcs@aus.edu.

Student Learning and Counseling Services offers a variety of services to students, including ADD, personality/ WAIS-III, IQ, Insight Inventory, Dyslexia Adult Screening Test (DAST), Brown Attention Deficit Disorder Scale (BADDS) and mental/behavioral testing. Students may choose to include any member of their family or other significant persons in the process.

Services offered by SLCS include:

Counseling

Counselors work with students to explore any academic or personal problems or concerns they may be experiencing. Examples of common issues that bring students to SLCS include adjusting to university life, study skills or time management issues, confusion about life or career goals, identity concerns, relationship conflicts, depression, anxiety, grief and loss. Students who have been counseled at home or off-campus may wish to continue with counseling at the university.

SLCS provides different types of counseling services: individual counseling, group counseling, couples counseling, crisis counseling, family therapy and personality testing.

SLCS also offers private consultation for students, faculty members and staff members who would like advice about how to help a student through a difficult time.

In addition to direct counseling, counselors can also provide referral information to students.

Self-Help Resources

SLCS has extensive self-help resources on many subjects in the form of handouts, books, videos and links on its section of the university website. Topics include coping with stress, depression, sleep disturbance, loneliness, anxiety, eating disorders, grief and loss, substance abuse, relationship building, assertiveness, career choices, study skills, concentration and memory, motivation, time management, and test-taking strategies.

Student Workshops

Workshops are conducted throughout the academic year on topics such as time management, study skills, communication skills, anxiety and stress management, anger management, and eating and body image concerns. Workshop topics and dates are advertised around campus, or students can call to learn about future workshops. Students are encouraged to contact SLCS with ideas for future workshops.

Writing Center

The AUS Writing Center, located on the first floor of the AUS Library building and in the Language Building (LAN 004) next door to the University Health Center, helps students become independent, confident writers. Available to all AUS students, the Writing Center offers one-on-one writing conferences by appointment or on a drop-in basis. Consultations may include: thesis development, organization, outlining, paragraph development, vocabulary, sentence structure and mechanics. Students may visit the Writing Center to work on drafts, to do research or to work with a consultant on particular aspects of their writing. The Writing Center also offers workshops on a variety of writing topics throughout the academic year. For more information, visit www.aus.edu/cas/writingcenter.



THE AMERICAN UNIVERSITY OF SHARJAH

الجامعة الأميركية في الشارقة

Admission to Graduate Studies

American University of Sharjah is a center for high-quality graduate education and research as well as a resource for sustainable development and advancement for the Gulf region and internationally. Students in AUS graduate programs find career advancement opportunities and personal enrichment. These programs foster a stimulating intellectual environment of collaborative research and intellectual exchange. The university's cross-disciplinary graduate courses and specialized programs attract excellent students who pursue creative and original work under the guidance of highly qualified, dedicated faculty members recruited from the most prestigious universities in the United States, Canada and around the world.

Degree Offerings

AUS currently offers 13 programs of graduate studies leading to the master's degree and one graduate certificate program. These are:

College of Architecture, Art and Design

- Master of Urban Planning

College of Arts and Sciences

- Master of Arts in English/Arabic/English Translation and Interpreting
- Master of Arts in Teaching English to Speakers of Other Languages (TESOL)
- Graduate Certificate in Museum and Heritage Studies

College of Engineering

- Master of Science in Chemical Engineering
- Master of Science in Civil Engineering
- Master of Science in Computer Engineering
- Master of Science in Electrical Engineering
- Master of Science in Engineering Systems Management
- Master of Science in Mechanical Engineering
- Master of Science in Mechatronics Engineering

School of Business and Management

- Master of Business Administration
- Executive Master of Business Administration
- Gulf Executive Master of Public Administration

Application Process

Admission to all AUS graduate programs is processed through the Office of Enrollment Management/Graduate Admissions. Applicants should address all inquiries, requests for application forms and correspondence to:

American University of Sharjah
Office of Enrollment Management
Graduate Admissions
P.O. Box 26666, Sharjah, UAE
graduateadmission@aus.edu
www.aus.edu/programs/graduate

To apply to a graduate program at AUS, an applicant must:

- complete the official graduate application form available from the Office of Enrollment Management/Graduate Admissions or through the AUS website
- pay the application fee
- submit official transcripts and TOEFL scores to the Office of Enrollment Management/Graduate Admissions
- submit to the Office of Enrollment Management/Graduate Admissions an equivalency of his/her degree from the UAE Ministry of Higher Education, (applies only to applicants with a bachelor's degree obtained outside the UAE)

Incomplete applications are not processed.

Upon receiving a complete application, the Office of Enrollment Management/Graduate Admissions determines if the applicant meets the general university requirements. For those applicants who meet such requirements, graduate admission committees within each program will review their applications and make

recommendations for admission.

Applicants must satisfy both general university requirements for graduate study and graduate program-specific admission criteria.

The Office of Enrollment Management/Graduate Admissions will notify the applicant of the university's final decision. When accepted into a graduate program, an applicant will be informed of the required tuition fees and dates for advising and course registration.

Application Deadlines

Applicants must submit completed application forms and all supporting documents to the Office of Enrollment Management/Graduate Admissions by the following dates:

Fall Semester 2011

August 28, 2011

Spring Semester 2012

January 22, 2012

Summer Term 2012

May 17, 2012

Applications received after these deadlines will be considered based on seat availability.

International Applicants

International applicants (i.e., graduates of universities located outside the UAE) are required to submit completed application forms and all supporting documents to the Office of Enrollment Management/Graduate Admissions by the following dates:

Fall Semester 2011

August 14, 2011

Spring Semester 2012

January 8, 2012

Summer Term 2012

May 17, 2012

Applicants in this category are required to present an equivalency of their degree from the UAE Ministry of Higher Education and Scientific Research located in Abu Dhabi, UAE.

Details on the procedure can be obtained directly from the ministry by calling +(971) 2 695 1300 or +(971) 2 642 8000, or by visiting www.moheesr.ae/equicert.

Admitted international students who need visas for the UAE should submit the visa application form, which is included in the admission package and also available from the AUS website, at least one month prior to the first day of class.

Note: *Admission is only valid for the semester for which the candidate has applied. If applicants do not enroll in the semester for which they have been accepted, they may request that their admission be deferred to the following semester. A written request should be submitted to the Office of Enrollment Management/Graduate Admissions.*

General University Requirements for Graduate Admission

To be considered for admission, all applicants must meet the general university requirements for graduate admission. Some graduate programs have additional requirements. For program-specific requirements, applicants should consult the pertinent degree program listing in this catalog.

Full Admission

For full admission to a graduate degree program at AUS, an applicant must:

- hold a four-year bachelor's degree from an independently accredited university recognized by AUS (applicants with a bachelor's degree obtained outside the UAE must submit an equivalency of their degree from the UAE Ministry of Higher Education)
- have attained a minimum cumulative grade point average (CGPA) of 3.00 (on a scale of 4.00) or its equivalent, and 3.00 or its equivalent in 300- and 400-level courses in discipline(s) relevant to the graduate program
- have attained a minimum Internet-Based TOEFL score of 80

Furthermore, the TESOL program also requires a TWE (Test of Written English) score of 5.

Other graduate programs may require

additional specific admissions requirements. For details, please refer to the relevant graduate program section of this catalog.

Conditional Admission

Conditional admission to a graduate program may be granted to applicants who meet the following requirements:

- hold a four-year bachelor's degree from an independently accredited university recognized by AUS
- have attained a minimum cumulative GPA of 2.50 (on a scale of 4.00) or its equivalent
- have attained a minimum Internet-Based TOEFL score of 71 (applicable to all programs except TESOL)

Conditional admission applicants may also be required to meet additional specific requirements in their requested program. Applicants should consult the relevant degree program section of this catalog.

To be accorded full admission into a graduate program, a conditional admission student must:

- achieve before the beginning of the second semester the required TOEFL score for full admission (Internet-Based TOEFL score of 80)
- achieve a cumulative GPA of at least 3.00 in graduate-level courses completed in the first semester. Conditionally admitted students are not eligible to register for more than two graduate courses (a maximum of six credit hours) in their first semester of study.

If either provision is not met, the student will not be allowed to continue his/her studies at AUS.

Important: *Each graduate program may assign undergraduate prerequisite courses and/or specially tailored courses for conditional admission students. Credits from these courses do not satisfy credit requirements for completing the graduate degree and are not used to calculate the graduate cumulative GPA.*

Mature Students Admission

AUS may offer admission to mature students who have earned a bachelor's degree five or more years ago from an

independently accredited university recognized by AUS and have a demonstrated record of significant work experience during the period since graduation.

Students granted admission as mature students must obtain a combined average of 3.00 in their first nine credit hours of credit-bearing courses completed for the master's program, as well as a combined average of 3.00 in any required bridging courses (if applicable). Students who fail to meet these conditions will not be allowed to continue their studies at AUS.

Mature students are normally not eligible to register for more than two graduate courses (a maximum of six credit hours) in their first semester of study.

Students seeking admission as mature students must consult with the Office of Enrollment Management/Graduate Admissions.

Non-degree Admission

Non-degree graduate students are those who wish to take AUS courses for academic credit but who do not seek a master's degree. Students are admitted to AUS with non-degree status if they meet requirements for full or conditional graduate admission. Complete applications should be submitted to the Office of Enrollment Management/Graduate Admissions.

Non-degree graduate students may take a maximum of nine credit hours at the graduate level.

Non-degree graduate students who meet the requirements for graduate conditional admission may register for no more than six credit hours in their first semester of study. If all requirements are met, registration in three credit hours in a subsequent semester will be allowed. Registration in courses will be subject to approval by the relevant graduate program director. Standard graduate tuition and fees apply.

Transient Students Admission

Transient student status covers:

- those who have obtained their undergraduate or graduate degrees

from AUS and have returned to take extra course(s) at AUS

- those who hold degrees from universities other than AUS and who want to take course(s) at AUS but not toward a degree
- AUS faculty/staff and spouses of faculty/staff who want to take course(s) for reasons other than seeking a degree

Applicants seeking transient student status at AUS must submit the Transient Student Application to the Office of the Registrar. The form is available at www.aus.edu/ixo/visiting_student.php.

Transient students may enroll in any university course for which they have the necessary academic background and qualifications. They must register for courses through the Office of the Registrar. In courses with enrollment limits, priority is given to AUS students.

Normally, a student can register as a transient student for no more than one academic year. Standard graduate tuition and fees apply.

For further information, please contact the Office of International Exchange Programs at ixo@aus.edu.

Visiting Students Admission

Students may enroll as visiting graduate students at AUS for credit transfer to their home universities. To be admitted as a visiting graduate student, a student must be enrolled in a graduate program at an accredited institution and be in good academic standing in his/her current institution. In addition, students must have attained a minimum Internet-Based TOEFL score of 80.

Applicants seeking visiting student status must submit to the AUS Office of International Exchange Programs the Visiting Student Application (available from the Office of International Exchange Programs and at www.aus.edu/ixo), an official university transcript showing courses in progress at the time of application and a letter of good academic standing from their home institution. To secure seats in courses, applications should be submitted by April 15 for summer and fall enrollment and November 15 for

spring enrollment. If the application is approved registration is completed through the Office of the Registrar. Visiting students may enroll in university courses for which they have the necessary academic background and qualifications. Registration in courses is subject to approval by the relevant graduate program director. In courses with enrollment limits, priority is given to AUS students.

Students are admitted as visiting students for a maximum of one academic year, and are responsible for determining that AUS credits are transferable to their home institutions. Standard graduate tuition and fees apply.

For further information, please contact the Office of International Exchange Programs at ixo@aus.edu.

Change of Status

Students may request a change of status (from non-degree to degree status, or from visiting to degree status) by submitting a complete application through the Office of Enrollment Management/Graduate Admissions. All admissions requirements in place at the time of the change of status request must be met.

Courses taken while under non-degree status may be accepted with the approval of the graduate program director. Grades earned in courses that are accepted will count in the cumulative GPA (CGPA). The university rules and regulations governing transfer courses and credits will apply.

Transfer Credit Policy

A graduate student may transfer up to nine graduate credits from a recognized graduate school at an accredited university to his/her program of study at AUS, depending upon program-specific rules and regulations. Such transfer credits should meet all of the following criteria:

1. The course work must:
 - be applied toward a graduate degree at the host institution and be taken

for graduate credit

- be approved by the graduate program director in consultation with appropriate faculty members
 - not have been used to earn another degree
 - not have been taken more than five years prior to entering a graduate program at AUS. (Some programs have more stringent time limitations on transfer credits. Consult individual program descriptions and graduate program directors for regulations.)
2. The student must have earned a grade of B or higher for 500-level or 600-level courses or other courses restricted to graduate students.

Transfer credit will not be accepted for research and thesis/dissertation hours, travel experience or work/life experience.

Business administration courses will be transferred only from programs accredited by the Association to Advance Collegiate Schools of Business (AACSB) or from universities approved by the School of Business and Management.

Grades earned in transferred courses do not count in the student's cumulative GPA (CGPA). Credit hours of transferred courses count in the cumulative earned hours and may apply towards meeting graduation requirements.

Applicants must request that credit transfers be reviewed at the time of application.



Tuition and Fees

Graduate student tuition, additional fees and housing charges are given in the tables below. Non-degree, transient and visiting students must pay the same tuition and fees as regular students.

Graduate Tuition (in AED)	
College of Architecture, Art and Design	3,720/per credit hour
College of Arts and Sciences	2,960/per credit hour
College of Engineering	3,720/per credit hour
School of Business and Management	
Master of Business Administration	3,720/per credit hour
Executive Master of Business Administration	190,000 for the complete program
Gulf Executive Master of Public Administration	140,000 for the complete program

Graduate Fees (in AED)	
Application Fee	200
Late Registration Fee	500
Lab/Technology Fee A (applies for each registered Rate A course - check Course Descriptions section)	610
Lab/Technology Fee B (applies for each registered Rate B course - check Course Descriptions section)	840
Thesis or Project Extension Fee	200
Thesis Processing Fee	1,000
Internship Fee	400
Deposit Payment (for MBA program only)	500 (non-refundable, non-transferable)
Health insurance is available for graduate students. The insurance fee is 300 Dirhams (AED) per semester or 600 Dirhams per semester, depending on the type of plan applicable to each student. Visit the University Health Center's web page for more information on the health insurance plans.	

Student Housing Fees

AUS has residence halls for men and for women. Living on campus is optional. Students should contact the Office of Student Affairs for information regarding individual requirements.

Room		Per Semester (AED)	Per Summer Term (AED)
Private	Single occupancy with private bath and kitchenette	14,900	5,960
Semi-Private	Single occupancy with a shared bath and kitchenette	10,550	4,220
Sharing	Double occupancy with a shared bath and kitchenette	5,780	2,310
Single	Single occupancy with a common bath and no kitchenette (men only)	5,560	-
Double	Double occupancy with a common bath and no kitchenette (men only)	3,230	-
Other Fees			
Refundable Dorm Damage Deposit	1,000 AED. Compulsory for all students residing in dormitories. Paid once at first occupancy and refunded, less deductions due to any missing or damaged items, at dormitory clearance time.		
Utilities Service Fee	Compulsory for all students residing in dormitories; will be added to the respective room rate when charged to the student account	140	-

Payment Methods

Tuition and fees are due each semester at or before the time of registration and form an integral part of registration. For information on the deferment of tuition and fees, please see the Deferment of Tuition and Fees section below.

AUS accepts the following methods of payment:

- cash in UAE Dirhams (AED) only
- checks drawn on local banks in UAE Dirhams (If two or more checks return due to insufficient funds, checks will no longer be accepted.)
- banker's drafts in UAE Dirhams
- credit cards (including online payment)
- direct transfers to Sharjah Islamic Bank Account No. 0029-200170-001 (student's name and ID number must be noted on transfer)

A charge of AED 500 is added if a check is returned for insufficient funds or if a credit card authorization payment is declined.

All student financial transactions with the university are processed through the Student Accounts Office located on the mezzanine floor of the Main Building. Questions concerning student accounts should be directed to the Student Accounts Office by calling 515 2282/515 2039 or sending an e-mail to studentaccounts@aus.edu.

Deferment of Tuition and Fees

Students are expected to pay their tuition and fees or to make arrangements for deferred payment during the registration period. The deferment of tuition and fees is approved only if all of the following conditions are met:

- At least 60 percent of the tuition and fees have been paid by the payment deadline.
- The student does not have access to checks or credit cards.
- The student has a clean payment history.
- The Fee Deferment Request form is completed and signed by the student and is authorized by a Finance Department official. The form is available at www.aus.edu/admin/forms/ or through Students Account.

Late Fees and Fines

All university students must adhere to university deadlines, rules and regulations. Late fees and fines may apply for late book returns, parking violations, breakage/replacement charges, late tuition payment, etc.

Graduate Student Employment Opportunities

AUS offers graduate students two types of on-campus employment: graduate assistantships and graduate work-study positions. Assistantships are available to qualified graduate students and are

competitively awarded and merit based.

A variety of student work-study opportunities are available through specific departments, graduate programs and AUS internal research grants to faculty members.

Information on eligibility and application guidelines is available at [www.aus.edu/academic/gup/graduate/Graduate Student Employment/](http://www.aus.edu/academic/gup/graduate/Graduate%20Student%20Employment/) or in section 4.0 Graduate Student Employment Opportunities in the Graduate Student Handbook section at the end of this catalog.

Sponsorship Liaison

The Sponsorship Liaison Division coordinates and communicates with external organizations sponsoring students to study at AUS.

The division provides various support services to both the sponsoring organizations and their sponsored students, including admission coordination, orientation, academic follow-up, progress reports, guidance, housing assistance and financial-related matters.

Moreover, the division is the main link for sponsors to communicate messages to sponsored students. It also coordinates the on- and off-campus annual meetings with sponsors and their students.

For further assistance and information, please contact the Sponsorship Liaison Officer, 515 1016, sponsors@aus.edu.



Academic Integrity

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, American University of Sharjah affirms the importance of respecting the integrity of individual work. The AUS Student Academic Integrity Code 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, AUS 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/she has chosen. Accordingly, each student is required to conform to the regulations of the university, of the college/school in which he/she has enrolled and of the classes in which he/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.

In order to establish within the AUS student body a sense of ethical responsibility, honor and mutual respect, upon matriculation every student will be asked to sign the following Academic Integrity Pledge.

I [student's name] pledge my commitment to the following values:

- *I will hold myself accountable for all that I say and write;*
- *I will hold myself responsible for the academic integrity of my work;*
- *I will not misrepresent my work nor give or receive unauthorized aid;*
- *I will behave in a manner that demonstrates concern for the personal dignity, rights and freedoms of all members of the community;*
- *I will respect university property and the property of others; and*
- *I will not tolerate a lack of respect for these values.*

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 (e.g., regarding such issues as collaborative work, use of study aids or take-home examinations, etc.). Students are also responsible for learning the conventions of documentation and acknowledgment of sources required in academic work.

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 categories.

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, the use of tutors and editing may vary among individual professors.

Inappropriate Proxy

Students must attend their own classes and be present for all examinations.

Those impersonated and impersonators will be suspended or dismissed from the university.

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, and the 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 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
7. 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/school.

Faculty members who wish to bring charges against students should do so through the dean (or appointed designee) of the college/school in which the alleged academic integrity code violation occurred. Students who wish to bring charges against other students must do so through the faculty member in whose course or academic activity the alleged academic integrity code violation occurred. The student who brings the charges must identify

himself/herself to the faculty member.

Violations of the academic integrity code that involve admission and/or placement testing fall within the jurisdiction of an ad hoc committee that is called upon when such violations are reported and could result in the revocation of admission or dismissal from the university.

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 college/school 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/school in which the offense has occurred. When the student is enrolled in another college/school, the dean who receives the notification will then notify the student's dean that the offense has occurred. Through this process, the university can monitor multiple occurrences of such errors of judgment by particular students.

2. Dean's Jurisdiction

In all other circumstances, the following procedures will be observed:

- a. Faculty members reporting an allegation of dishonesty must do so within 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 college/school dean (or appointed designee).

- b. The college/school dean (or appointed designee) will promptly notify the student of the charge and will arrange a meeting to discuss the charge with the student. The dean (or appointed designee) will also notify the head of the department or unit in which the offense occurred, and the student's dean if the student is a member of another college/school, that an allegation has been made.

- c. At the 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 five working 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 hearing the case (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 hearing the case (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 hearing the case, the faculty member making the charge may recommend a grading penalty or other sanctions.

If the student fails to attend a scheduled meeting regarding such charges, the date of which will be made known in advance to him/her, the college/school 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 or a lowered overall grade for the course
 - d. a failing grade of XF for the course in which the offense occurred
 - e. suspension for one or more academic terms, including the term in which the offense occurred
 - f. dismissal (for a specified term or permanently) from the university
4. 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.
5. 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 as applicable. If consensus cannot be reached, the Provost or his/her representative will adjudicate.
6. Penalties (d)–(f) will become a permanent part of the student's file maintained indefinitely by the Office of the Registrar, with appropriate notation indicating that there has been a violation of the Student Academic Integrity Code.
7. The student may petition to replace the XF grade that resulted from a (d) penalty with an F grade at graduation or at complete withdrawal time. For details, please refer to Appeal of an XF grade under Student Petitions and Appeals.

Suspension and Dismissal

The decision as to whether suspension or dismissal is appropriate in a given instance will necessarily depend on the circumstances of each case.

Suspension

Suspension is effective for not less than the term 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 entitled to resume studies in the same college/school at the conclusion of the period of suspension, provided he/she has satisfied all requirements imposed by the dean hearing the case when the original action was implemented. The student will then need to submit the Reactivation Form to the Office of the Registrar. The form is available at www.aus.edu/registration/all_forms.php.

Dismissal

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 interest of maintaining the standards of behavior and conduct normally expected in a university community. In instances where the dean hearing the case has recommended dismissal, the Academic Appeals Review Committee will review the case and make a recommendation to the Provost.

A student who has been dismissed but who has not been denied the privilege of returning to the university later may apply for readmission through the Office of Enrollment Management/Graduate Admissions 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 admission requirements in effect at the time of readmission.

Note: *The calendar year that must elapse before a Reactivation Form or an application for readmission may be considered is interpreted as beginning*

on the final day of the term during which the disciplinary action was taken.

Notification of Penalty

The dean hearing the case (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 head of the department in which the case occurred and the student's dean if the student is enrolled in another college/school.

In addition to the above and for penalties (d-f), the following notification process will apply:

- For penalty (d), the dean hearing the case will inform the Office of the Registrar.
- For penalty (e), the dean hearing the case will inform the student's dean who will, in turn, notify the Office of the Registrar as well as the Vice Chancellor for Student Affairs and take the appropriate academic action.
- For penalty (f), the dean hearing the case must inform the Vice Provost for Research and Graduate Studies in writing within five working days of the date of the notice. The Vice Provost for Research and Graduate Studies will refer the case to the Academic Appeals Review Committee, which will review it and make a recommendation to the Provost. The Provost will inform the dean hearing the case, the Vice Provost for Research and Graduate Studies, the Office of the Registrar and the Vice Chancellor for Student Affairs of the final decision.
- For record keeping of documents pertaining to the infringement of the academic integrity code, please refer to the appropriate section under Student Records herein.

Appeal of Penalty

In cases concerning notation to the student's record [penalties (d)–(f)], students will be notified in writing of their right of appeal. Appeals must be made in writing within five working 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 of conduct review panel meeting. Appeals must be submitted to the Vice Provost for Research and Graduate Studies. The Office of the Provost will review the appeal and

may consult the case's written record, the appeal request and any person involved in the adjudication process. Following the review, the Office of the Provost 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.

Student Records

Custody of Records

All transcripts and other documents students submitted from other institutions at admission time or later are the property of AUS, and, as such, are part of the student record that is under the custody of the Office of the Registrar. The university is not required to provide (or allow the making of) copies of these documents. Transcripts submitted to AUS for admission or credit transfer cannot be returned to the student or forwarded to other institutions.

Student Privacy Rights

Students have the right to:

- inspect and review information contained in their educational records. The university is not required to provide (or allow the making of) copies of these documents. The university allows, nevertheless, copy making of very specific documents included in a student's record. Copies of such documents will only be provided upon submission of a signed request from the student concerned. The request form is available at www.aus.edu/registration/all_forms.php. A nominal fee applies.
- request changes or updates to their personal data. Registered students are given access to update their emergency telephone/mobile contact numbers and their personal e-mail address via the secured online student information system. For mailing address updates, an official request signed by the student concerned has to be submitted to the Office of the Registrar/Student Records section. The form is available at www.aus.edu/registration/all_forms.php.
- consent to disclosure, within the extent of UAE federal and local laws, personally identifiable information from education records

The university reserves the right to disclose students' records to the

immediate guardian of the student and to the private or public authority sponsoring the student. For further information on students' records, please check with the Office of the Registrar/Student Records section.

Academic Transcripts

A permanent record reflecting the academic achievements of each student who registers at the university (also referred to as a "transcript") is maintained by the Office of the Registrar. At the end of every semester, the Office of the Registrar issues updated transcripts for all the students who were registered for the semester. These transcripts are mailed to every individual student. These copies are not official and are only intended to update students on their academic achievement. Students may also access their transcripts through the secure online student information system. Students are encouraged to review their records online periodically.

Students may obtain copies of their academic transcripts at AUS from the Office of the Registrar. Transcripts will only be released with a signed request from the student concerned. The request form is available at www.aus.edu/registration/all_forms.php. A nominal fee applies. The university will issue only complete transcripts, not parts of the student record.

An explanation of the university's grading system is included in the Grades and Academic Standing section herein. A brief explanation is also provided on the back of every official transcript.

Records on Academic Integrity Code Violations

The retention of records on academic integrity code violations is governed by the following:

- In cases where penalties (a)-(c) were assigned: All records pertaining to the infringement of the code are maintained by the student's college/school. If the student does not graduate from AUS, the records are retained for five years after the student's last registration. If the student graduates from AUS, these records are destroyed by the college/school upon the student's graduation.
 - In cases where penalties (d)-(f) were assigned: The notation indicating a violation of the Student Academic Integrity Code will become a permanent part of the student's file maintained indefinitely by the Office of the Registrar. Upon graduation, all records pertaining to the violation of the Student Academic Integrity Code that were maintained by the college/school will be transferred to the Office of the Registrar for permanent retention. If the student does not graduate from AUS, all records pertaining to violations of the academic integrity code will be retained by the college/school for five years after the student's last registration at AUS and then transferred to the Office of the Registrar for permanent retention.
- Records on Student Academic Integrity Code violations maintained by the Office of the Registrar are subject to university regulations concerning the confidentiality of student records. Upon written request, students have the right to inspect their records related to violations of the integrity code.

Enrollment Verifications and Certifications

Students may need different types of official certificates pertaining to their academic record at AUS. These certificates must be requested from the Office of the Registrar using the request forms available at www.aus.edu/registration/all_forms.php. A nominal fee applies.

Registration and Course Information

Registration

Orientation Program

Prior to registration, each college/school holds an orientation session to familiarize students with its specific regulations and assist them with the registration process. These sessions are also to inform the students about potential research/project areas available within the program.

Academic Advisors

Academic advising is an essential element of the educational process. American University of Sharjah requires advisor-student conferences at least once per semester. Students are assigned academic advisors who help them in planning their schedules. However, students are responsible for selecting their courses, meeting course prerequisites and adhering to the most recent university policies and procedures. The advisor assists the student in interpreting university policies and procedures. Students are required to consult with their advisor on issues regarding degree requirements. Some programs require that students have a graduate advisory committee, which has specific responsibilities identified by each graduate program in accordance with university policy.

Registration Process

Before the registration period begins, the Office of the Registrar posts the registration guide at www.aus.edu/registration. The guide provides pertinent information and indicates the registration steps along with the place, date and time for each step. A continually updated list of courses offered is posted on the online student information system as well. Students must register in a course prior to attending classes. It is the responsibility of the individual student to monitor his/her registration status, which may be done by accessing his/her records through the AUS

website. Students who register after the designated date are charged a late registration fee of 500 Dirhams.

Continuing and returning students register through the website. New students and transfer students register with their respective college/school. Non-degree and transient students register with the Office of the Registrar. Visiting students register with the Office of International Exchange Programs. Registration in courses as a non-degree or a visiting graduate student requires the approval of the relevant graduate program director.

Registration by way of proxy is not permitted.

New and transfer students must ensure that all documents required for finalizing their admission, particularly those indicated in the letter of admission, are submitted to the Office of Enrollment Management/Graduate Admissions before registration begins. Transfer students must complete their transfer file and be awarded transfer credits before the end of their first semester at AUS.

Thesis and Final Project

Registration

See Thesis and Final Project Registration within the Graduation section herein.

Student Course Load

Good Academic Standing

The normal student course load for a full-time graduate student in good academic standing is nine credit hours per semester. The graduate program director/coordinator may approve a student in good standing to register for up to 12 credit hours per semester.

Academic Probation

The course load of a full-time graduate student on academic probation is six credit hours.

Summer Term Registration

A maximum total of six credit hours is allowed during a six-week summer term. The program director/coordinator

may further restrict the maximum credit hours of a probation student in a summer term. A graduate student may not register for more than three credit hours of thesis/final project during a six-week summer term.

Conditional Admission

Conditionally admitted students are not eligible to register for more than two graduate courses (a maximum of six credit hours) in their first semester of study.

Mature Students Admission

Students admitted as mature students are normally not eligible to register for more than two graduate courses (a maximum of six credit hours) in their first semester of study.

Auditing Courses

A graduate student who wishes to attend a course but who does not wish to participate, take examinations, receive a final grade or receive credit for the course may register to audit the course with the permission of the instructor and the graduate program director/coordinator. The instructor may establish standards of class participation and attendance that must be met if a student is to remain in audit status.

Graduate students may audit an undergraduate course with the permission of the instructor and the graduate program director/coordinator. Registration is managed through the Office of the Registrar. In courses with enrollment limits, priority is given to students registering for credit.

The audited course will appear on a student's transcript as audited. Tuition and fees for audit students are the same as those for students registering for credit.

Changes to or from audit status must be made before the last day of the add and drop period.

Registration in Independent Study Courses

Independent study is the umbrella term used to label two types of independent

work: an independent course and directed study.

Students are allowed to take one independent study. A second independent study, for a maximum total of eight credit hours used toward the graduation requirements of one degree program, could be approved by the student's graduate program director/coordinator for graduation purposes only. In order to be eligible to pursue an independent study, students must be in good academic standing.

An independent study should not be used to meet major requirements, core requirements, concentration requirements or foundation courses requirements.

Students interested in registering for an independent study course must complete the Independent Study Application form available at www.aus.edu/registration/all_forms.php and submit it to the Office of the Registrar during the early registration period of the upcoming semester/term. Registration is handled by the Office of the Registrar. Tuition and fees for independent study courses are the same as those for other courses. Independent study courses are graded and appear on the student's transcript.

Independent Course (1 to 4 credits)

An independent course is listed in the catalog but offered in an independent study format. The course is coded using the course number in the catalog.

Students are not allowed to repeat courses in an independent course format.

Directed Study (1 to 4 credits)

A directed study is an investigation under faculty supervision beyond what is offered in existing courses. Directed study courses are numbered as 596 or 696 courses. The three-letter course prefix reflects the field of study of the course.

Summer Courses outside AUS

Requirements

An enrolled student is eligible to apply to take courses at another college/university during the summer with the aim of transferring credits to AUS provided to

following conditions are met:

- The student must be in good academic standing at AUS.
- The summer courses at the host university must not be taken as attempts to repeat AUS courses in which D or F grades were previously earned.
- The host university must be located outside the UAE.
- The host university must be recognized by the UAE Ministry of Higher Education and Scientific Research.
- The host university must provide learning experiences similar to those offered by AUS.
- The language of instruction of the course(s) taken at the host university must be English (except for language courses conducted in other languages).

Some programs may reserve the right not to allow for any courses to be taken at another college/university.

Amount of Credit

- Students may normally transfer no more than six credit hours for a six-week summer session conducted at a host university
- For summer sessions of shorter duration, AUS normally allows no more than one credit hour per week of instruction (e.g., no more than three credit hours for a three-week session).
- Students may register for more than one summer session between spring and fall semesters with approval of the relevant graduate program director/coordinator. Students may not be concurrently registered in more than one summer term.
- A college/school may place further restrictions on the allowable maximum number of credits. Students must consult with the relevant graduate program director/coordinator when planning for summer courses outside AUS.

Application Process

Prior to registering for courses at the host university students must complete the Course Permission Form - Outgoing Students available at www.aus.edu/ixo and submit it to the Office of the Registrar. Credit will not be awarded if the completed form is not submitted to the Office of the Registrar prior to registration in summer courses.

All courses must be approved by the relevant graduate program director/

coordinator prior to registration in summer courses.

For information on visas and other related issues, please contact the International Exchange Programs Office at ixo@aus.edu.

Transfer of Credits

Credits earned in summer courses taken outside AUS will transfer provided the following conditions are met:

- Upon completion of the course(s) students must submit to the Office of the Registrar an official transcript from the host university demonstrating that the minimum course passing grade requirement indicated on the permission form was met.
- The student was in good academic standing at AUS at the time of registration in summer courses at the host university.

Grades earned in summer courses completed outside AUS do not count in the student's cumulative GPA (CGPA). Credit hours of transferred courses count in the cumulative earned hours and may apply towards meeting graduation requirements.

Mature, Non-degree, Transient and Visiting Student Registration

See the corresponding sections under Admission to Graduate Studies.

Tuition and Fees

Please refer to the Tuition and Fees section of this catalog for specific information on tuition, fees, deferment of tuition and fees and payment methods.

Add and Drop

Students are allowed to add and/or drop courses at the beginning of every semester/term. The add and drop period begins on the first day of class. The duration of the add and drop period may vary, and the actual dates are published in the registration guide for each semester/term, which is available at www.aus.edu/registration. Courses dropped during the add and drop period are not recorded in a student's transcript. The semester

tuition is recalculated accordingly with no fee penalty charged. Students interested in adding and/or dropping courses should first consult with their respective advisors.

Students who register for a course and do not attend it may be automatically dropped. Students who are automatically dropped will not be eligible for a tuition refund or adjustment.

Attendance and Lateness

Attendance and participation in all class, workshop and laboratory sessions are essential to the process of education at AUS. 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 academic achievement.

Course Withdrawal

Students are permitted to withdraw from courses without grade penalty by submitting the Withdrawal Form (available at www.aus.edu/registration/all_forms.php). The student must submit the form in person to the Office of the Registrar.

Withdrawal from courses must occur no later than the end of the withdrawal period. A grade of W will be recorded on the transcript for the course from which the student has withdrawn. A W grade does not impact the student's GPA.

As of the end of the withdrawal period and up to the last day of classes, a grade of WF will be recorded for those who withdraw from a course. The student will receive 0.00 grade points (F grade) for the WF, and this will be used in calculating the student's GPA. Furthermore, as of the end of the withdrawal period, faculty members may assign a WF for excessive absence. If a student with a documented medical condition (e.g., operation, hospital stay, serious illness, etc.) is withdrawn from a course after the established withdrawal deadline, the student may submit a Student Petition Form (available at www.aus.edu/registration/

[all_forms.php](#)) to the Office of the Registrar with the appropriate original medical documents. The Office of the Registrar will verify the claims and approve the change of status from a WF to a W.

Students who register for a course and do not attend it may be automatically dropped. Students who are automatically dropped will not be eligible for a tuition refund or adjustment.

A student may not withdraw from a course in which an academic integrity infraction has been found and a penalty applied.

Withdrawal from the University

In the event a student wishes to withdraw from the university, he/she must submit the Complete Withdrawal Form to the Office of the Registrar in person. The form is available at www.aus.edu/registration/all_forms.php.

Depending on the time of withdrawal, a grade of W or WF will be recorded for all the courses the student was registered for in the semester of withdrawal. In addition, the following refund schedule will apply:

Withdrawal from the University*	
One week before the first day of classes	
100% refund excluding the seat reservation deposit of new students	
Before the end of the first week of classes	
100% refund excluding non-refundable deposits	
During the second week of classes	
50% refund of tuition	
During the third week of classes	
25% refund of tuition	
After the third week of classes	
0% refund	
<i>*Refunds for summer term withdrawals are prorated.</i>	

Interrupted Studies and Reinstatement

Students are expected to maintain continuous enrollment (fall and spring semesters) until they complete their program. Enrollment in zero-credit courses only does not establish residency for the purpose of this policy.

A graduate student may take up to two semesters off from graduate studies but must inform the Office of the Registrar in writing of their intention to do so. Reinstatement of the student

is automatic; however, students must reactivate their record by submitting a Reactivation Form to the Office of the Registrar one month ahead of registration. The form is available at www.aus.edu/registration/all_forms.php. Courses taken at another institution during this interim period will not be transferred. No fees are charged for reinstatement.

Graduate students who were on probation prior to complete withdrawal must petition for reinstatement. Reinstatement must be approved by the student's dean or program director/coordinator.

Any graduate student who leaves AUS for more than two consecutive semesters must submit a new application for admission to the Office of Enrollment Management/Graduate Admissions.

Course Information

Course Code

Every course in each discipline or field of study offered by the university is represented by a three-letter prefix followed by a three-digit number indicating the level of the course content.

Course Credit Hours

All courses are valued in credits. Normally, each credit hour represents 50 minutes of class instruction per week each semester, two or three 50-minute laboratory sessions per week each semester, or one or two 50-minute recitation sessions per week each semester.

The numbers in parentheses following the title of a course indicate the course contact hours distribution per week and the course credit information. The first digit in 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 credits the student will receive upon successfully completing the course.

Course Descriptions and Syllabi

Except for non-recurring topics (also referred to as special topic courses), descriptions of courses offered by AUS are listed in the Course Descriptions section of this catalog and on the university website. Courses are grouped by college/school and sorted by course subject and course code. Descriptions of non-recurring topics are made available during registration in the college/school offering the course.

Course syllabi are available from the department or program office. They include course title and course code; pre-requisites (if any) and co-requisites (if any); name, contact information and

office hours of the instructor; course description; course outcomes; course schedule; assignments and due dates; assessment methods and the weights assigned to them; and reading material and course texts.

Course Prerequisites

Certain courses require a minimum background of knowledge, as indicated by prerequisite courses cited in individual course descriptions. Titles and numbers refer to AUS courses. Equivalent courses satisfactorily completed at other institutions may also meet prerequisite requirements by transfer credit. Courses for which

a grade below C was received do not satisfy prerequisite requirements.

Courses Offerings and Schedules

Courses are offered at the discretion of the individual graduate programs. Students should check with the respective programs for information on when courses will be offered.

To accommodate graduate student work schedules, some programs offer their courses in the evening or over the weekend. For details on course schedules, please refer to the semester online course offerings or check with the graduate program offering the course.

Fields of Study

Degree Offerings

American University of Sharjah has three colleges and one school that offer both undergraduate and graduate degree programs, in addition to one graduate certificate program. Graduate programs are listed below. Undergraduate degree offerings are listed in the *AUS Undergraduate Catalog*.

College of Architecture, Art and Design

- Master of Urban Planning

College of Arts and Sciences

- Master of Arts in English/Arabic/English Translation and Interpreting
- Master of Arts in Teaching English to Speakers of Other Languages
- Graduate Certificate in Museum and Heritage Studies

College of Engineering

- Master of Science in Chemical Engineering
- Master of Science in Civil Engineering
- Master of Science in Computer Engineering
- Master of Science in Electrical Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Engineering Systems Management
- Master of Science in Mechatronics Engineering

School of Business and Management

- Master of Business Administration
- Executive Master of Business Administration
- Gulf Executive Master of Public Administration

Transferring from Non-Degree or Visiting to Degree Status

Students may request a change of status from non-degree to degree status or from visiting to degree status by submitting a complete application through the Office of Enrollment Management/Graduate Admissions. All admissions requirements in place at the time of the change-of-status request must be met.

Courses taken while under the non-degree or the visiting status may apply towards the degree program given the approval of the graduate program director/coordinator. Grades earned in courses that are accepted will count in the cumulative GPA (CGPA). The university rules and regulations governing transfer courses and credits will apply.

The graduation requirements will be determined by the catalog that is effective when the student joins a degree program or the catalog effective the semester of the student's graduation.

Change of Program

Students seeking to change their graduate degree program must complete the Change of Major Form available from the Office of the Registrar. Requests for a change of program should be submitted to the office of the graduate program director/coordinator of the program of the student's choice by the last day of the 12th week of classes of the fall or spring semester. The office of the graduate program director/coordinator will forward the approved forms to the Office of the Registrar. Forms received by the Office of the Registrar by the end of the add and drop period will be effective as of the following semester/term.

To be eligible for a change of program, the graduate student must meet the requirements for admission to the new program. Please refer to the relevant program's catalog section for information on admission requirements. A change in major might entail a change in a student's catalog. Please refer to the Catalog section under Graduation Requirements for more details.

Concentrations and Themes

Some programs allow students the choice of an area of concentration or theme. This option offers students more in-depth knowledge of a subject area.

Please refer to the relevant program section for concentration/ theme requirements.

Where the concentration/theme is mandatory, a student must declare his/her choice when applying to the program. Where the concentration is an option, a student must indicate his/

her choice by filling in the appropriate information on the Change of Major Form.

Change of Major forms must be submitted to the office of the graduate program director/coordinator by the last day of the 12th week of classes of the fall or spring semester. The office

of the graduate program director/coordinator will forward the approved forms to the Office of the Registrar. Forms submitted by the deadline will be effective as of the following semester/term. The Change of Major Form is available from the Office of the Registrar.

Grades and Academic Standing

Grading System

Courses are graded using letter grades. The grade point average (GPA) is based on a four-point scale. The minimum passing grade for a graduate course is C. Normally, graduate students who receive an F in a graduate course will not be allowed to continue in the program.

The AUS grading system is provided below:

Excellent	
A	equals 4.00 grade points
Meets Expectation	
A-	equals 3.70 grade points
B+	equals 3.30 grade points
B	equals 3.00 grade points
Below Expectation	
B-	equals 2.70 grade points
C+	equals 2.30 grade points
C	equals 2.00 grade points
Fail	
F	equals 0.00 grade points
Academic Integrity Violation Fail	
XF	equals 0.00 grade points
Withdrawal Fail	
WF	equals 0.00 grade points

Grades not calculated in the grade point average are:

AUD	Audit
AW	Administrative Withdrawal
I	Incomplete
IP	In Progress
N	No Grade
P	Pass; credits counted
PDS	Pass with distinction (graduate executive programs only)
TR	Transfer; credits counted
W	Withdrawal
WV	Waive; no credit

Incomplete Grades

The work for a course must be completed by the end of the final exam day for that course. In emergency circumstances, a student may request permission from the course instructor and graduate program director/coordinator to complete a course in the following semester. A grade of I (incomplete) is assigned for the course. The instructor of the course will then process an Incomplete Grade Form and submit it to the Office of the Registrar for final approval and implementation. The Incomplete Grade Form must be submitted within the final examinations period.

Students must complete an incomplete course before the end of the following regular semester. Otherwise, a tentative grade estimated on the basis of work already completed may be recorded. Failure to complete the course within the following semester may result in the grade being recorded as F unless a tentative grade has been reported previously.

In Progress Grades

A thesis/final project normally requires longer than one semester to be completed. An In Progress (IP) grade is recorded until completion of the thesis/final project. Once the thesis/final project is defended, the program director/coordinator will inform the Office of the Registrar of the final grade.

Repeating Courses

Normally, graduate courses cannot be repeated. With the recommendation of

the program director/coordinator and the approval of the appropriate dean, a graduate student may be allowed to repeat any course in which a grade of B-, C+, C or F is received. The original grade and the new grade will appear in the transcript, but only the new grade will be calculated into the GPA.

No course may be taken more than twice. Students may not repeat courses in an independent course format.

Note: Normally, graduate students who receive an F in a graduate course will not be allowed to continue in the program.

Grade Point Average

AUS uses two grade point averages: the semester grade point average (SGPA) and the cumulative grade point average (CGPA).

Quality Points

The quality points earned in a course are calculated by multiplying the grade point value of the letter grade by the number of credits the course is worth. Effective June 2004, only the last entry of the repeated course is counted in the calculation of the CGPA.

Semester Grade Point Average (SGPA)

The SGPA is the grade point average of grades earned in a particular semester. It is calculated by dividing the sum of the quality points of courses taken in a particular semester by the total number of credits of the courses taken in that same semester.

$$\text{SGPA} = \frac{\text{sum (quality points of courses taken in semester X)}}{\text{sum (credit hours of courses taken in semester X)}}$$

Cumulative Grade Point Average (CGPA)

The CGPA is calculated by dividing the sum of the quality points of courses taken in all semesters by the total number of credits of all courses taken in all semesters.

CGPA = sum (quality points of courses taken in all semesters) / sum (credit hours of courses taken in all semesters)
Effective June 2004, only the last entry of a repeated course is considered in the CGPA calculation.

Academic Standing

A student's academic standing is determined by his/her CGPA.

Good Standing

In order to be considered in good standing, graduate students must maintain a CGPA of at least 3.00 out of 4.00. A student must be in good standing to be eligible for graduation.

Academic Probation

If a graduate student's cumulative GPA is below 3.00, the student is placed on academic probation. During probation

status, the following conditions apply:

- A graduate student on probation may not register for more than six credit hours in a semester. The program director/coordinator may restrict the summer course load of a graduate student on probation to three credit hours.
- A graduate student on probation may not register for thesis or final project credit hours until a cumulative GPA of 3.00 is achieved.

Probation will be removed at the end of any semester in which the student attains a CGPA of 3.00.

Academic Dismissal

A graduate student on probation who does not achieve good academic standing by the end of the regular semester following the term in which the cumulative GPA fell below 3.00 will be dismissed from the university.

Normally, graduate students who receive an F in a graduate course will not be allowed to continue in the university.

Students who have been dismissed as a result of failing to meet the

requirements of good standing or who receive an F in a graduate course may petition for reinstatement. Students seeking to move to another graduate program must petition to the Vice Provost for Research and Graduate Studies. Petitions must be submitted to the Office of the Registrar. The Student Petition Form is available at www.aus.edu/registration/all_forms.php.

Petitions will be reviewed by the graduate program director/coordinator, who will make a written recommendation to the appropriate dean. The dean will then provide a written recommendation and forward the petition to the Vice Provost for Research and Graduate Studies. Decisions regarding continuation in the program will be made by the Vice Provost for Research and Graduate Studies in consultation with the appropriate dean or appointed designee.

Students who have been academically dismissed, readmitted and subsequently dismissed will normally not be readmitted.

Student Petitions and Appeals

Student Responsibility

All official university communications are distributed through the AUS-issued e-mail address. These are considered official notifications. Students are responsible for checking their AUS e-mail accounts and for responding to or acting upon messages accordingly.

Students should keep their own records of all transactions with the university (e.g., 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.

Petitions

Students may petition for exceptions to academic policies of the university.

Petitions are processed through the Office of the Registrar. The Student Petition Form is available at www.aus.edu/registration/all_forms.php.

Appeal of Academic-Related Issues

If a student wishes to discuss an issue pertaining to a course, instructor or other academic-related issues, the student may direct his/her concern to the involved faculty member. If the issue or grievance is not resolved, the student should contact the graduate program director/coordinator and/or dean of the college/school.

If, in the judgment of the dean of the college/school, the grievance is of such gravity or its resolution would

have such impact on the welfare of students generally or on the conduct of professional responsibilities in the university as to require even more formal safeguards for the aggrieved student and faculty member involved, the dean will prescribe an appropriate procedure consonant with the university's mission or refer the matter to the Academic Appeals Review Committee through the Vice Provost for Research and Graduate Studies. Academic appeals requests must be submitted no later than the end of the first day of orientation week of the following semester.

Graduation

Thesis and Final Project

Master's theses or final project reports document research conducted by AUS graduate students under the guidance and supervision of AUS faculty members. They are the culmination of the students' programs of study and are expected to reflect appropriate scholarly depth and rigor. Theses and final projects are defended publicly.

The Office of the Vice Provost for Research and Graduate Studies in collaboration with the Graduate Program Committee, establishes and oversees the regulations and requirements for theses and final projects at AUS. Details on thesis preparation and defense are included in the Graduate Student Handbook section of this catalog. Degree candidates are responsible for familiarizing themselves with and adhering to the standards and regulations of the latest edition of the *AUS Guide to Formatting Graduate Theses*. This manual is available from the Office of the Vice Provost for Research and Graduate Studies and online at www.aus.edu/academic/gup/. AUS also has a stringent policy regarding research involving humans or animals as subjects. Detailed information on such research activities may be found at www.aus.edu/academic/gup/research/policies_research/index.php.

It is AUS policy to maintain master's theses in the AUS Archives and also to make theses available to other students and scholars. The AUS Library is responsible for the archiving and binding of the master's thesis. Detailed procedures and requirements for submitting master's theses to the AUS Library and Archives for binding are outlined in the *AUS Guide to Formatting Graduate Theses*.

Registering for Thesis/Final Project Credit

Graduate students registering for

thesis/final project credits must register through the Office of the Registrar. Only students in good academic standing may register for thesis/final project credits.

Thesis/Final Project First Registration

In the first semester of thesis/final project work (usually no earlier than the second semester of enrollment in the graduate program), a student normally registers for three thesis/final project credit hours.

Before the end of the add/drop period, graduate program directors/coordinators must provide the Office of the Registrar with a list of all students who will be registered for thesis/final project (XXX 699/XXX 698), along with their thesis/final project titles and the names of their advisors.

The thesis proposal must be orally presented to the thesis committee before the end of the first semester that the student is registered for thesis/final project. The thesis proposal must be approved in writing by the thesis committee. Final project proposals are approved by the graduate program director/coordinator.

Students who do not demonstrate adequate progress by the end of the 10th week of the semester will be withdrawn from the thesis/final project course by their advisors.

Tuition refunds will not be allowed if a student is withdrawn from the thesis/final project course due to insufficient progress.

For details on thesis proposal preparation and submission, please refer to Section 3.0 Master's Thesis in the Graduate Student Handbook part of this catalog.

Thesis/Final Project Continuous Enrollment

Students who do not complete their thesis/final project after one semester of thesis/final project work will need to maintain continuous enrollment in the thesis/final project.

Before the end of the add and drop period, the program director/coordinator will e-mail the Office of the Registrar a list of the names and ID numbers of those students maintaining continuous enrollment for registration into their respective thesis/final project courses, along with their thesis/final project titles, the names of their advisors and the appropriate credit and billing hours.

Thesis/Final Project Time Extensions

Students who do not complete the thesis/final project after registering for thesis/final project full credits must register for the full thesis/final project credits but with zero billing hours until the thesis/project is finished and defended. A fee of AED 200 per semester is charged to establish continuous enrollment. Failure to pay the AED 200 will be considered an interruption of studies (see Interrupted Studies and Reinstatement under the Registration section).

All students must be registered in the semester in which they defend their thesis.

Note: *A student must complete all degree requirements within five years from the time of initial enrollment into the program.*

Switching from Final Project to Thesis and Vice Versa

Graduate students who wish to switch from thesis to final project (or vice versa) must submit their requests within the published deadlines. The petition must be approved by the student's graduate program director/coordinator. A student who switches from thesis to final project (or vice versa) will be given an N for no grade for the thesis/final project credit hours (i.e., XXX 698 or XXX 699) completed for the first option selected. The student must pay for any additional credit hours or courses required as a result of switching from thesis to final project (or vice versa).

Grading of Thesis/Final Project

A thesis/final project grade will be awarded after completion and public defense of the thesis/final project.

If the thesis/final project work continues into a second semester, an IP grade will be awarded and the student must register for the thesis/final project course again but only for the balance thesis credit hours (i.e., enroll in the final three credits if he/she only enrolled in three the previous semester). The IP designation will be used until completion and successful defense of the thesis/final project.

Graduation Requirements

Catalog

The graduation requirements for any individual student are determined either by the catalog that was effective for the academic year when the student was admitted in the major or the catalog effective for the academic year when the student graduates.

If a required course within a program changes its number of credits, then the number of credits required by the program for graduation may, at the discretion of the college/school, change by the same amount provided the minimum total number of credits for graduation is 36 and the CGPA is at least 3.00. In case of substantial changes in course offerings, equivalent graduation requirements are determined by the dean of the student's college/school.

Caution: *The course offerings and requirements of American University of Sharjah are under continual examination and revision for improvement. This catalog presents the requirements in effect at the time of publication and in no way guarantees that these requirements will not change. The student assumes full responsibility for compliance with all academic requirements.*

Courses

Courses are considered primary components of the curriculum and should not be split into individual credits to be counted in different areas of the degree audit.

Graduation Residence Requirements

In order to obtain a master's degree from AUS, students must complete at least three semesters in residence at AUS.

Time Limit on Duration of Study and Course Year Limit

Regardless of the catalog by which the student's graduation requirements are governed, all degree requirements must be completed within five years of admission to AUS as a graduate student, inclusive of any leave.

In addition, credits more than eight years old (courses transferred to AUS) at the time of graduation may not be counted toward the fulfillment of a graduate degree program.

Academic Standing Requirement

A student must be in good academic standing to be eligible for graduation.

Graduation Procedures

Participation in the Commencement Ceremony

The university holds two commencement exercises: a fall commencement ceremony at the end of the fall semester and a spring commencement ceremony at the end of the spring semester.

Prospective candidates for graduation in a summer term or a fall semester are eligible to participate in the corresponding fall commencement ceremony. Likewise, prospective candidates for graduation in a spring

semester are eligible to participate in the corresponding spring commencement ceremony.

Graduate students registered at the 11th week of a semester for courses/thesis/final project necessary to complete their degree requirements may participate in commencement at the end of that semester, unless the college/school notifies the Office of the Registrar that graduation will be delayed because of lack of progress on the thesis/final project.

Students who do not wish to participate in the commencement exercises of their semester of graduation must complete an Absentia Form, which is available at www.aus.edu/registration/all_forms.php or www.aus.edu/commencement. Absentia graduates are not eligible to participate in another semester commencement ceremony.

Application for Graduation

Candidates for graduate degrees file an Application for Graduation form (available at www.aus.edu/registration/all_forms.php or www.aus.edu/commencement) with the Office of the Registrar during the registration period of the last expected term of study. Only after an Application for Graduation form 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 need not reapply for graduation. Their previous application will be automatically moved to the following semester.

Conferral of Degrees

Only students who have successfully completed degree requirements and all thesis requirements, including corrections and final submission of the completed thesis to the library, by the end of the term for which they

have applied to graduate are certified for conferral of a degree. Degrees are conferred at the end of the semester in which requirements have been met. Conferral of the degree is noted on the academic transcript of the graduate with the date of graduation.

Names on Degrees

The names of AUS students will be spelled in English exactly as they appear on their passports or identity cards when printed on degrees. 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.

Attestation of Degrees and Transcripts

The Office of the Registrar provides information relevant to the attestation of degrees and transcripts with the UAE Ministry of Higher Education and Scientific Research. For details, please see www.aus.edu/commencement.



College of Architecture, Art and Design

Dean

Peter Di Sabatino

Associate Dean

Ahmed Mokhtar

Interim Graduate Program Director

Jerry Kolo

Master of Urban Planning (MUP)

Michael Hughes, Head

Urban planning is concerned with creating pleasing and functional places where present and future generations can live, work, entertain and engage in their customary community, social, religious and cultural activities.

Urban planning has roots in architecture, engineering, public health, law and the social sciences. Planners today combine design, analytical and communication skills to help communities manage change. Urban planning involves government, private enterprise and local communities taking concerted action toward achieving a common goal.

The Master of Urban Planning (MUP) at AUS provides a specialized and professional education that enables graduates to exert leadership in managing urban growth, developing urbanization policies and promoting social development. The program imparts to students ethical standards compatible with the values of local cultural settings, principles of social justice and concerns for environmental protection and sustainability. More details on the program are available at www.aus.edu/programs/mup.

Program Mission

The MUP program prepares individuals to become experts and leaders in the management and planning of urban development; in doing so, they will be guided by professional and ethical standards rooted in values of sustainability, local culture and social justice.

Program Goals

The MUP program seeks to:

- offer a high-quality educational setting that integrates theoretical principles of urban planning with practical methods and applications
- pursue approaches to teaching and learning that emphasize dealing with practical real-world issues and problems
- support and promote original interdisciplinary research in urban planning and related fields
- advance cooperation and forge partnerships with local communities, be they governmental, professional, academic and other local groups such as community-based organizations, not-for-profit entities and non-governmental organizations

Program Outcomes

Graduates of the MUP program will be able to:

- analyze and interpret data relevant to urban planning issues and questions
- use digital technology tools to solve planning problems and advance decision making
- identify, formulate and propose solutions to urban planning problems
- communicate effectively, both verbally and in writing
- make effective, persuasive and coherent oral presentations
- develop sound policy options to support policy making
- describe the local context of practice and the way it differs from other contexts worldwide
- link the local with the global so as to maximize planning action performance
- discern nature and mechanisms of contemporary urban planning practice in advanced societies
- apply knowledge and skills to real-world situations
- engage citizens as active and meaningful participants in the planning process
- function effectively within a team of planners or other professionals

- describe ethical and professional responsibilities
- describe the challenges and contradictions in sustainable development
- integrate the imperatives of sustainable development in all aspects of urban planning

Admission Requirements

Applicants are required to fulfill the university's general admission requirements for graduate studies. The program admits students from all fields of study including, but not limited to, urban planning, architecture, engineering, business, the humanities and the social sciences. The Admissions Committee consists of the Coordinator of the Master of Urban Planning program and two faculty members who teach in the program—one from the College of Architecture, Art and Design and one from the College of Engineering. Applicants must submit their most recent curriculum vitae (CV) with the application package.

Degree Requirements

The MUP degree is awarded after the successful completion of a minimum of 33 credits (in core, concentration, elective courses and a capstone experience) and a maximum of 48 credits (up to 15 additional credits—five courses—in foundation courses). Foundation courses may be waived when the waiver policy requirements are met. Students must choose between two areas of concentration: design of the built environment and transportation planning.

Students must complete the degree requirements within five years from the time of initial enrollment in the program. A minimum cumulative grade point average of 3.00 is required.

Graduation Requirements

To graduate with an MUP degree, students must successfully complete

the following minimum requirements:

- 12 credits in core courses
- six credits in concentration courses
- six credits in a required capstone experience
- a minimum of nine credits in elective courses

Foundation Courses Requirement

Students admitted to the MUP program may be required to complete a maximum of 15 credits in foundation courses, which serve as preparation for the core courses. The number of foundation courses required will normally depend on courses completed at the undergraduate level. Foundation courses may be waived when the waiver policy requirements are met.

Foundation Courses (15 credits)

- UPL 501 Fundamentals of Urban Planning
- UPL 547 Research Methods and Analysis
- UPL 550 Urban Economics and Analysis
- UPL 572 Urban Transportation Systems Planning Techniques
- UPL 582 Theory and Principles of Urban Design

Waiver Policy

Students may qualify to waive up to 15 credits (five courses) from the foundation courses. In general, a course may be waived if the student has completed comparable course work at the undergraduate level.

Waivers are only granted at the time of admission, after an official, sealed transcript is received by the AUS Office of Enrollment Management/ Graduate Admissions. Students may be required to submit course documentation in order to qualify. The waiver rules are as follows:

- Students may waive foundation courses if two related undergraduate courses have been completed. Only courses taken at an accredited university toward a degree and with a minimum grade of B will be considered.
- Students with relevant professional experience that indicates mastery over the content of a foundation course may

be granted a waiver based on a written or oral assessment.

- Students may be required to take a placement exam in order to waive a foundation course.

Core Courses Requirement (12 credits)

Students must complete the following UPL courses:

- UPL 541 Planning Theory and Methods
- UPL 548 Environmental Planning
- UPL 556 Spatial Analysis for Planners
- UPL 565 Land Use Planning Principles and Practice
- UPL 597 Urban Planning Internship

Concentration Courses Requirement (6 credits)

Depending on their choice of a concentration, students have to complete the following courses:

Concentration in Design of the Built Environment

- UPL 584 Urbanism and Urban Form Analysis
- UPL 686 Space, Society and the Public Realm

Concentration in Transportation Planning

- UPL 574 Urban Transportation Systems Analysis
- UPL 676 Transportation Systems Operations and Control

Required Capstone Experience (6 credits)

Students must select one capstone experience from among the three listed below. Students must first receive permission from the program coordinator in order to choose the final project or master's thesis option.

- UPL 667 Urban Planning Studio
This experience involves working as a group on applying substantive urban planning skills. It involves fieldwork and hands-on analysis and application.
- UPL 698 Final Project
This involves individual work by a student, under faculty supervision, on an applied topic. For more information, please refer to the Graduate Student Handbook section at the end of this catalog.

For registration details, please refer to Thesis and Final Project in the Academic Policies and Regulations section of this catalog.

- UPL 699 Master's Thesis

This involves individual work by a student, under faculty supervision, on an original piece of research. For more information, please refer to the Graduate Student Handbook section at the end of this catalog. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide.

For registration details, please refer to Thesis and Final Project under the Academic Policies and Regulations section of this catalog.

Elective Courses (minimum of 9 credits)

Students must complete three elective courses (a minimum of 9 credits) selected in consultation with their advisor from any university graduate-level course not counted as a core, concentration or capstone course.

Academic Advising

Program advising procedures provide students with orientation and guidance on the program and the profession. Students are assigned a faculty mentor based on their area of interest. Students meet with their faculty mentor every semester to discuss curricular progress and changes in circumstances, if any. Students subsequently meet with the program coordinator, who confirms course choices for the next semester. The program coordinator will either clear the students to register themselves via the website or register them in the courses selected for the following semester.

College of Arts and Sciences

Dean

Mark Edward Rush

Associate Deans

Ibrahim El-Sadek

Pia-Kristina Anderson

Director of Graduate Programs

Pia-Kristina Anderson

Master of Arts in English/ Arabic/English Translation and Interpreting (MATI)

The Master of Arts in English/Arabic/English Translation and Interpreting (MATI) responds to the vital role that intercultural communication plays in international encounters and the growing impact of the Arab region on world affairs by equipping graduates with highly specialized translation and interpreting skills in English and in Arabic. The MATI program places the diverse range of skills required for translation and interpreting within a general theoretical framework, which provides students with the conceptual tools to identify, analyze and resolve problems and develop a reflective approach to translation and interpreting. The MATI program provides students with advanced training in translation and interpreting techniques as well as in terminology management, machine translation (MT), translation memory (TM) and language engineering areas most relevant to the work of translators and interpreters in today's complex web of communication.

Program Goals

To fulfill its mission, the MATI program aims to:

- equip graduates with highly specialized translation and interpreting skills and techniques in English and in Arabic
- provide students with the conceptual tools to identify, analyze and resolve problems and develop a reflective approach to translation and interpreting
- enhance their knowledge of English and Arabic language and linguistics as they relate to translation and interpreting

- provide students with relevant technologies for translation and interpreting
- prepare students to respond confidently to the demands of translation and interpreting within the fields of business, science, international relations, law and journalism
- further develop their knowledge of relevant research methods and academic writing conventions

Program Outcomes

Graduates of the MATI program should be able to:

- demonstrate competence in translation and interpreting into and out of English and Arabic
- demonstrate the ability to reflect upon and use relevant theories of translation and interpreting in the production and assessment of translation and interpreting tasks
- apply knowledge of English and Arabic language and linguistics to the tasks of translation and interpreting
- apply relevant technologies to translation and interpreting activities
- perform competently in translating and interpreting for business, science, international relations, law and journalism
- employ appropriate research methodologies and conventions of academic writing

Admission Requirements

Applicants are required to fulfill the university's general admission requirements for graduate studies.

In addition, non-native speakers of Arabic must hold a BA in Arabic.

Conditional admission status may be granted to applicants with a minimum overall GPA of 2.50 (or equivalent) and a 2.50 or its equivalent in 300- and 400-level courses in discipline(s) relevant to the program, and at least three years of relevant practical experience in translation and/or interpreting. In such cases, the student must take TRA 500 Principles and Strategies of Translation and another

course as specified by the program director in their first semester of study, and must attain a GPA of 3.00 (B) or above for that semester to achieve full admission and to be allowed to proceed. Conditional admission applicants must also meet the general university conditional admission requirements as outlined in the Admission to Graduate Studies section earlier in this catalog.

Degree Requirements

To graduate with the Master of Arts in English/Arabic/English Translation and Interpreting, students must complete all the requirements of the program, which consist of 36 credits inclusive of a research thesis. Students must complete the degree requirements within five years from the time of initial enrollment in the program. A minimum cumulative GPA of 3.00 is required for graduation. Courses are offered during the weekday evenings.

Required Courses (27 credits)

- TRA 500 Principles and Strategies of Translation
- TRA 503 Theoretical Models of Translation
- TRA 505 Interpreting and the Profession I
- TRA 509 Interpreting and the Profession II: Simultaneous Interpreting
- TRA 510 Research Methods and Academic Writing
- TRA 512 Terminology, Arabization and the Translator
- TRA 558 Contrastive Linguistics and Translation
- TRA 630 Practicum
- TRA 699 Master's Thesis

Practicum Waiver

The practicum requirement (TRA 630) can be waived, subject to the approval of the graduate program director, for those students who are in full-time employment in professional organizations or recognized government organizations. To be waived out of the practicum, students must produce a letter from

their employers stating the length and duration of their employment.

Students with three or more years of experience in translation and/or interpreting may be exempted from the practicum.

Elective Courses (minimum of 9 credits)

Students must complete three courses (a minimum of nine credits) from the following, in consultation with their advisor.

- TRA 504 Discourse Semantics and Pragmatics in Translation
- TRA 556 Rhetoric for Translators
- TRA 610 Intercultural Communication and Translation
- TRA 595/694 Special Topics in Translation and Interpreting

Master's Thesis

The thesis must be prepared under close supervision of the thesis faculty supervisor on a topic within translation/interpreting studies.

The thesis must be completed within two consecutive academic semesters. An extension may be allowed if a candidate presents acceptable mitigating circumstances. The thesis is defended to the satisfaction of a committee composed of three faculty members. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide.

For information on the thesis proposal, thesis defense and deadlines, please refer to the Graduate Student Handbook section at the end of this catalog.

For thesis registration details, please refer to Thesis and Final Project under the Academic Policies and Regulations section of this catalog.

Master of Arts in Teaching English to Speakers of Other Languages (MA TESOL)

The mission of the Master of Arts in Teaching English to Speakers of Other Languages (MA TESOL) program is to provide students a balanced foundation of both practical and theoretical

knowledge needed to teach English at various proficiency levels, and to prepare them for doctoral studies in areas related to language learning and teaching. By combining theory and practice, the program aims to produce informed teachers capable of using theory to enhance their teaching practice.

Program Goals

To fulfill this mission, the program goals are:

- to develop a critical approach to assess second language learning models, teaching methodologies and materials appropriate to the UAE cultural context
- to prepare students for positions requiring high levels of proficiency in teaching English as ESL/EFL at the secondary and tertiary levels
- to equip its graduates with the required competencies to contribute to the field and be prepared to enroll in PhD programs

Program Educational Objectives

The objectives of the MA TESOL program are to:

- provide state-of-the-art knowledge in TESOL
- enhance students' ability to serve the specific needs of the region by selecting and adapting appropriate teaching materials
- advance students' teaching skills at different levels, primarily throughout the schools in the Gulf region
- increase students' understanding of the form and function of English
- offer students opportunities to practice teaching English in ESL/EFL classroom settings
- teach students the research skills that will enable them to conduct research in the field of TESOL

Program Learning Outcomes

Upon graduation from the MA TESOL program, students should be able to:

- differentiate various approaches to teaching language skills
- evaluate the effectiveness and validity of different teaching methodologies
- take initiative in developing appropriate teaching materials
- develop or adapt materials for special/learning teaching situations

- understand language testing concepts
- apply testing and assessment concepts to real classroom situations
- select appropriate tests for specific goals
- demonstrate critical and practical knowledge in the field of computer assisted/enhanced language learning
- recognize the pedagogical potential of available technologies and develop curricula relying on these technologies
- analyze and critique important theoretical positions in the field of applied linguistics
- adapt and apply theoretical concepts in grammar to actual ESL teaching practice
- apply pedagogical theories to teaching practices
- explain how personal and social factors impact language learning
- explain the role of culture in language learning and teaching in an ESL/EFL environment
- understand the complexities involved in language learning
- ask informed questions about the process of language acquisition
- understand the basic models explaining language learning
- develop effective classroom observation skills
- use classroom research to improve teaching
- conduct original research

Admission Requirements

In addition to fulfilling the university's general requirements for graduate studies, the applicant must have a minimum of 5 on the TWE (Test of Written English). Only official ETS scores are accepted.

Applicants with a bachelor's degree or equivalent in English/linguistics with a minimum grade point average of 3.00 (B average) from an independently accredited university recognized by AUS, in addition to meeting the university's general requirements for admission to graduate studies, are granted full admission. Holders of bachelor's degrees in other fields who satisfy all admission requirements are granted conditional acceptance pending

completion of ENG 223 Introduction to Language Study and ENG 401 Advanced English Grammar in their first semester of study with a GPA of 3.00 or higher. These courses, however, may be waived with a minimum of two years of full-time English language teaching in an accredited institution.

Degree Requirements

Students seeking an MA TESOL degree must complete a minimum of 36 credits in core courses, elective courses and a master's thesis or professional project. Students must complete the degree requirements within five years from the time of initial enrollment in the program. A minimum cumulative GPA of 3.00 is required for graduation.

Students in the MA TESOL program must choose from two options, the thesis option or the project option.

Thesis Option

The 36 credits needed as degree requirements for this option include:

- 21 credits of core courses
- nine credits of elective courses
- six credits of Master's Thesis

Project Option

The 36 credits needed as degree requirements for this option include:

- 21 credits of core courses
- 12 credits of elective courses
- three credits of Professional Project

Required Courses (27/24 credits)

Core Courses (21 credits)

- ELT 510 Research Methods and Academic Writing
- ELT 511 Linguistics for ESL Teachers
- ELT 513 Language Acquisition and Development
- ELT 515 Methods and Materials Development
- ELT 517 Curriculum Design
- ELT 551 Language Testing and Evaluation
- ELT 619 Practicum in TESOL

Master's Thesis/Professional Project (6/3 credits)

- ELT 698 Professional Project (3 credits-project option)
- ELT 699 Master's Thesis (6 credits - thesis option)

Elective Courses (minimum of 9/12 credits)

Students in the thesis option must complete three elective courses for a minimum of nine credits. Students in the project option must complete four elective courses for a minimum of 12 credits.

Students can select elective courses from the following list:

- ELT 501 Advanced English Grammar
- ELT 503 Contrastive Linguistics
- ELT 505 Culture and the Language Teacher
- ELT 521 Reading and Writing in ESL
- ELT 523 Bilingual Education
- ELT 525 Pragmatics for ESL Teachers
- ELT 531 Sociolinguistics
- ELT 553 Technology in the ESL Classroom
- ELT 567 Leadership and Management
- ELT 611 Classroom Research
- ELT 615 Quantitative and Qualitative Research in ELT

Master's Thesis/Professional Project

A student must complete his/her thesis or professional project under close supervision of a faculty supervisor on a topic related to some aspect of TESOL. It must be defended to the satisfaction of the thesis or project committee, which is composed of three faculty members from TESOL program faculty. One committee member may be selected from outside the TESOL program faculty upon approval of the director of the program. For more information, please refer to the Graduate Student Handbook section at the end of this catalog. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide.

For thesis registration details, please refer to Thesis and Final Project under the Academic Policies and Regulations section of this catalog.

Academic Advising

Students work closely with their advisor in selecting elective courses that address their individual needs.

The advisor also encourages students to develop professional portfolios that include samples of selected work such as research papers, teaching reports, projects and lesson plans.

Graduate Certificate in Museum and Heritage Studies

The Graduate Certificate in Museum and Heritage Studies is designed to provide local and regional museums and cultural institutions with knowledgeable staff, meet the rapidly growing need for professionally qualified staff to work in the museum and heritage market, and provide students in the region with a quality alternative to higher education abroad. The purpose of the Graduate Certificate Program is to provide the region with knowledgeable and competent individuals who can manage and organize museum and cultural sites and institutions.

Program Goals

To fulfill its mission, the graduate certificate program aims to:

- implement curricula that provide students with a solid grounding in the fundamentals of theory and practice in the field of museum and heritage studies
- provide students with a working knowledge of the current best practices for museum and heritage development and management
- provide students with an understanding of the range of specializations within the museum and heritage domain
- prepare students for positions in the museum and heritage industry by equipping graduates with the required competencies to assume entry-level positions in their chosen museum and/or heritage field
- have the student leave the program with independent learning and critical thinking skills

Program Outcomes

Upon graduating from the certificate program, students should be able to:

- demonstrate basic knowledge of the workings of various subfields within museum and heritage studies, including management, collections, conservation, and exhibition and interpretation

- articulate the current best practices of the museum and heritage field in the Gulf region
- function in their chosen specialties within the field of museum and heritage studies
- articulate the current best practices of the museum and heritage field in the Gulf region
- function in their chosen specialties within the field of museum and heritage studies
- demonstrate basic skills in museum and heritage studies
- demonstrate, through supervised practicums, the ability to carry out basic research, presentation and management skills within their chosen museum and heritage subfields

Admission Requirements

Applicants are required to fulfill the university's general admission requirements for graduate studies.

Degree Requirements

To earn a Graduate Certificate in Museum and Heritage Studies, students must complete a minimum of 18 credits as follows:

- nine credits of core courses
- a minimum of six credits in elective courses
- a three-credit practicum

Students must complete the degree requirements within five years from the time of initial enrollment in the program. A minimum cumulative GPA of 3.00 is required for graduation.

Required Courses (12 credits)

Core Courses (9 credits)

- MHS 500 Introduction to Museum and Heritage Studies
- MHS 501 Exhibitions and Collections Management
- MHS 502 Introduction to Principles and Practices of Museum Administration

Practicum (3 credits)

students must complete a practicum (MHS 597) comprising a hands-on experience in museum and heritage studies while working within a museum. A practicum involves

working in the museum, filing a weekly report with the practicum supervisor, and filing an end-of-practicum report.

Elective Courses

(minimum of 6 credits)

Students must complete two courses (for a minimum of six credits) from the following, in consultation with their advisor.

- MHS 510 Modern Practices in Exhibition Design
- MHS 520 History of Material Culture in the Arabian Gulf
- MHS 530 World Heritage Sites
- MHS 540 Museums and Media
- MHS 550 Museum Education and Heritage Studies
- MHS 594 Special Topics in Museum and Heritage Studies

College of Engineering

Dean

Yousef Al-Assaf

Associate Dean

Hany El Kadi

Director of Graduate Programs

Hany El Kadi

Master of Science in Chemical Engineering (MSChE)

Dana Stevenson-Abouelnasr, Head

The MSChE program will prepare professionals in an environment that combines chemical engineering practice and technical research to contribute to the growing body of chemical engineering knowledge, research and development both regionally and internationally.

Program Educational Objectives

Graduates of the MSChE program will be prepared to:

- be successful professionals in a specialized area of chemical engineering
- maintain a desire for research, innovation, and life-long learning uphold the responsibilities of the engineering profession

Program Educational Outcomes

Upon graduation, an AUS MSChE graduate should demonstrate the ability to:

- perform research emphasizing creativity, independent learning and scientific methods in a chosen area of chemical engineering
- apply advanced mathematics and engineering knowledge in identifying, formulating and solving engineering problems
- select and use techniques, skills and modern tools necessary for research or professional practice
- communicate effectively
- recognize the need for, and engage in, lifelong learning
- attend to professional and ethical responsibilities

Admission Requirements

In addition to meeting the university's general graduate admission requirements, applicants must meet specific requirements of the MSChE program. Applicants must hold a Bachelor of Science in Chemical Engineering from an independently accredited university recognized by AUS. Degreed individuals in other engineering fields or a quantitative science field that is closely related to the sought program field may be considered on a case-by-case basis. An applicant with a bachelor's degree in technology (or less than four years of university-level work) will not normally be admitted to the program.

Degree Requirements

Students seeking an MSChE degree must complete a minimum of 30 credits consisting of college/program core courses, program elective courses, a seminar, and a master's thesis or a professional project, with a minimum cumulative grade point average of 3.00.

Students in the MSChE program must choose from two options: the thesis option or the non-thesis option. To ensure that a student in either option will receive good exposure to the research environment, students are required to complete either a thesis or a professional project that includes research aspects. In addition, students who opt for the non-thesis option must take a course in research methodology that will further enhance their research abilities.

Thesis Option

The 30 credits needed as degree requirements for this option include the following:

- six credits of required college core courses
- nine credits of required program core courses
- a minimum of six credits in elective courses
- a zero-credit seminar
- nine credits in Master's Thesis

Non-thesis Option

The 30 credits needed as degree requirements for this option include the following:

- six credits of required college core courses
- 12 credits of required program core courses
- a minimum of nine credits in elective courses
- a zero-credit seminar
- three credits in Professional Project

Required Courses (24/21 credits)

College Core Courses (6 credits)

Students must complete the following courses:

- NGN 500 Advanced Engineering Mathematics
- NGN 505 Random Variables and Stochastic Processes or NGN 509 Advanced Computational Methods

Program Core Courses (9/12 credits)

Students in the thesis option must complete nine credits in program core courses; students in the non-thesis option must complete 12 credits.

- CHE 510 Transport Phenomena
- CHE 511 Advanced Chemical Engineering Thermodynamics
- CHE 512 Advanced Kinetics and Reactor Design
- NGN 501 Research Methods and Analysis in Engineering (non-thesis option)

In addition, all students must complete a seminar course (CHE 695).

Master's Thesis/Professional Project (9/3 credits)

- CHE 698 Professional Project (3 credits - non-thesis option)
- CHE 699 Master's Thesis (9 credits - thesis option)

Elective Courses (minimum of 6/9 credits)

Students in the thesis option must complete a minimum of six credits in elective courses. Students in the non-thesis option must complete a minimum of nine credits in elective courses.

Students can select elective courses from the following list:

- CHE 594 Special Topics in Chemical Engineering
- CHE 610 Catalysis and Reaction Engineering
- CHE 611 Biomedical Engineering and Biotechnology
- CHE 612 Advanced Process Analysis and Control
- CHE 613 Advanced Materials Science
- CHE 614 Environmental Engineering
- CHE 694 Special Topics in Chemical Engineering
- CHE 696 Independent Study in Chemical Engineering

Students in both the thesis and the non-thesis options may elect to take one elective course outside the program with the approval of their advisor.

Master's Thesis/Professional Project

A student must complete his/her thesis/professional project under the direct supervision and guidance of a principal advisor. This principal advisor serves as the chair of the student's examining committee. The committee also includes two additional faculty members. For the thesis option, one of the additional faculty members must be selected from outside the program. The committee could also include one co-advisor or more.

For more information, please refer to the Graduate Student Handbook section at the end of this catalog. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide/.

For registration details, please refer to Thesis and Final Project Registration under the Academic Policies and Regulations section of this catalog.

Master of Science in Civil Engineering (MSCE)

Jamal A. Abdalla, Head

The MSCE program will prepare professionals in an environment that combines civil engineering practice and technical research to contribute to the growing body of civil

engineering knowledge, research and development efforts both regionally and internationally.

Program Educational Objectives

Graduates of the MSCE program will be prepared to:

- be successful professionals in a specialized area of civil engineering
- maintain a desire for research, innovation and lifelong learning
- uphold the responsibilities of the engineering profession

Program Educational Outcomes

Upon graduation, an AUS MSCE graduate should demonstrate the ability to:

- perform research emphasizing creativity, independent learning and scientific methods in a chosen area of civil engineering
- apply advanced mathematics and engineering knowledge in identifying, formulating and solving engineering problems
- select and use techniques, skills and modern tools necessary for research or professional practice
- communicate effectively
- recognize the need for, and engage in, lifelong learning
- attend to professional and ethical responsibilities

Admission Requirements

In addition to meeting the university's general graduate admission requirements, applicants must meet specific requirements of the MSCE program. Applicants must hold a Bachelor of Science in Civil Engineering from an independently accredited university recognized by AUS. Degreed individuals in other engineering fields or a quantitative science field that is closely related to the sought program field may be considered on a case-by-case basis.

An applicant with a bachelor's degree in technology (or less than four years of university-level work) will not normally be admitted to the program.

Degree Requirements

Students seeking an MSCE degree must complete a minimum of 30 credits consisting of college/program core courses, program elective courses, a seminar, and a master's thesis or a professional project with a minimum cumulative grade point average of 3.00.

Students in the MSCE program must choose from two options, the thesis option or the non-thesis option. To ensure that a student in either option will receive good exposure to the research environment, students are required to complete either a thesis or a professional project that includes research aspects. In addition, many of the civil engineering graduate courses have research components that reinforce the research element in the program. Students who opt for the non-thesis option may elect to take a course in research methodology that will further enhance their research abilities.

Thesis Option

The 30 credits needed as degree requirements for this option include the following:

- three credits of required college core courses
- six to 12 credits of 500-level elective courses and six to 12 credits of 600-level elective courses, for a minimum total of 18 credits
- a zero-credit seminar
- nine credits in Master's Thesis

Non-thesis Option

The 30 credits needed as degree requirements for this option include the following:

- three credits of required college core courses
- nine to 15 credits of 500-level elective courses and nine to 15 credits of 600-level elective courses, for a minimum total of 24 credits
- a zero-credit seminar
- three credits in Professional Project

Required Courses (6/12 credits)

College Core Courses (3 credits)

Students must complete one of the following courses:

- NGN 500 Advanced Engineering Mathematics

- NGN 501 Research Methods and Analysis in Engineering
- NGN 505 Random Variables and Stochastic Processes
- NGN 509 Advanced Computational Methods

In addition, all students must complete a seminar course (CVE 695).

Master's Thesis/Professional Project (9/3 credits)

- CVE 698 Professional Project (3 credits - non-thesis option)
- CVE 699 Master's Thesis (9 credits - thesis option)

Elective Courses (minimum of 18/24 credits)

Students in the thesis option must complete six to 12 credits from 500-level courses and six to 12 credits from 600-level courses, for a minimum total of 18 credits. Students in the non-thesis option must complete nine to 15 credits from 500-level courses and nine to 15 credits from 600-level courses, for a minimum total of 24 credits.

Students can select elective courses from the following list:

- CVE 520 Advanced Construction Materials and Methods
- CVE 521 Finite Element Method
- CVE 522 Advanced Water Resources Engineering
- CVE 523 Advanced Transportation Systems
- CVE 594 Special Topics in Civil Engineering
- CVE 620 Advanced Construction Planning and Controls
- CVE 621 Analysis and Design of Tall Buildings
- CVE 622 Physical and Chemical Processes in Environmental Engineering
- CVE 623 Advanced Transportation Planning Techniques
- CVE 624 Advanced Geotechnical Engineering
- CVE 625 Highway Bridge Design
- CVE 694 Special Topics in Civil Engineering
- CVE 696 Independent Study in Civil Engineering
- ESM 570 Project Management

Students in both options may elect to

take one course outside the program with the approval of their advisor.

Master's Thesis/Professional Project

A student must complete his/her thesis or professional project under the direct supervision and guidance of a principal advisor. This principal advisor serves as the chair of the student's examining committee. The committee also includes two additional faculty members. For the thesis option, one of the additional faculty members must be selected from outside the program. The committee could also include one co-advisor or more.

For more information, please refer to the Graduate Student Handbook section at the end of this catalog. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide/.

For registration details, please refer to Thesis and Final Project Registration under the Academic Policies and Regulations section of this catalog.

Master of Science in Computer Engineering (MSCoE)

Assim Sagahyoon, Head

The MSCoE program will prepare professionals in an environment that combines computer engineering practice and technical research to contribute to the growing body of computer engineering knowledge, research and development both regionally and internationally.

Program Educational Objectives

Graduates of the MSCoE program will be prepared to:

- be successful professionals in a specialized area of computer engineering
- maintain a desire for research, innovation, and lifelong learning
- uphold the responsibilities of the engineering profession

Program Educational Outcomes

Upon graduation, an AUS MSCoE

graduate should demonstrate the ability to:

- perform research emphasizing creativity, independent learning and scientific methods in a chosen area of computer engineering
- apply advanced mathematics and engineering knowledge in identifying, formulating and solving engineering problems
- select and use techniques, skills and modern tools necessary for research or professional practice
- communicate effectively
- recognize the need for, and engage in, lifelong learning
- attend to professional and ethical responsibilities

Admission Requirements

In addition to meeting the university's general graduate admission requirements, applicants must meet specific requirements of the MSCoE program. Applicants must hold a Bachelor of Science in Computer Engineering from an independently accredited university recognized by AUS. Degreed individuals in engineering fields or a quantitative science field that is closely related to the sought program field may be considered on a case-by-case basis. An applicant with a bachelor's degree in technology (or less than four years of university-level work) will not normally be admitted to the program.

Degree Requirements

Students seeking an MSCoE degree must complete a minimum of 30 credits consisting of college/program core courses, program elective courses, a seminar, and a master's thesis or a professional project with a minimum cumulative grade point average of 3.00.

Students in the MSCoE program must choose from two options, the thesis option or the non-thesis option. To ensure that a student in either option will receive good exposure to the research environment, all students are required to complete either a thesis or a professional project that includes research aspects. In addition, many of the 600-level computer engineering

courses have research components that reinforce the research element in the program.

Thesis Option

The 30 credits needed as degree requirements for this option include the following:

- six credits of required college core courses
- a minimum of nine credits from 500-level elective courses and a minimum of six credits from 600-level elective courses
- a zero-credit seminar
- nine credits in Master's Thesis

Non-thesis Option

The 30 credits needed as degree requirements for this option include the following:

- six credits of required college core courses
- nine to 12 credits of 500-level elective courses and nine to 12 credits of 600-level elective courses, for a minimum total of 21 credits
- a zero-credit seminar
- three credits in Professional Project

Required Courses (15/9 credits)

College Core Courses (6 credits)

Students must complete two of the following courses:

- NGN 500 Advanced Engineering Mathematics
- NGN 505 Random Variables and Stochastic Processes
- NGN 509 Advanced Computational Methods

In addition, all students must complete a seminar course (COE 695).

Master's Thesis/Professional Project (9/3 credits)

- COE 698 Professional Project (3 credits - professional project option)
- COE 699 Master's Thesis (9 credits - thesis option)

Elective Courses (minimum of 15/21 credits)

Students in the thesis option must complete a minimum of nine credits from 500-level elective courses and a minimum of six credits from 600-level elective courses. Students in the non-thesis option must complete nine to 12

credits of 500-level elective courses and nine to 12 credits of 600-level elective courses, for a minimum total of 21 credits.

Students can select elective courses from the following list:

- COE 530 Advanced Computer Networks
- COE 531 Advanced Software Design for Engineers
- COE 532 Advanced Embedded Systems and Industrial Automation
- COE 533 Advanced Computer Architecture
- COE 594 Special Topics in Computer Engineering
- COE 630 Wireless Networks
- COE 632 Advanced Database Systems
- COE 633 Advanced Internet Computing
- COE 634 Computer-Aided Design and Optimization of Digital Systems
- COE 635 Optical Networks
- COE 694 Special Topics in Computer Engineering
- COE 696 Independent Study in Computer Engineering

Students in both options may elect to take one elective course outside the program with the approval of their advisor.

Master's Thesis /Professional Project

A student must complete his/her thesis/professional project under the direct supervision and guidance of a principal advisor. This principal advisor serves as the chair of the student's examining committee. The committee also includes two additional faculty members. For the thesis option, one of the additional faculty members must be selected from outside the program. The committee could also include one co-advisor or more.

For more information, please refer to the Graduate Student Handbook section at the end of this catalog. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide/.

For registration details, please refer to Thesis and Final Project Registration under the Academic Policies and Regulations section of this catalog.

Master of Science in Electrical Engineering (MSEE)

Mohamed El-Tarhuni, Head

The MSEE program will prepare professionals in an environment that combines electrical engineering practice and technical research to contribute to the growing body of electrical engineering knowledge, research and development both regionally and internationally.

Program Educational Objectives

Graduates of the MSEE program will be prepared to:

- be successful professionals in a specialized area of electrical engineering
- maintain a desire for research, innovation and lifelong learning
- uphold the responsibilities of the engineering profession

Program Educational Outcomes

Upon graduation, an AUS MSEE graduate should demonstrate the ability to:

- perform research emphasizing creativity, independent learning and scientific methods in a chosen area of electrical engineering
- apply advanced mathematics and engineering knowledge in identifying, formulating and solving engineering problems
- select and use techniques, skills and modern tools necessary for research or professional practice
- communicate effectively
- recognize the need for, and engage in, lifelong learning
- attend to professional and ethical responsibilities

Admission Requirements

In addition to meeting the university's general graduate admission requirements, applicants must meet specific requirements of the MSEE program. Applicants must hold a Bachelor of Science in Electrical Engineering from an independently accredited university recognized by AUS. Degreed individuals in engineering fields or a quantitative science field that is closely related

to the sought program field may be considered on a case-by-case basis. An applicant with a bachelor's degree in technology (or less than four years of university-level work) will not normally be admitted to the program.

Degree Requirements

Students seeking an MSEE degree must complete a minimum of 30 credits consisting of college/program core courses, program elective courses, a seminar, and a thesis or a professional project with a minimum cumulative grade point average of 3.00.

Students in the MSEE program must choose from two options, the thesis option or the non-thesis option. To ensure that a student in either option will receive good exposure to the research environment, all students are required to complete either a thesis or a professional project that includes research aspects. In addition, all students will be required to complete research-oriented class projects within many of the electrical engineering graduate courses.

Thesis Option

The 30 credits needed as degree requirements for this option include the following:

- six credits of required college core courses
- six to nine credits of 500-level elective courses and six to nine credits of 600-level elective courses, for a minimum total of 15 credits
- a zero-credit seminar
- nine credits in Master's Thesis

Non-thesis Option

The 30 credits needed as degree requirements for this option include the following:

- six credits of required college core courses
- nine to 12 credits of 500-level elective courses and nine to 12 credits of 600-level elective courses, for a minimum total of 21 credits
- a zero-credit seminar
- three credits in Professional Project

Required Courses (15/9 credits)

College Core Courses (6 credits)

Students must complete two of the following courses:

- NGN 500 Advanced Engineering Mathematics
- NGN 505 Random Variables and Stochastic Processes
- NGN 509 Advanced Computational Methods

In addition, all students must complete a seminar course (ELE 695).

Master's Thesis/Professional Project (9/3 credits)

- ELE 698 Professional Project (3 credits - non-thesis option)
- ELE 699 Master's Thesis (9 credits - thesis option)

Elective Courses (minimum of 15/21 credits)

Students in the thesis option must complete six to nine credits from 500-level courses and six to nine credits from 600-level courses, for a minimum total of 15 credits. Students in the non-thesis option must complete nine to 12 credits from 500-level courses and nine to 12 credits from 600-level courses, for a minimum total of 21 credits.

Students can select elective courses from the following list:

- ELE 540 Principles of Digital Communications
- ELE 542 Applied Electromagnetics
- ELE 543 Analog Microelectronics
- ELE 544 Advanced Signal Processing
- ELE 545 Power System Operation and Control
- ELE 546 Advanced Power Electronics
- ELE 594 Special Topics in Electrical Engineering
- ELE 640 Bioelectric Phenomena
- ELE 641 Advanced Microwave Engineering
- ELE 642 Digital and Wireless Communications
- ELE 643 Image and Video Processing
- ELE 644 Control of AC Drives
- ELE 645 High Voltage Engineering
- ELE 646 Radio Frequency Integrated Circuits
- ELE 694 Special Topics in Electrical Engineering

- ELE 696 Independent Study in Electrical Engineering

Students in both options may elect to take one course outside the program with the approval of their advisor.

Master's Thesis/Professional Project

A student must complete his/her thesis/professional project under the direct supervision and guidance of a principal advisor. This principal advisor serves as the chair of the student's examining committee. The committee also includes two additional faculty members. For the thesis option, one of the additional faculty members must be selected from outside the program. The committee could also include one co-advisor or more.

For more information, please refer to the Graduate Student Handbook section at the end of this catalog. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide/.

For registration details, please refer to Thesis and Final Project Registration under the Academic Policies and Regulations section of this catalog.

Master of Science in Engineering Systems Management (MSESM)

Moncer Hariga, Director

Faculty

Fouad Abdel Aziz
Ibrahim Al-Kattan
Hazim El-Baz

The mission of the Master of Science in Engineering Systems Management (MSESM) program is to considerably increase the opportunities for practicing engineers to be successful in their efforts to build effective teams, lead and manage major engineering projects, and expand economic development for the private and public sectors of the UAE and the Gulf region countries.

The curriculum provides core courses followed by concentration courses in the theme areas of construction management (CM), engineering management (EM) and information

technology management (ITM).

With quality standards similar to those established in comparable North American institutions, the program offers a multidisciplinary curriculum designed to integrate management skills with technical knowledge from different engineering disciplines for the purpose of accomplishing work activities and entire projects more economically and productively. The program provides students from engineering and related disciplines with the knowledge and skills needed to plan, design, analyze and improve integrated systems of people, material, technology and information. It also aims to contribute to the related world body of knowledge and advance research and development efforts in the region.

Program Educational Objectives

Graduates of the MSES program will be prepared to:

- utilize engineering system management tools and techniques to design and implement economically and technically sound solutions to real-world problems
- lead the change management process to meet organizational goals and objectives
- communicate effectively in a multidisciplinary team work environment
- act professionally and ethically in the practice of engineering systems management
- engage in lifelong learning and carry out independent research in ESM fields

Program Educational Outcomes

Upon graduation, an AUS MSES graduate should demonstrate the ability to:

- apply the techniques, tools and skills of engineering systems management to address real-world problems
- conduct economic and financial analysis of projects and engineering operations
- function as effective members of multidisciplinary teams and communicate effectively in both written and verbal forms

- recognize professional and ethical responsibilities and act accordingly within a global and social context
- engage in theoretical and applied research projects

Admission Requirements

In addition to meeting the university's general graduate admission requirements, applicants must meet specific requirements of the MSES program. Applicants must have a Bachelor of Science degree in engineering from an independently accredited university recognized by AUS. Degreed individuals in a quantitative science field that is closely related to engineering may be considered on a case-by-case basis. Degreed individuals in computer science or information technology may be considered only for the information technology theme. An applicant with a bachelor's degree in technology (or less than four years of university-level work) will not normally be admitted to the program. Preference will be given to applicants with relevant work experience.

Degree Requirements

Students in the MSES program must choose from two options: the thesis or professional project option, or the course option, as described below.

Students seeking an MSES degree with a thesis or professional project option must complete a minimum of 36 credit hours with a minimum cumulative grade point average of 3.00.

Students seeking an MSES degree with a course option must complete a minimum of 39 credit hours with a minimum cumulative grade point average of 3.00.

Thesis or Professional Project Option

The 36 credits needed as degree requirements for this option include:

- 15 credits in core courses
- 15 credits in theme required and elective courses
- six credits in Master's Thesis or Professional Project

Course Option

The 39 credits needed as degree requirements for this option include:

- 18 credits in core courses
- 21 credits in theme required and elective courses

Prerequisite Discipline-Bridging Courses

Students with no prior background in engineering statistics will be required to take ESM 501 Fundamentals of Probability and Statistics.

Students with no prior background in engineering economy will be required to take ESM 502 Fundamentals of Engineering Economy.

Credits for prerequisite bridging courses do not count toward fulfillment of degree requirements.

Required Courses

Core Courses (15/18 credits)

Students in the thesis/professional project option must complete 15 credits in course courses; students in the course option must complete 18 credits.

- ESM 520 Management for Engineers
- ESM 532 Introduction to Applied Operations Research
- ESM 555 Information Technology Management
- ESM 560 Quality Engineering and Management
- ESM 575 Advanced Engineering Economy
- ESM 600 Research Methodology (course option only)

Theme Courses (3/6 credits)

Students in the thesis/professional project option must complete three credits in theme required courses; students in the course option must complete six credits.

Construction Management Theme

- ESM 570 Project Management
- ESM 686 Capstone Course in Construction Management (course option only)

Engineering Management Theme

- ESM 570 Project Management
- ESM 685 Capstone Course in Engineering Management (course option only)

IT Management Theme

- ESM 580 IT Project Management
- ESM 687 Capstone Course in Information Technology Management (course option only)

Elective Courses

Students in the thesis/professional project option must complete a minimum of 12 credits in theme elective courses; students in the course option must complete a minimum of 15 credits.

Depending on their declared theme, students can select elective courses from the following lists.

Students in both the thesis/professional project and the course options may elect to take one elective course outside the program with the approval of their advisor.

Construction Management Theme

- ESM 600 Research Methodology (thesis/professional project option only)
- ESM 642 Business Process Management
- ESM 644 Financial Management for Engineers
- ESM 650 Construction Management
- ESM 652 Construction Planning and Scheduling
- ESM 660 Legal Aspects of ESM
- ESM 668 Construction Safety Management
- ESM 694 Special Topics in ESM

Engineering Management Theme

- ESM 600 Research Methodology (thesis/professional project option only)
- ESM 634 Advanced Modeling and Simulation
- ESM 636 Human Resources Management
- ESM 638 Decision Analysis
- ESM 640 Supply Chain Management
- ESM 642 Business Process Management
- ESM 644 Financial Management for Engineers
- ESM 660 Legal Aspects of ESM
- ESM 694 Special Topics in ESM

IT Management Theme

- ESM 600 Research Methodology (thesis/professional project option only)
- ESM 612 Advanced Information Systems Management
- ESM 614 Communication and Network Management
- ESM 620 Security Management
- ESM 624 Knowledge Management
- ESM 642 Business Process Management
- ESM 644 Financial Management for Engineers
- ESM 660 Legal Aspects of ESM
- ESM 694 Special Topics in ESM

Master's Thesis/Professional Project

A student must complete his/her thesis or professional project under the direct supervision and guidance of a principal advisor. This principal advisor serves as the chair of the student's examining committee. The committee also includes two additional faculty members. For the thesis option, one of the additional faculty members must be selected from outside the program. The committee could also include one co-advisor or more.

For more information, please refer to the Graduate Student Handbook section at the end of this catalog. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide/.

For registration details, please refer to Thesis and Final Project under the Academic Policies and Regulations section of this catalog.

Master of Science in Mechanical Engineering (MSME)

Mohammed-Amin Al-Jarrah, Head

The MSME program will prepare mechanical engineering and associated professionals in an environment that combines mechanical engineering practice and technical research to contribute to the growing body of

mechanical engineering knowledge, research and development both regionally and internationally.

Program Educational Objectives

Graduates of the MSME program will be prepared to:

- be successful professionals in a specialized area of mechanical engineering
- maintain a desire for research, innovation, and lifelong learning
- uphold the responsibilities of the engineering profession

Program Educational Outcomes

Upon graduation, an AUS MSME graduate should demonstrate the ability to:

- perform research emphasizing creativity, independent learning and scientific methods in a chosen area of mechanical engineering
- apply advanced mathematics and engineering knowledge in identifying, formulating and solving engineering problems
- select and use techniques, skills and modern tools necessary for research or professional practice
- communicate effectively
- recognize the need for, and engage in, life-long learning
- attend to professional and ethical responsibilities

Admission Requirements

In addition to meeting the university's general graduate admission requirements, applicants must meet specific requirements of the MSME program. Applicants must hold a Bachelor of Science in Mechanical Engineering from an independently accredited university recognized by AUS. Degreed individuals in engineering fields or a quantitative science field that is closely related to the sought program field may be considered on a case-by-case basis. An applicant with a bachelor's degree in technology (or less than four years of university-level work) will not normally be admitted to the program.

Degree Requirements

Students seeking an MSME degree must complete a minimum of 30 credits consisting of college program core courses, program elective courses, a seminar and a thesis or a professional project with a minimum cumulative grade point average of 3.00.

Students in the MSME program must choose from two options, the thesis option or the non-thesis option. To ensure that a student in either option will receive good exposure to the research environment, all students are required to complete either a thesis or a professional project that includes research aspects. In addition, all students will be required to complete research-oriented class projects within many of the mechanical engineering graduate courses.

Thesis Option

The 30 credits needed as degree requirements for this option include the following:

- six credits of required college core courses
- nine credits of required program core courses
- a minimum of six credits in elective courses
- a zero-credit seminar
- nine credits in Master's Thesis

Non-Thesis Option

The 30 credits needed as degree requirements for this option include the following:

- six credits of required college core courses
- nine credits of required program core courses
- a minimum of 12 credits in elective courses
- a zero-credit seminar
- three credits in Professional Project

Required Courses (24/21 credits)

College Core Courses (6 credits)

Students must complete two of the following courses:

- NGN 500 Advanced Engineering Mathematics
- NGN 501 Research Methods and Analysis in Engineering

- NGN 505 Random Variables and Stochastic Processes
- NGN 509 Advanced Computational Methods

Program Core Courses (9 credits)

Students must complete the following three courses:

- MCE 550 Mechanical Systems Design
- MCE 551 Advanced Thermofluids
- MCE 552 Modeling and Simulation of Mechanical Systems

In addition, all students must complete a seminar course (MCE 695).

Master's Thesis/Professional Project (9/3 credits)

- MCE 698 Professional Project (3 credits - non-thesis option)
- MCE 699 Master's Thesis (9 credits - thesis option)

Elective Courses (minimum of 6/12 credits)

Students in the thesis option must complete a minimum of six credits in elective courses. Students in the non-thesis option must complete a minimum of 12 credits in elective courses.

Students can select elective courses from the following list:

- MCE 594 Special Topics in Mechanical Engineering
- MCE 650 Advanced Machine Dynamics
- MCE 651 Advanced Engineering Materials
- MCE 652 Advanced Topics in Manufacturing
- MCE 653 HVAC Systems Design
- MCE 654 Advanced Fluid Dynamics
- MCE 655 Advanced Measurements and Design of Experiments
- MCE 694 Special Topics in Mechanical Engineering
- MCE 696 Independent

Study in Mechanical Engineering

Students in both options may elect to take one course outside the program with the approval of their advisor.

Master's Thesis/Professional Project

A student must complete his/her thesis/professional project under the direct supervision and guidance of a principal

advisor. This principal advisor serves as the chair of the student's examining committee. The committee also includes two additional faculty members. For the thesis option, one of the additional faculty members must be selected from outside the program. The committee could also include one co-advisor or more.

For more information, please refer to the Graduate Student Handbook section at the end of this catalog. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide/.

For registration details, please refer to Thesis and Final Project Registration under Academic Policies and Regulations section of this catalog.

Master of Science in Mechatronics Engineering (MSMTR)

Rached Dhaouadi, Director

The Master of Science in Mechatronics Engineering (MSMTR) program is committed to being an international, multidisciplinary center of excellence in synergistic applications of the latest techniques in embedded systems, precision mechanical engineering, control theory, computer science and electronics through education, research and outreach. The technological gap between developing and industrialized nations continues to widen at an alarming rate, largely due to the lack of skilled engineers capable of integrating new technologies into existing systems and networks. The mandate of the mechatronics engineering program is to improve this situation by equipping engineers with the design, analysis and synthesis abilities to plan, implement and manage the latest technologies. The curriculum of the mechatronics program meets the region's needs—both present and future—through the education of engineers and scientists. Professional jobs considered to be in the mechatronics engineering field are grounded in the multidisciplinary aspects of electrical, mechanical, control, computer and software engineering. The unique skills of the mechatronics graduate are becoming

increasingly valuable to employers in a variety of areas, including modern industrial installations and systems, computer integrated manufacturing systems, maintenance diagnosis and troubleshooting, defense systems, vehicle design and manufacturing, robotics and many more.

This graduate program provides students with state-of-the-art knowledge in their areas of specialization and with practical strategies for adapting that knowledge to serve the specific needs of the region. Multidisciplinary engineers are needed now more than ever to meet the demands for a flexible engineering workforce to deal with highly integrated engineering systems.

Program Educational Objectives

Graduates of the MSMTR program will be prepared to:

- apply the latest techniques in precision mechanical engineering, control theory, computer engineering and science, and electronics to design more functional, adaptable and cost-effective products
- provide employers with interdisciplinary skills necessary to utilize cutting-edge technology tools in the design, development and implementation of modern engineering systems
- understand and develop technologies such as information technology, embedded systems, modeling and simulation, and precision engineering systems in the design and development of smart products
- apply mechatronics principles in the broad context of engineering system design
- address open-ended problems and maintain an attitude of self-learning

Program Educational Outcomes

Upon graduation, an AUS MSMTR graduate should demonstrate the ability to:

- apply advanced engineering tools necessary to identify, model and analyze mechatronics engineering problems

- formulate and propose alternative solutions that satisfy specific performance requirements of a mechatronics system
- design and implement a mechatronics component, process or system and assess its performance
- function effectively in multidisciplinary teams in a leadership role or as an active member
- act professionally and ethically
- recognize contemporary issues and their influence on technology advancement in a global and societal context
- engage in lifelong learning in engineering and related professional areas
- conduct research and development activities in mechatronics and related areas
- communicate effectively through technical presentations and documentations

Admission Requirements

In addition to meeting the university's general graduate admission requirements, applicants must meet the specific requirements of the mechatronics engineering program. Applicants must hold a bachelor of science degree in engineering from an accredited institution. Degreed individuals in fields closely related to engineering or a quantitative science may be considered on a case-by-case basis. An applicant with a bachelor's degree in technology (or less than four years of university-level work) is not normally admissible to the program.

Waiver Policy

Students may qualify to waive up to six credits (two courses) from prerequisite discipline-bridging courses (see Degree Requirements). In general, a course may be waived if the student has completed comparable course work at the undergraduate level. Students may be required to submit course documentation. Waivers are only granted after an official, sealed transcript is received by the AUS Office of Enrollment Management/Graduate Admissions. Waivers are evaluated at admission. The following rules apply:

- Students may waive prerequisite discipline-bridging courses if similar undergraduate courses have been taken at an accredited university.
- Students with professional experience that indicates mastery of a given discipline-bridging course content may be granted a waiver.

Degree Requirements

The formal program of study includes a minimum of 30 credits, including the completion of either a research thesis or design project. Students must file formal study plans upon the completion of 12 credits of approved MTR graduate courses. A minimum cumulative grade point average of 3.00 is required for graduation.

Thesis Option

Students in the thesis option must complete a minimum of 30 credits, as follows:

- 18 credits in core courses
- a minimum of six credits in elective courses
- six credits in Master's Thesis

Design Project Option

Students in the design project option must complete a minimum of 30 credits, as follows:

- 15 credits in core courses
- a minimum of 12 credits in elective courses
- three credits in Mechatronics Design Project

Prerequisite Discipline-Bridging Courses

Students admitted to the program must complete the two prerequisite discipline-bridging courses listed below. One or both courses could be waived by the Mechatronics Engineering Admissions Committee, depending on the student's background. The waiver must be established at the time of admission. Prerequisite discipline-bridging courses do not generate credits toward the completion of the degree.

- MTR 501 Introduction to Mechatronics (Students with a Bachelor of Science in Mechatronics Engineering are exempted.)
- MTR 515 Information Technology

for Mechatronics (Students with a Bachelor of Science in Computer Engineering are exempted.)

Core Courses (15/18 credits)

Students in the thesis option must complete 18 credits, while students in the design project option must complete 15 credits from the following list of courses:

- MTR 520 Embedded Systems for Mechatronics
- MTR 540 Advanced Control Systems
- MTR 590 Mechatronics Design
- MTR 600 Modeling and Simulation of Dynamic Systems
- MTR 605 Digital Signal Processing (thesis option only)
- MTR 695 Mechatronics Seminar
- NGN 500 Advanced Engineering Mathematics

Elective Courses (6/12 credits)

Students in the thesis option must complete a minimum of six credits, while students in the design project option must complete a minimum of 12 credits from the following list of courses:

- MTR 605 Digital Signal Processing (design project option only)
- MTR 610 Automated Manufacturing Systems
- MTR 615 Artificial Intelligent Systems
- MTR 630 Real-Time Robotics Systems
- MTR 640 Nonlinear and Intelligent Control Systems
- MTR 644 Electric Drives for Mechatronics Systems
- MTR 645 Image Processing and Computer Vision
- MTR 650 Applied Linear Estimation
- MTR 694 Special Topics in Mechatronics Engineering
- MTR 696 Independent Study in Mechatronics Engineering

Master's Thesis/Design Project

Students in the thesis option must complete a program of research culminating in a thesis, for at least six credits, that contributes to a selected area of knowledge. Students in the design project option must complete a

comprehensive design project for three credit hours during the final semester of the program. Projects are normally industry related and developed through an industrial partner.

A student must complete his/her thesis/design project under direct supervision and guidance of a principal advisor. This principal advisor will serve as the chair of the student's examining committee and is appointed no later than the end of the third semester of study in the program. The committee also includes two additional faculty members. For the thesis option, one of the additional faculty members must be selected from outside the program. The committee could also include one or more co-advisor.

Students in the thesis option must pass a final oral thesis defense. Students in the design project option must pass a final oral project presentation.

For more information, please refer to the Graduate Student Handbook section at the end of this catalog. A complete guide for preparing the thesis is given at www.aus.edu/academic/gup/graduate/thesesguide/.

For registration details, please refer to Thesis and Final Project under the Academic Policies and Regulations section of this catalog.

School of Business and Management

Dean

R. Malcolm Richards

Associate Dean

A. Paul Williams

Director of Graduate and Executive Programs

Robert E. Bateman II

Master of Business Administration (MBA)

The AUS Master of Business Administration (MBA) program is committed to helping individuals in the Gulf region think and act globally, integrating the latest business knowledge into problem solving. The program provides advanced management education in an environment that encourages students to extend their leadership capabilities. It is built on the premise that up-to-date expertise is what gives managers value-added capacity in a knowledge-based economy.

Through this program, students are prepared for careers in management and leadership positions in both the private and public sectors. Students will acquire a comprehensive foundation in the fundamentals of business in a global environment. They will also learn the skills and analytical tools for effective communication and decision making.

AUS faculty worked in close cooperation with American University, Washington, DC, to design this program. Individual participation is emphasized through class discussions, case study methodology, and real-world projects in cooperation with other students in the class. Graduates of the MBA program are prepared to identify, analyze and understand the interrelationships among business organizations and international and domestic institutions in the UAE and throughout the world. Students also develop an awareness of societal and environmental needs and concerns as they relate to ethical, professional and socially responsible business practices.

More details on the program are available at www.aus.edu/mba.

Program Educational Goals and Outcomes

The MBA program prepares students for careers in management and helps them develop the decision-making skills necessary to lead successful business enterprises. The curriculum presents global business perspectives and challenges students to apply them to the Gulf region. MBA graduates are expected to achieve the following objectives:

- *Proficiency in the core business knowledge required of an executive manager*
Students will appropriately apply principles of economics, financial analysis, information and operations management, and marketing to the diagnosis of complex business problems.
- *Understanding of the interrelations between business organizations and other societal institutions*
Students will use principles of ethics and social responsibility to understand the management of relationships between a business enterprise and its key internal and external stakeholders.
- *Teamwork, interpersonal, communication and leadership skills*
Students will demonstrate graduate-level competence in team interaction and presentation skills, use of technology, writing and leadership through participation in projects that emphasize the role of the executive in managing change.
- *Decision-making skills rooted in critical thinking, analysis and problem solving*
Students will have the ability to evaluate and select from alternative courses of action, using appropriate methods to consider and integrate data with the theory and practices common to business organizations.

Admission Requirements

In addition to meeting the university's general graduate admission

requirements, applicants must meet the specific requirements of the MBA program. Admission to the MBA program is competitive. Applicants are required to take the AUS Graduate Management Test. This exam is administered through the AUS Testing Center. The score on this exam is then considered with the student's undergraduate grade point average, particularly for the last two years of study. These results are used to assist the SBM Graduate Committee in determining the admission status of an applicant. Students unable to travel to Sharjah prior to enrollment may submit a score of 500 or more on the Graduate Management Admission Test (GMAT), taken within the last five years.

Conditional Admission

Conditional admission to the MBA program is limited. During the semester in which they have conditional admission status, applicants must satisfy all admission requirements for the MBA program, including the requirement to earn an average of at least 3.00 in all coursework. Failure to do so will result in dismissal.

Academic Load

An MBA student may register for up to nine credits per semester. Upon a student's request, the program director can approve three additional credits if the student has achieved a cumulative GPA of 3.50 or above.

Academic Standing Policy

In addition to the university guidelines on academic dismissal, as outlined in the Academic Policies and Regulations section of this catalog, the following rule applies:

- A student is allowed to receive two Cs (C or C+) in courses in the MBA program. If the student receives a third C or C+, he/she is dismissed from the program.

Degree Requirements

To be awarded an MBA degree, students must complete 30 credits in MBA core courses and electives as follows:

- 24 credits in MBA core courses
- a minimum of six credits in elective courses

Students enrolled in the program also have the option to choose an area of concentration in one of the following fields: finance, human resource management, innovation and entrepreneurship, management consulting or public management.

Students who select an area of concentration are required to complete 33 credits in core courses and concentration electives as follows:

- 24 credits in MBA core courses
- a minimum of nine credits in concentration electives

In addition, the following restrictions apply:

- Students concentrating in finance cannot substitute MBA 611.
- Students concentrating in human resource management cannot substitute MBA 612.
- Students concentrating in management consulting cannot substitute MBA 612.
- Students concentrating in public management can substitute MBA 611 with MBA 625 only. This substitution is encouraged.

In addition, students may be required to complete 16.5 credits in foundation courses at the beginning of their program.

Courses are offered in the evenings. The MBA program can be completed in 18 months, including summers, if all the foundation courses are required and 12 months if all the foundation courses are waived.

Foundation Courses Requirement

Students admitted to the MBA program may be required to complete a maximum of 16.5 credits in foundation courses, which serve as preparation for the core courses. The number of foundation courses required will normally depend on courses completed by the student as an undergraduate. Foundation courses

may be waived when the waiver policy requirements are met.

Foundation Courses (16.5 credits)

- MBA 501 Foundations of Economics
- MBA 503 Financial Accounting for Managers
- MBA 504 Managerial Statistics
- MBA 505 Financial Management
- MBA 508 Analytical Methods and Modeling*
- MBA 509 Marketing Concepts*
- MBA 512 Organizational Behavior*

** Indicates a half-semester or compressed course format.*

Waiver Policy

Students may qualify to waive any or all of the foundation courses. In general, a course may be waived if the student has completed comparable course work at the undergraduate level. Students may be required to submit course documentation. Waivers are only granted after an official, sealed transcript is received by the AUS Office of Enrollment Management/ Graduate Admissions. Waivers are evaluated at admission. Listed below are the waiver rules:

- Each of the foundation courses in the MBA program may be waived for students who have taken equivalent coursework at the undergraduate level. Two equivalent courses are required to waive each of the following foundation courses: MBA 501, 503 and 504. One equivalent course is required to waive MBA 505, 508, 509 and 512. Waiver consideration will only be given for courses taken at an accredited university. Only courses in which the student earned a grade of B or better will be considered.
- Students who waive the following foundation courses will be required to take the core courses indicated:

Waived Foundation Course	Required Core Course
MBA 501	MBA 601
MBA 503	MBA 613
MBA 504	MBA 609
MBA 505	MBA 611
MBA 508	MBA 606
MBA 509	MBA 614
MBA 512	MBA 612

- Students with professional experience and/or holders of commonly recognized certificates (e.g., CPA or CFA) that indicate mastery of the content of a foundation course may be granted a waiver.
- Students may be required to take a placement exam in order to waive a foundation course. Waiver exams must be completed at the beginning of the program.

Proficiency Requirements

Prior to enrolling in MBA courses students must demonstrate proficiency in computer skills and basic statistics. These requirements can be met by passing an undergraduate university-level course in computer skills or statistics, respectively. Students who have not taken these courses may meet the proficiency requirements by earning a passing grade in a proficiency placement test.

Core Courses Requirement

To be awarded an MBA degree, students must complete 24 credits in core courses. With permission of the SBM Director of Graduate Programs, students may replace one core course with an elective course in a related subject, provided that the elective meets the educational objectives of the program.

Students may not substitute for a core course if the corresponding foundation course was waived.

Core Courses (24 credits)

- MBA 601 Managerial Economics
- MBA 606 Management Information Systems
- MBA 609 Operations Management
- MBA 611 Advanced Financial Management
- MBA 612 Leadership and Change Management
- MBA 613 Accounting Analysis for Managers
- MBA 614 Marketing Management
- MBA 618 Strategic Management in a Global Environment

General MBA Degree

In addition to meeting the core courses requirements, students who do not elect

an area of concentration must complete two elective courses (a minimum of six credits) selected from any MBA courses not counted as core or foundation courses. Electives selected from outside of the MBA program must be approved by the student's advisor.

Finance Concentration (9 credits)

Students may choose from the following or any other approved elective:

- MBA 632 Investment Analysis
- MBA 633 Financial Derivatives
- MBA 634 Commercial Banking
- MBA 635 Islamic Economics
- MBA 636 Islamic Banking and Finance
- MBA 637 Investing in Real Estate

Human Resource Management Concentration (9 credits)

Required Course (3 credits)

- MBA 661 Strategic Human Resource Management

Elective Courses (6 credits)

Students may choose from the following or any other approved elective:

- MBA 662 International Human Resource Management
- MBA 663 Staffing
- MBA 664 Training and Development

Innovation and Entrepreneurship Concentration (9 credits)

Required Course (3 credits)

- MBA 615 Innovation and Entrepreneurship

Elective Courses (6 credits)

Students may choose from the following or any other approved elective:

- MBA 680 Project Management

Management Consulting Concentration (9 credits)

Required Course (3 credits)

- MBA 670 Management Consulting

Elective Courses (6 credits)

Students may choose from the following or any other approved elective:

- MBA 610 Business Research Applications
- MBA 615 Innovation and Entrepreneurship
- MBA 680 Project Management

- MBA 690 Global Consulting Practicum

Public Management Concentration (9 credits)

Required Course (3 credits)

- MBA 620 Public Administration and the Policy Process

Elective Courses (6 credits)

Students may choose from the following or any other approved elective:

- MBA 621 Management of Nonprofit Organizations
- MBA 622 The Public-Private Partnership
- MBA 623 e-Government
- MBA 624 Ethics, Law, Democracy and Society

Academic Advising

The SBM Office of Graduate Programs provides academic and career advising to students through the director, advisor and graduate faculty in the School of Business and Management. Additionally, the graduate committee provides assistance in advising as required. The graduate committee consists of faculty members who teach in the MBA program and are appointed on a yearly basis.

Executive Master of Business Administration (EMBA)

The Executive MBA program is designed for high-potential business leaders preparing to expand the position of their companies in world markets. Adapting state-of-the-discipline business knowledge to the needs of the local market, the EMBA helps to unlock the global growth potential of Gulf enterprises. A unique curriculum integrates liberal thought with professional education in a format that encourages active learning and immediate application to the challenges of executive management and organizational governance in a global context.

The focus is on development of leadership and decision-making skills; participants learn from cross-functional business approaches,

strategies, techniques and technologies around the world to identify useful new ideas and stimulate creative problem solving. The cohort-based approach promotes dialogue among participants and fosters a network of innovative thinkers who can create solutions that serve businesses throughout the region. Two travel seminars introduce participants to world markets in a structured setting.

Leadership-building includes enhancing core competencies for effective management. Individual modules highlight key decisions on the use of human, financial and data resources. Other sessions consider executive problem-solving, development of strategy and effective communications. Participants learn to motivate others and to implement organizational growth initiatives. Strategic innovation and executive skill-set sessions are interwoven with modules that bring discipline-specific theory into practice.

Program Educational Goals and Outcomes

The EMBA program prepares graduates to take on new leadership responsibilities and feel confident in facing new business challenges. Specific objectives and outcomes include the following:

- *Application of business knowledge to the development of organizational strategy*

Participants will apply principles of economics, financial management, marketing, information systems, human resource management and operations to the development of integrated organization strategies for growth and innovation.

- *Management of relations between business organizations, stakeholders and social institutions*

Participants will use principles of ethics and social responsibility, knowledge of local expectations, and an understanding of the influence of the globalization process on corporate governance to position a business enterprise appropriately with key internal and external stakeholders worldwide.

- *Exhibit leadership, teamwork, and interpersonal and communication skills at an executive level*

Participants will demonstrate an ability to use leadership techniques, high-level team interaction and presentation skills, application of technology, and effective writing in projects that emphasize the role of the executive in enhancing organizational performance.

- *Application of critical thinking, analysis and problem-solving skills to executive decisions*

Participants will apply a variety of techniques to analyze problems critically; to develop, evaluate and select from alternative courses of action; and to implement decisions in an organizational context.

Admission Requirements

Admission requirements for the EMBA program limit participation to professionals with significant career growth potential. The standards are designed to ensure that each participant is able to contribute to the interaction of a motivated cohort.

Applications for admission to AUS graduate programs are processed through the Office of Enrollment Management/Graduate Admissions, which determines whether an applicant meets minimum university standards.

Each applicant must satisfy the following requirements:

- hold a four-year bachelor's degree from an accredited university recognized by AUS and the UAE Ministry of Higher Education and Scientific Research
- have maintained a minimum cumulative grade point average (CGPA) of 3.00 (on a scale of 4.00) or its equivalent, and 3.00 or its equivalent in 300- and 400-level courses in disciplines relevant to the graduate program. An applicant with a lower CGPA must present evidence of at least five years of relevant work experience after earning the bachelor's degree and provide evidence of suitable preparation for graduate work, such as a strong score of the Graduate Management Admission Test (GMAT).

- have attained a minimum iBT score of 80
- provide official notice of the results of the GMAT exam

The SBM Graduate Committee will require the following additional information before determining whether an applicant will be admitted to the program:

- a resume or CV indicating the current position title, responsibilities and any awards or special recognition received by the applicant. Each participant will be expected to have a minimum of three to five years of management-level leadership experience.
- a letter from a supervisor or other executive of the individual's employer, indicating that the applicant has potential for taking on increased levels of responsibility and will have the support of the employer (i.e., time off, etc.)
- a statement of interest describing the applicant's reasons for seeking admission

After reviewing these materials, the SBM Graduate Committee will schedule interviews with candidates judged most likely to benefit from the program. The evaluation and interview results will be used by the committee to prepare a ranked list of candidates for the available seats in each cohort. Consideration will be given for equal opportunity and the diversity of the cohort.

Due to the structure and sequencing of the cohort approach, the program will not accept transfer or non-degree participants.

Academic Load

EMBA instruction takes place on alternating weekends over a two-year program (excluding Ramadan). A minimum attendance standard applies. Courses often span traditional academic terms but approximate a six-credit load per semester.

Participants are expected to attend all courses with their cohort, but the EMBA Program Director may, in extenuating

circumstances, allow a participant to make up sessions with a subsequent cohort to meet this requirement.

Academic Standing Policy

Grading in the EMBA program is Pass/Fail. A grade of Pass with Distinction is awarded to participants who demonstrate exceptional performance. Participants must pass all modules.

University guidelines on repeating courses and on academic dismissal apply, as outlined in the Academic Policies and Regulations section of this catalog. In addition, participants may take no more than one course with a subsequent cohort to improve their grade.

Degree Requirements

The EMBA requires the completion of 45 credits in eight modules. Portions of each module are integrated with supporting elements from other modules to facilitate immediate application of new knowledge. All modules must be completed with a minimum grade of Pass to earn the degree.

Required Modules (45 credits)

- EMB 701 Leadership and the Executive
- EMB 702 Analytical Foundations
- EMB 703 Financial Management
- EMB 704 Process and Innovation
- EMB 705 Markets and Innovation
- EMB 706 Society and Governance
- EMB 711 Gulf to Global Strategy
- EMB 712 Executive Toolkit

Academic Advising

The SBM Office of Graduate Programs and Outreach provides academic and career advising to participants through the Director of Graduate Programs and Outreach and members of the SBM Graduate Committee.

Gulf Executive Master of Public Administration (GEMPA)

The AUS Gulf Executive Master of Public Administration (GEMPA) program is designed to increase the capacity of governments in the Gulf region by stimulating the ability of key executives to learn from theories, policies and practices proven successful in enhancing service quality, improving public participation and strengthening the business investment environment in other rapidly developing economies.

Emphasis is placed on learning from cultures, societies, religions, traditions, technologies and the social sciences to identify new ideas that stimulate creative problem solving and promote effective cooperation between government leaders and the public. A key element of this approach and objective of the program is to stimulate dialogue among participants and foster a network of innovative thinkers who can create solutions that serve governments throughout the Gulf region.

Development of core competencies for effective management is also a fundamental goal of the program. Individual sessions focus on key skills as they apply to the use of human, financial and data resources. Other seminars consider policy development and evaluation, effective communications and executive problem solving. Participants learn to motivate others and to drive organizational change.

Each participant is expected to integrate these skills and demonstrate their application in a project using action learning—one of the most powerful techniques in executive education. Upon completion of the program, each participant will be more effective in his or her existing role and will be better prepared to deal with new challenges.

More details on the program are available at www.aus.edu/gempa.

Program Educational Goals and Outcomes

The GEMPA program is designed to increase the capacity of governments in the Gulf region by stimulating the ability of key executives to learn from

theories, policies and practices proven successful in enhancing service quality, improving public participation and strengthening the business investment environment in rapidly developing economies.

Breadth and diversity of perspectives

Participants will broaden their perspectives by engaging the working knowledge and diverse viewpoints of motivated public executives through cooperative interaction with instructors and peers.

Integrative approach to learning

Participants will develop an integrative approach to organizational learning, bringing together liberal thought, practical policy choices and analogies drawing on the experience of others.

Ethic of public service

Participants will internalize an ethic of public service and stewardship, respect for the rule of law and concern for effective communication with stakeholders in society.

Executive management skills

Participants will apply executive management skills and competencies to new challenges across the full spectrum of public resource and leadership issues.

- a letter from a supervisor or other executive of the individual's employer, indicating the applicant's potential for taking on increased levels of responsibility
- a statement of interest in which the applicant describes his or her reasons for seeking admission to the program
- an example of the potential participant's written work, such as a report or policy statement

After reviewing these materials, the SBM Graduate Committee will schedule interviews with candidates judged most likely to benefit from the program. The evaluation and interview results will be used by the committee to prepare a ranked list of candidates for the available seats in each cohort.

Conditional Admission

Conditional admission is not applicable to the GEMPA program.

Transfer Policy

Transfer or non-degree students are not admitted to the GEMPA program.

Waiver Policy

The waiver policy is not applicable to the GEMPA program.

Academic Load

GEMPA course instruction takes place in four-day sessions, usually scheduled over a single weekend each month, excluding Ramadan. Attendance at all sessions is required. Courses often span traditional academic terms but approximate a six-credit load per semester.

Each course in the GEMPA program is designed to convey new ideas and teach practical concepts that participants can apply in their own areas of responsibility. Faculty members update course content continuously to include the latest in management thinking and real-world application.

Participants are expected to attend all courses with their cohort, but the GEMPA Program Director may, in extenuating circumstances, allow a participant to take a course with the subsequent cohort to fulfill this requirement.

Courses are often taught away from AUS, but in each case one or more instructors have face-to-face interaction

Admission Requirements

Admission to the GEMPA program is limited to experienced public officials committed to making effective use of an executive education opportunity. In addition to meeting the university's general graduate admission requirements, applicants must submit the following materials to the SBM Graduate Committee prior to the end of the second week of July:

- a graduate application form (on paper or via e-mail)
- official transcripts from each college or university attended
- a résumé or CV indicating current position title, service level rating, and awards or special recognition received. Participants are normally expected to have at least five years of service in a governmental or nonprofit organization, with at least one year in a mid-level or senior management position.

with participants. Reading selections, exams and class assignments are administered through the AUS web-based learning system.

Participants are working officials in government, non-profits or similar organizations. Courses frequently require the application of administrative leadership concepts in practical assignments. Each participant is required to undertake an action-learning project within his or her organization.

Academic Standing

University guidelines on repeating courses and academic dismissal apply as outlined in the Academic Policies and Regulations section of this catalog. In addition, participants may retake no more than two courses with a subsequent cohort to improve their grades.

In exceptional circumstances, the program director may allow participants who have left the program to return, provided that no more than one year has elapsed between the last course completed and the return of the participant to the program.

Degree Requirements

The Gulf Executive MPA degree requires completion of 40 credits, normally over a 22-month period. Course and seminar credits vary from one to three credits, depending on the length of instruction and the nature of assignments. All courses must be successfully completed to earn the degree.

Participants must take a comprehensive exam constituting an action-learning project (GMPA 632) that must be presented in both written and oral form. This project requires the student to take a leading role in an organizational change initiative in which he or she applies the knowledge and skills learned during the GEMPA experience. Specific guidelines for the project, the written report and the oral presentation will be available from the GEMPA Program Director and at www.aus.edu/gempa.

All participants must complete their degree requirements within three years from first enrollment. All credit applied toward the degree must be completed in the AUS Gulf Executive MPA Program.

Required Courses (40 credits)

- GMPA 500 Executive Writing and Research
- GMPA 501 Economics for Public Executives
- GMPA 504 Executive Problem Solving
- GMPA 506 Government Informatics
- GMPA 600 Public Administration Colloquium (non-credit)
- GMPA 601 Policy, Politics and Administration
- GMPA 605 Financial Management and Budgeting
- GMPA 606 Strategic Human Resource Management
- GMPA 607 Public Marketing and Strategic Communication
- GMPA 612 Organizational Transformation
- GMPA 614 Analysis and Evaluation
- GMPA 615 Managing the Public Private Partnership
- GMPA 616 e-Governance
- GMPA 617 Public Ethics and the Rule of Law
- GMPA 619 Executive Leadership
- GMPA 632 Learning in Public Management
- GMPA 680 Project Management for Executives

Academic Advising

The SBM Office of Graduate Programs provides academic and career advising to participants through the SBM Director of Graduate Programs and the Graduate Program Advisor. Additionally, the SBM Graduate Committee provides assistance in advising as required. The SBM Graduate Committee consists of faculty members who teach in the GEMPA program and are appointed on a yearly basis.

College of Architecture, Art and Design

UPL Urban Planning

UPL 501 Fundamentals of Urban Planning (3-0-3). (Cross-listed as ARC 571). Introduces the discipline of urban planning. Surveys the history of the field as well as its links with other fields of environmental studies, such as architecture, urban design, geography, engineering and others. Overviews what planners do and the tools they use in their practice.

UPL 541 Planning Theory and Methods (3-0-3). Explores the theoretical foundations of planning and its associated methods. Examines the basic theoretical framework that fosters good planning practice. Reviews the classical theoretical paradigms of planning, examines the major roles played by practicing planners, and looks at the application of theory in dealing with such issues as community development, environmental protection, economic policies, political and administrative structure, and social equity.

UPL 547 Research Methods and Analysis (3-0-3). Introduces the quantitative and qualitative methods and techniques used in urban planning research and practice. Analytic approaches include research design, multivariate regression, survey research, case study research, evaluation and graphic data presentation. Emphasizes methods in the context of planning and urban policy research. Prerequisite/concurrent: UPL 501.

UPL 548 Environmental Planning (3-0-3). Provides a comprehensive overview of the field of environmental planning and how it relates to efforts intended to manage, organize and protect environmental resources. Reviews the political and administrative context of environmental planning. Addresses principles of sustainability, ethics and the law in relation to land, air, water and other natural resources. Prerequisite/concurrent: UPL 501.

UPL 550 Urban Economics and Analysis (3-0-3). Examines the economics of cities and urban problems. Undertakes economic analysis of the location and growth of urban and regional areas with emphasis on public policy issues. Discusses land-use patterns, measurement and change in regional economic activity, and urban problems such as transportation, housing, poverty and crime. Places special attention on local fiscal behavior, overlapping jurisdictions and the provision of local public goods, and intergovernmental fiscal relations. Prerequisite: UPL 501.

UPL 556 Spatial Analysis for Planners (4-0-3). Introduces key concepts and technical skills involved in analyzing spatial phenomena. Includes the following topics: spatial inferences, cartographic quality, geospatial data and exploratory spatial data analysis. Introduces and applies key software tools in urban and regional contexts. Prerequisite/concurrent: UPL 501. Lab/Tech fee rate A applies.

UPL 565 Land Use Planning Principles and Practice (3-0-3). Examines various theoretical and practice-based approaches to land use planning. Gives an overview of the various social, economic, political and legal influences on land use and the planning process and application appropriate to balance such influences. Prerequisite/concurrent: UPL 501.

UPL 572 Urban Transportation Systems Planning Techniques (3-0-3). Covers data collection, trip generation, trip distribution, factors underlying the choice of mode, traffic assignment, modeling and evaluation techniques, use of planning software packages, development and evaluation of alternatives. Prerequisite/concurrent: UPL 501.

UPL 574 Urban Transportation Systems Analysis (3-0-3). Explores the use of quantitative techniques for modeling urban transportation systems' performance. Covers the

application of graph theory and network analysis to transportation problems, and analytical approaches to formulate network equilibrium assignment problems and solution algorithms. Introduces dynamic traffic assignment. Prerequisite: UPL 572.

UPL 582 Theory and Principles of Urban Design (3-0-3). (Cross-listed as ARC 573). Examines major concepts, principles and theories of urban design. Reviews the historic development of urban design as a professional field and surveys current urban design issues, trends and practices in both the Western and non-Western/Islamic contexts. Prerequisite/concurrent: UPL 501.

UPL 584 Urbanism and Urban Form Analysis (3-0-3). Examines urban form elements, patterns and evolution. Focuses on the forces that have shaped cities in history and analyzes contemporary trends that impact urban formation and regeneration. Explores methods of urban morphological analysis as related to urban design. Places special attention on the study of cities of the Middle East and Islamic societies. Prerequisite: UPL 501.

UPL 597 Urban Planning Internship (0-0-0). Consists of eight weeks (320 hours) of approved internship. At the end of the internship, the student must submit a report of the internship work experience. Course is offered on a Pass/Fail basis. Prerequisite: UPL 501. Registration fees apply.

UPL 667 Urban Planning Studio (6-0-3). Covers the application of substantive skills in urban planning. Focuses on comprehensive planning exercises for an urban area in the UAE/Gulf region, involving fieldwork and hands-on analysis and application. Emphasizes the methods and tools of preparing plans. Addresses development of baseline data; analysis of existing conditions; identification of strategic planning and development issues; forecasting of future conditions; review of development goals, objectives and policies; development and synthesis of alternative plans; evaluation of alternatives; and

development of implementation strategies and programs that support policymaking. Prerequisites: UPL 501, UPL 556 and completion of a minimum of 15 UPL credits. Lab/Tech fee rate A applies. Must be taken two times for a total of 6 credits.

UPL 676 Transportation Systems Operations and Control (3-0-3).

Studies the operation and control of transportation systems with emphasis on traffic characteristics, capacity analysis, traffic improvements, signalization, signs and marking, channelization, intersection capacity, and principles and techniques used to improve the efficiency and safety of transportation systems. Prerequisite: UPL 572.

UPL 686 Space, Society and the Public Realm (3-0-3). Explores the nature of urban space and its role in the social being. Focuses on the potentials of space as a tool in shaping the public realm and nurturing citizenship. Examines critical issues of globalization and the transforming role of space in the post-industrial, informational city. Prerequisite: UPL 582.

UPL 698 Final Project (6 credits). Requires students to choose an applied research topic often in conjunction with a real planning problem and/or client. Students will produce a high-quality project report guided by an advisor and a minimum of two readers. The final project serves as a capstone course requiring students to draw on the basic knowledge, skills and techniques learned from their coursework. Graded as Pass/Fail. Prerequisite: approval of program director.

UPL 699 Master's Thesis (6 credits). Requires independent, significant original research conceived and developed by the student and guided by an advisor and a minimum of two readers. Students will demonstrate scholarly capabilities and expertise based on the theoretical knowledge and methodological skills they have developed in their previous coursework. The thesis experience serves as a capstone course for students

who intend to pursue careers in research, teaching and/or scholarship. Graded as Pass/Fail. Prerequisite: approval of program director

Independent Study

Independent study is the umbrella term used to label two types of independent work: independent course and directed study.

For conditions governing registration in an independent study, please refer to the Registration in Independent Study Courses section under Academic Policies and Regulations.

Independent Course (1 to 4 credits).

A course listed in the catalog but offered in an independent study format. The course is coded using the course number in the catalog.

Students are not allowed to repeat courses in an independent course format.

Directed Study (1 to 4 credits). An investigation under faculty supervision beyond what is offered in existing courses.

Directed study courses are numbered as 596 or 696 courses. The three-letter course prefix reflects the field of study of the course (e.g., independent study courses in UPL are coded as UPL 696).

Special Topics Courses

Special Topics (1 to 4 credits).

Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses. Can be repeated for credit. Prerequisites: topic specific. Lab/tech fee may apply.

Special topic courses are numbered as 594 or 694 courses. The three-letter course prefix reflects the field of study of the course.

Descriptions of particular special topics courses are made available in the college/school offering the course during registration.

College of Arts and Sciences

ELT

TESOL

ELT 501 Advanced English Grammar (3-0-3). (Cross-listed as ENG 401). Examines the structure, function and meaning of contemporary English. Discusses issues relative to descriptive/prescriptive approaches to language and ESL instruction.

ELT 503 Contrastive Linguistics (3-0-3). Compares and contrasts English and Arabic phonology, morphology, syntax and semantics. Promotes a functional approach to language to demonstrate the applications of contrastive linguistics to ESL teaching.

ELT 505 Culture and the Language Teacher (3-0-3). Investigates how identities, values, assumptions, behaviors and communication styles affect teaching and learning a second language. Analyzes methods and approaches for cross-cultural research.

ELT 510 Research Methods and Academic Writing (3-0-3). Develops students' academic writing competencies and research skills. Introduces students to quantitative and qualitative research methods and teaches them how to conduct and report research.

ELT 511 Linguistics for ESL Teachers (3-0-3). (Formerly ENG 511). Focuses on areas in linguistics relevant to ESL teachers. Explores ways of utilizing research and generalizations derived from linguistics to inform ESL teaching practice.

ELT 513 Language Acquisition and Development (3-0-3). Focuses on processes involved in acquiring first and second languages. Examines different theoretical perspectives explaining acquisition and analyzes the factors that affect language development and learning. Explores the implications of SLA research in ELT classroom contexts.

ELT 515 Methods and Materials Development (3-0-3). Examines traditional and contemporary approaches to English language teaching. Various aspects of classroom

practice are analyzed, including teacher and learner roles, classroom management, and integrated versus separate teaching of the language skills.

ELT 517 Curriculum Design (3-0-3). Introduces students to the principles of ESL course design. Examines the stages of developing and evaluating learning centered curricula and materials. Prerequisite/concurrent: ELT 515.

ELT 521 Reading and Writing in ESL (3-0-3). Discusses various theoretical models dealing with teaching literacy skills in a second language to children and adults. Explores ways to adapt and apply these models for effective ESL instruction. Prerequisite: ELT 510.

ELT 523 Bilingual Education (3-0-3). Reviews different models of bilingual education and issues in bilingualism. Discusses how to achieve a balanced bilingual education system by examining the challenges posed by cultural and linguistic diversity in a bilingual education setting.

ELT 525 Pragmatics for ESL Teachers (3-0-3). Focuses on social implications of language use in social contexts (world English, international English, regional English or intranational English). Provides training for ESL/EFL teachers in practical and theoretical areas of pragmatics and teaches them how to prepare, present and evaluate lessons in pragmatics utilizing authentic materials. Prerequisite: ELT 511.

ELT 531 Sociolinguistics (3-0-3). Studies the relationship between language, society and culture. Investigates the implications of sociolinguistic research for ESL teachers. Prerequisite: ELT 510.

ELT 551 Language Testing and Evaluation (3-0-3). Covers the fundamental goals, principles, standards and uses of language assessment and language assessment research. Reviews the factors involved in assessing proficiency in second language skills and in selecting appropriate testing instruments

and evaluation tools. Prerequisite/concurrent: ELT 515.

ELT 553 Technology in the ESL Classroom (3-0-3). Introduces a wide range of current applications of technology in the ESL classroom. Focuses on creating innovative and effective ESL learning and teaching environments using computers and other educational technologies. Prerequisite/concurrent: ELT 515.

ELT 567 ELT Leadership and Management (3-0-3). Introduces students to basic concepts in ELT leadership and management. Explores the areas of educational organizations, human resources in ELT, language program development and marketing as well as establishing stakeholder relations. Prerequisite: ELT 515.

ELT 611 Classroom Research (3-0-3). Reviews ESL classroom-based research as a means of understanding how ESL instruction and learning take place. Discusses research topics such as teacher talk, wait time, conversational repair, error correction, learning strategies and feedback. Prerequisite: ELT 510.

ELT 615 Quantitative and Qualitative Research in ELT (3-0-3). Surveys both quantitative and qualitative theoretical and epistemological approaches in TESOL research. Emphasizes how choices in research designs and analytical procedures impact data collection and results. The course is applications-oriented using the results of established theory. Graduate students can use this course to develop their research project proposals. Prerequisite: ELT 510.

ELT 619 Practicum in TESOL (1 to 3 credits). Provides the opportunity to observe, explore and implement effective ESL teaching strategies. Involves weekly seminars in which the students discuss their classroom experiences and reflect on their personal growth as ESL teachers. Prerequisite: ELT 551.

ELT 698 Professional Project (3-0-3). Requires students to further develop their teaching skills by directing them to conceptualize, plan, adapt and apply

innovative approaches to different components of English language teaching and learning. At the end of the course, students must write a project report to be defended in front of an examining committee. Graded as Pass/Fail. Prerequisite: completion of 30 credits in the program.

ELT 699 Master's Thesis (6 credits). Requires students to complete individual and original research work on a topic related to some aspect of TESOL that addresses both theoretical and practical aspects of ELT. The thesis is supervised by the thesis faculty supervisor and is defended to the satisfaction of the committee of three faculty members. Graded as Pass/Fail.

MHS Museum and Heritage Studies

MHS 500 Introduction to Museum and Heritage Studies (3-0-3). Provides an overview of the history of museums and the development of a heritage perspective. Introduces the development of the museum and its broader historical, social and cultural contexts. Explores some of the basic cultural issues inherent in the creation and development of museums. Investigates the positive uses of heritage as they are manifest in the creation of museums, historic sites and in educational systems. Probes "contested heritage" and considers the role of museums in the context of the "heritage crusade" and its critics. Prerequisite: admission to the MHS program.

MHS 501 Exhibitions and Collections Management (3-0-3). Introduces the issues involved in the care, management and interpretation of museum collections, including exhibition development and registration methods. Explores legal and ethical issues surrounding museum collections. Prerequisite: admission to the MHS program.

MHS 502 Principles and Practices of Museum Administration (3-0-3). Introduces the issues involved in the administration and management of museums. Covers the museum and its mission; organizational and financial

management; fundraising and earned income activities; strategic planning; marketing and audience development strategies; and the social, economic and political trends that shape museums. Prerequisite: admission to the MHS program.

MHS 510 Modern Practices in Exhibition Design (3-0-3). Focuses on exhibition design as a disciplined form of creative and aesthetic expression and exchange around exhibits, spectator and place. Introduces the practice and discipline of exhibition as an ordering, framing and displaying of works in a given environment to support an intended cultural message. Addresses the exhibition's relation to architectural space. Examines exhibition design as a collaborative activity involving artistic director, curator, artist and exhibition designer. Prerequisite: MHS 501.

MHS 520 History of Material Culture in the Arabian Peninsula (3-0-3). Provides an advanced survey of various artistic and building traditions in the Arabian Peninsula, with a focus on the connections with the neighboring civilizations. Examines the earliest archaeological sites and agricultural settlements in this region, in addition to the rise, spread and impact of Islam in the region's material culture. Addresses questions concerning the nature, diffusion and transformation of artifact forms and architectural types and assesses the state of cultural heritage in the contemporary period. Prerequisites: MHS 500, MHS 501 and MHS 502.

MHS 530 World Heritage Sites (3-0-3). Provides an overview of the World Heritage Convention of 1972. Introduces international laws, regulations, charters and recommendations guiding treatment of cultural objects and management of heritage resources. Illustrates strategies for the development of international destinations for sustainable and eco-tourism and focuses on strategies for identifying, recording and interpreting distinctive features of artifacts and historic sites, including basic instruction on preparing registration and inventory forms for object and building lists. Prerequisites: MHS 500, MHS 501 and MHS 502.

MHS 540 Museums and Media (3-0-3). Introduces the theory and practice of integrating time-based and interactive media into the museum experience. Examines how technology is challenging traditional exhibition concepts by introducing new interactions between the museum and its audience, and providing new avenues for dissemination of information and cultural understanding. Addresses how to effectively plan, design and integrate new technologies into a museum context via practical application and related literature as well as critical analysis of museum-based media applications. Prerequisite: MHS 501. Lab/Tech fee rate A applies.

MHS 550 Museum Education and Interpretation (3-0-3). Introduces the educational role of museums in contemporary society. Provides an overview of the museum as a life-long learning institution. Examines museum education practices such as audience development strategies that include school tours, adult lectures and community outreach programs. Covers educational methods and techniques, audience research and evaluation practices as well as organizational matters such as volunteer management. Prerequisite: MHS 501.

MHS 597 Practicum in Museum and Heritage Studies (3-0-3). Provides students with guided and hands-on work experience within the field of museum and heritage studies. Requires a minimum of 200 hours of approved work experience within a museum or heritage institution under the supervision of a faculty supervisor. Prerequisites: MHS 500, MHS 501 and MHS 502. Graded as Pass/Fail.

TRA English/Arabic/English Translation and Interpreting

TRA 500 Principles and Strategies of Translation (3-0-3). Provides advanced training in principles and methods of translation from English to Arabic and vice versa. A variety of text types are covered, ranging from legal to journalistic genres.

TRA 503 Theoretical Models of Translation (3-0-3). Provides a conceptual map of translation studies and outlines the various theoretical approaches and trends that impact the practice of translation. Introduces the range of factors that govern the process of translation and to the theoretical underpinnings that have motivated different attitudes to translating and translations. Prerequisite: TRA 500.

TRA 504 Discourse Semantics and Pragmatics in Translation (3-0-3). Addresses the needs of the practicing 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.

TRA 505 Interpreting and the Profession I (3-0-3). Provides the students with high-level training in those interpreting skills most relevant to the translator at work. Provides advanced training in liaison and consecutive interpreting 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.

TRA 509 Interpreting and the Profession II: Simultaneous Interpreting (3-0-3). Builds on TRA 505 and provides high-level training in those skills most relevant to Simultaneous Interpreting (SI), including professional standards and international conventions as well as equipment simultaneous interpreters use. Theoretical insights into the process of interpreting are presented and placed within an overall, practice-driven model of the process. Prerequisite: TRA 505.

TRA 510 Research Methods and Academic Writing (3-0-3). Examines academic writing conventions and research methods. Addresses quantitative and qualitative research approaches. Deals with the requirements of preparing/writing MA theses.

TRA 512 Terminology, Arabicization and the Translator (3-0-3). Introduces the field of terminology and reviews it within the work of the translator. Explains term formation, standardization, term banks and

coordination, among others. Reviews the process and problems of Arabicization and its impact on translation into Arabic. Demonstrates the application of theoretical framework of terminology and Arabicization on translation work.

TRA 556 Rhetoric for Translators (3-0-3). Surveys the various traditions within both English and Arabic grammar and rhetoric and their application to translation. Develops and applies a text-linguistic model rooted in rhetorical thinking.

TRA 558 Contrastive Linguistics and Translation (3-0-3). Deals with how English and Arabic compare and contrast at various levels of linguistic organization: phonology, morphology, syntax and semantics. A discourse pragmatic perspective, together with a functional approach to the lexico-grammar, is promoted throughout to enable students to look at the way texts are organized functionally. Prerequisite: TRA 500.

TRA 610 Intercultural Communication and Translation (3-0-3). Addresses the interface between culture and translation in intercultural communication between Arabic and English. Examines macro and micro culture and the translational strategies used in cross-cultural communication through translation. Prerequisite: approval of program director.

TRA 630 Practicum (0-0-0). Provides the opportunity for practical hands on experience in translation and/or interpreting. Involves working within a translation and/or interpreting organization and reporting back weekly to the practicum supervisor over a period of four weeks. Graded as Pass/Fail. Prerequisite: approval of program director

TRA 699 Master's Thesis (6 credits). Requires students to complete an extended piece of individual research (10,000–12,000 words) on a topic within translation/interpreting studies, including an extended translation (c. 5000 words) and a commentary, chosen in consultation with the thesis faculty supervisor. Emphasis is placed on the theoretical and practical aspects of translating or interpreting. The thesis must be completed within two consecutive academic semesters.

An extension may be allowed if a candidate presents acceptable mitigating circumstances. The thesis is defended to the satisfaction of a committee composed of three faculty members. Graded as Pass/Fail. Prerequisite: approval of program director.

Independent Study

Independent study is the umbrella term used to label two types of independent work: independent course and directed study.

For conditions governing registration in an independent study, please refer to the Registration in Independent Study Courses section under Academic Policies and Regulations.

Independent Course (1 to 4 credits).

A course listed in the catalog but offered in an independent study format. The course is coded using the course number in the catalog.

Students are not allowed to repeat courses in an independent course format.

Directed Study (1 to 4 credits). An investigation under faculty supervision beyond what is offered in existing courses.

Directed study courses are numbered as 596 or 696 courses. The three-letter course prefix reflects the field of study of the course (e.g., independent study courses in TESOL are coded as ELT 596).

Special Topics Courses

Special Topics (1 to 4 credits).

Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses. Can be repeated for credit. Prerequisites: topic specific. Lab/tech fee may apply.

Special topic courses are numbered as 594 or 694 courses. The three-letter course prefix reflects the field of study of the course.

Descriptions of particular special topics courses are made available in the college/school offering the course during registration.

College of Engineering

CHE Chemical Engineering

CHE 510 Transport Phenomena (3-0-3). Covers the following topics: differential analysis of momentum; heat and mass transport; models transport processes; and formulation of appropriate boundary conditions, mathematical solutions and interpretation of results. Prerequisite: NGN 500.

CHE 511 Advanced Chemical Engineering Thermodynamics (3-0-3). Investigates advanced concepts in thermodynamics. Includes in-depth study of the following topics: fundamental laws of thermodynamics, equations of state, property relations for pure materials and mixtures, phase equilibria and intermolecular forces. Prerequisite: admission to the MSChE or MSME program.

CHE 512 Advanced Kinetics and Reactor Design (3-0-3). Covers the following principles of chemical reaction and reactor analysis and design: non-elementary reaction kinetics, estimation of thermochemical and reaction rate parameters, detailed chemical kinetic modeling, catalysis with particular emphasis on coupled chemical kinetics and transport phenomena, heterogeneous nonisothermal reactor design and real reactors. Prerequisite: admission to the MSChE program.

CHE 610 Catalysis and Reaction Engineering (3-0-3). Introduces the fundamental concepts underlying catalytic processes and their application in reactor design. Covers the following topics: molecular theories of adsorption and surface reactions on catalysts; catalyst characterization techniques; transport in catalysts and shape selective catalysts; and applications in fixed-bed catalytic reactors, fluidized bed reactors and multiphase reactors. Prerequisite: CHE 512.

CHE 611 Biomedical Engineering and Biotechnology (3-0-3). Explores chemical engineering concepts related to the human body. Covers the following topics: body material balances, blood properties and theology, circulatory dynamics, neuroprosthetics, body heat exchange, body thermoregulation, heat transfer in tumors, pharmacokinetic models, non-invasive imaging, orthopedics, biomaterials, membrane transport, tissue engineering and drug delivery systems. Assumes a basic understanding of physiological functions. Prerequisite/concurrent: NGN 500.

CHE 612 Advanced Process Analysis and Control (3-0-3). Covers the following topics: linear multi-input multi-output (MIMO) systems; state-space representation of process dynamic systems; controllability and observability analysis; stability analysis; frequency-domain analysis and system identification; controller synthesis for multivariable process systems; decentralized control, state feedback control, model predictive control and optimal control; digital control systems-Z transforms, discrete time models, closed loop analysis and digital control system implementation; and application of advanced control concepts to chemical process units. Prerequisite: NGN 500; prerequisite/concurrent: NGN 509.

CHE 613 Advanced Materials Science (3-0-3). Introduces advanced materials for engineers, emphasizing process-structure-property relations. Covers concepts in materials science, engineering and technology dealing with traditional and advanced materials, surface science and engineering, evaluation and standards. Prerequisite: admission to the MSChE program.

CHE 614 Environmental Engineering (3-0-3). Provides a review of fundamentals, applied knowledge and recent advances in environmental engineering. Covers the following topics: causes of environmental pollution;

environmental regulations; mass and energy balance for environmental systems under steady state and transient conditions; and contaminant transport in air, water and solids. Focuses on microbiology and reaction kinetics related to the environment and the application of environmental principles to water and wastewater treatment, air pollution control and solid waste management. Prerequisite: admission to the MSChE program.

CHE 695 Seminar (1-0-0). Introduces research methodologies. Explores the planning and realization of research projects. Examines current research issues in engineering using case studies that emphasize the utilization of applied research in designing engineering systems. Graded as Pass/Fail. Prerequisite: admission to the MSChE program.

CHE 698 Professional Project (3 credits). Requires an approved professional project on selected area of chemical engineering for completion of the MS degree. Includes development of the project concept, investigation of needs, initial data collection and assembly of written and field materials necessary to conduct a professional project, as well as exploration of alternative means to conduct the project. Requires a report and final presentation to the examining committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: CHE 695.

CHE 699 Master's Thesis (9 credits). Requires students to complete original research work in the field of study. Requires the thesis to be completed under the supervision of a faculty member serving as thesis advisor, and a final defense to the examining committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: CHE 695.

COE Computer Engineering

COE 530 Advanced Computer Networks (3-0-3). Focuses on advanced topics in computer networking and performance modeling. Covers the following: performance modeling and simulation, congestion control and quality of service (QoS) techniques, overview of computer networks security, and recent advances in computer networks.

COE 531 Advanced Software Engineering (3-0-3). Covers fundamental principles of software engineering with emphasis on methodologies for requirements engineering, design, and verification and validation. Explores recent research trends in software engineering. Prerequisite: admission to the MSCoE program.

COE 532 Advanced Embedded Systems and Industrial Automation (3-0-3). Covers the following topics: embedded systems hardware, advanced embedded systems programming and interface, serial communicates and control area networks, real-time operations of embedded systems, supervisory control and data acquisition (SCADA) systems, distributed control systems (DCS) and embedded systems applications. Prerequisite: admission to the MSCoE program.

COE 533 Advanced Computer Architecture (3-0-3). Covers techniques of quantitative analysis and evaluation of modern computing systems. Emphasizes the major component subsystems of high-performance computers: pipelining, instruction level parallelism, memory hierarchies, input/output and network-oriented interconnections. Prerequisite: admission to the MSCoE program.

COE 630 Wireless Networks (3-0-3). Explores advanced concepts in wireless networking and mobile communications. Covers the following topics: antennas and multipath propagation, wireless propagation modeling, multiple access, spread spectrum, modulation, coding and error control, orthogonal frequency

division multiplexing (OFDM), cellular wireless networks, wireless local area networks (LANs), mobile Internet Protocol (IP), ad hoc networks, Bluetooth, transmission control protocol (TCP) over wireless, Worldwide Interoperability for Microwave Access (WiMAX), satellite networks, security issues in wireless networks and sensor networks. Prerequisite: COE 530.

COE 632 Advanced Database Systems (3-0-3). Covers the following advanced topics in database systems: file structures, indexing techniques, query processing and optimization, concurrency control and backup and recovery Extensible Markup Language (XML) databases and languages, and mobile databases and data mining. Prerequisite: admission to the MSCoE program.

COE 633 Advanced Internet Computing (3-0-3). Covers the following advanced topics in Internet computing: search engines; web-server technologies; web proxies and web-caching; web-crawlers, information retrieval and filtering methods; semantic Internet and related technologies; and web-services architectures. Prerequisite/concurrent: COE 531.

COE 634 Computer-Aided Design and Optimization of Digital Systems (3-0-3). Covers the following topics in computer-aided design of very-large-scale integration (VLSI) circuits: functional verification; logic synthesis; verification of combinational and sequential circuits; technology mapping; and logic simulation, optimization and testing. Prerequisite: COE 533.

COE 635 Optical Networks (3-0-3). Covers the following advanced concepts in optical communications and networking: single-mode and multi-mode fibers, fiber loss and dispersion, fiber nonlinearities, lasers and optical transmitters, photo-detectors and optical receivers, single-channel system design, synchronous optical network (SONET)/synchronous digital hierarchy (SDH) networks, Wavelength-Division Multiplexing (WDM) components, WDM network design issues, wavelength routing and

assignment, protection and restoration in optical networks, and control and management of optical networks. Prerequisite: COE 530.

COE 695 Seminar (1-0-0). Introduces research methodologies. Explores the planning and realization of research projects. Examines current research issues in engineering using case studies that emphasize the utilization of applied research in designing engineering systems. Graded as Pass/Fail. Prerequisite: admission to the MSCoE program.

COE 698 Professional Project (3 credits). Requires an approved professional project on selected area of computer engineering for completion of the MS degree. Includes development of the project concept, investigation of needs, initial data collection and assembly of written and field materials necessary to conduct a professional project, as well as exploration of alternative means to conduct the project. Requires a report and final presentation to the examining committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: COE 695.

COE 699 Master's Thesis (9 credits). Requires students to complete original research work in the field of study. Requires the thesis to be completed under the supervision of a faculty member serving as thesis advisor, and a final defense to the examining committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: COE 695.

CVE Civil Engineering

CVE 520 Advanced Construction Materials and Methods (3-0-3).

Covers emerging construction materials that impact new construction and repair of existing infrastructure. Introduces material design concepts related to the development of advanced composites through combinations of new materials. Introduces advanced concrete materials, fiber-reinforced concrete and advanced steel applications. Covers principles and applications of building and heavy

construction methods including safe formwork. Focuses on sustainable materials and methods in construction. Prerequisite: admission to the MSCE program.

CVE 521 Finite Element Method (3-0-3). Introduces the theory and application of modern structural analysis. Emphasizes finite element formulations for truss, frame, plane stress, plane strain and axisymmetric problems. Covers variational principles and isoparametric formulation. Introduces fundamentals of nonlinear analysis concepts. Covers computer modeling and practical analysis of large structural systems. Prerequisite: admission to the MSCE or MSME program.

CVE 522 Advanced Water Resources Engineering (3-0-3). Presents advanced hydrologic and hydraulic principles in planning, modeling and designing storage, irrigation, drainage, flood control and related water resource facilities. Covers the following topics: unsteady and non-uniform flow, conveyance channels and spillways, control and diversion structures, outlet works, energy dissipation, hydraulic machinery, flow measurements and reservoir hydraulics. Employs applicable case studies. Prerequisite: admission to the MSCE program.

CVE 523 Advanced Transportation Systems (3-0-3). Focuses on transportation systems modeling, simulation, analysis and evaluation techniques. Covers transportation systems operations, traffic signal systems design and optimization. Includes intelligent transportation systems (ITS) concepts and applications. Uses available software packages to evaluate transportation systems performance and ITS applications. Prerequisite: admission to the MSCE program.

CVE 620 Advanced Construction Planning and Control (3-0-3). Covers the following topics: application of advanced planning and control techniques critical to the success of construction projects, advanced resource allocation and leveling, time-cost optimization, project monitoring,

updating and control, stochastic scheduling, contractual implications of construction schedules, analysis of time-related change orders and delays, schedule diagnostics, and advanced use of construction planning and scheduling software. Employs case studies from the construction industry. Prerequisite: admission to the MSCE program.

CVE 621 Analysis and Design of Tall Buildings (3-0-3). Introduces design strategies for tall buildings. Covers the following topics: selection of the structural systems for tall buildings; modeling of gravity, wind and earthquake loads using relevant codes; structural modeling and static and dynamic analysis of tall buildings; design of structural elements and effects of creep, shrinkage and temperature; and P-Delta effects and instability of tall buildings. Emphasizes the use of computers in analysis and design of tall buildings. Prerequisite: admission to the MSCE program.

CVE 622 Physical and Chemical Processes in Environmental Engineering (3-0-3). Explores advanced analysis and design methods for various environmental engineering problems in water treatment, wastewater treatment, air pollution control and water quality management. Covers the following topics: materials transport, reaction kinetics, reactor modeling, separation processes, disinfection and process optimization. Prerequisite: admission to the MSCE program.

CVE 623 Advanced Transportation Planning Techniques (3-0-3). Presents an overview of both theoretical and applied issues in planning transportation systems. Focuses on everyday planning-oriented problems associated with development and project evaluation issues and techniques with emphasis on the development, calibration and validation of master transportation plans and traffic impact study analysis. Covers engineering economics and procedures for traffic impact studies. Prerequisite: admission to the MSCE program.

CVE 624 Advanced Geotechnical Engineering (3-0-3). Covers site investigation with an emphasis on advanced site testing, and shallow and deep foundations. Includes footing and rafting for difficult subsoil conditions, excavation support systems, groundwater control, slope stability, soil improvement and construction monitoring techniques. Explores offshore geotechnical engineering and elements of geotechnical earthquake engineering. Prerequisite: admission to the MSCE program.

CVE 625 Highway Bridge Design (3-0-3). Introduces highway bridge analysis, design and evaluation based on the American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor Design (LRFD) Bridge Design Specifications. Covers the following topics: types of bridges, highway bridge loading, bridge analysis, deck slabs, composite steel bridge design, pre-stressed concrete girders, substructure design and bridge rating. Prerequisite: admission to the MSCE program.

CVE 695 Seminar (1-0-0). Introduces research methodologies. Explores the planning and realization of research projects. Examines current research issues in engineering using case studies that emphasize the utilization of applied research in designing engineering systems. Graded as Pass/Fail. Prerequisite: admission to the MSCE program.

CVE 698 Professional Project (3 credits). Requires an approved professional project on selected area of civil engineering for completion of the MS degree. Includes development of the project concept, investigation of needs, initial data collection and assembly of written and field materials necessary to conduct a professional project, as well as exploration of alternative means to conduct the project. Requires a report and final presentation to the examining committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: CVE 695.

CVE 699 Master's Thesis (9 credits).

Requires students to complete original research work in the field of study. Requires the thesis to be completed under the supervision of a faculty member serving as thesis advisor, and a final defense to the examining committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: CVE 695.

ELE Electrical Engineering

ELE 540 Principles of Digital Communications (3-0-3).

Reviews random processes. Covers representation of bandpass signals and systems, baseband and bandpass digital modulation schemes, optimum receiver design and performance analysis, channel capacity, and block and convolutional channel coding and decoding schemes. Prerequisite/concurrent: NGN 505.

ELE 542 Applied Electromagnetics (3-0-3). Covers the following topics: Maxwell's equations; electromagnetic boundary conditions; potentials and the representation of electromagnetic fields; theorems of field calculations (uniqueness, duality, equivalence, reciprocity and Babinet's principles); plane, cylindrical and spherical waves; polarization properties of waves; and waveguides and elementary antennas. Prerequisite: admission to the MSEE program.

ELE 543 Analog Microelectronics (3-0-3). Covers analysis and design of advanced electronic circuits. Explores topics such as electronic device modeling, processing and layout, current mirrors, noise analysis, voltage reference and regulators, Opamp design, OTAs and filter circuits. Prerequisite: admission to the MSEE program.

ELE 544 Advanced Signal Processing (3-0-3). Explores topics such as signal representation and system response, signal sampling and reconstruction, convolution, transfer function and system characteristics, digital filter design and realization,

adaptive filters, spectral analysis, multirate signal processing, time-frequency analysis and wavelets. Prerequisite: admission to the MSEE program.

ELE 545 Power System Operation and Control (3-0-3). Introduces economic operation, and unit commitment of power systems. Covers modeling of system components and control equipment, automatic control of generation and frequency regulation, and aspects of interconnected operation. Prerequisite: admission to MSEE program.

ELE 546 Advanced Power Electronics (3-0-3). Covers operation and modeling of power electronic devices, DC/DC converters, single phase and three phase inverters, different type of PWM techniques, theory of space transformation, space vector representation and space vector PWM inverters. Includes DSP based control and implementation of power converters and power electronics applications in renewable energy systems. Prerequisite: admission to MSEE program.

ELE 640 Bioelectric Phenomena (3-0-3). Provides an overview of the following topics: electrical sources and electric fields, membrane biophysics, action potentials, volume conductor fields, electrophysiology of the heart, electric and magnetic lead fields, electroencephalography (EEG) and magnetoencephalography (MEG). Prerequisite/concurrent: NGN 500.

ELE 641 Advanced Microwave Engineering (3-0-3). Covers transmission-line theory; microstrip and coplanar lines; S-parameters; signal-flow graphs; matching networks; microwave devices; design, fabrication and measurements of microwave-integrated circuits using CAD tools; radar equation; resolution techniques; calibration; scatterometers; and scattering models. Prerequisite/concurrent: NGN 500.

ELE 642 Digital and Wireless Communications (3-0-3). Covers the following topics: signal design for communications over band-limited channels, optimum and suboptimal

receiver structures for band-limited channels, adaptive equalization, communications over mobile radio channels with fading and mitigation techniques against channel fading. Prerequisite: ELE 540.

ELE 643 Image and Video Processing (3-0-3). Provides an overview of the principles and techniques of digital image processing in applications related to digital imaging system design and analysis. Covers the following topics: analysis and implementation of image and video processing algorithms and standards, methods and filters for image enhancement and restorations, source and transform coding techniques for lossless and lossy compression, and basic elements of object recognition systems. Prerequisite/concurrent: NGN 500.

ELE 644 Control of AC Drives (3-0-3). Covers the following topics: dynamic models of DC and AC machines, pulse width modulated (PWM) inverters, scalar control of induction machines, direct and indirect field orientation, flux estimators and observers and vector control of AC machines. Prerequisite: admission to the MSEE program.

ELE 645 High Voltage Engineering (3-0-3). Covers the following topics: destructive and non-destructive testing of power system components; breakdown mechanism of gas, liquid and solid insulating materials; generation and measurement of high-voltage AC; and DC and impulse voltages and non-destructive testing such as surface and internal discharges, capacitance and loss factor. Prerequisite: admission to the MSEE program.

ELE 646 Radio Frequency Integrated Circuits (3-0-3). Covers design of advanced radio frequency integrated circuits as it applies to contemporary electronic systems. Includes RFIC systems and architectures, low-voltage MOS, transceiver complex circuits, RF signal processing, RF power amplifiers and linearization, PLL topologies, frequency synthesizers, phase noise

analysis, layout considerations, packaging of RF circuits and design case studies. Use of software tools and analytical techniques for circuit design and simulations. Prerequisite: admission to MSEE program.

ELE 695 Seminar (1-0-0). Introduces research methodologies. Explores the planning and realization of research projects. Examines current research issues in engineering using case studies that emphasize the utilization of applied research in designing engineering systems. Graded as Pass/Fail. Prerequisite: admission to the MSEE program.

ELE 698 Professional Project (3 credits). Requires an approved professional project on selected area of electrical engineering for completion of the MS degree. Includes development of the project concept, investigation of needs, initial data collection and assembly of written and field materials necessary to conduct a professional project, as well as exploration of alternative means to conduct the project. Requires a report and final presentation to the examining committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: ELE 695.

ELE 699 Master's Thesis (9 credits). Requires students to complete original research work in the field of study. Requires the thesis to be completed under the supervision of a faculty member serving as thesis examining, and a final defense to the advisory committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: ELE 695.

ESM Engineering Systems Management

ESM 501 Fundamentals of Probability and Statistics (1-0-1). Covers basics of probability and statistical methods and principles including data collection, descriptive statistics, elementary probability theory, statistical inference and simple regression. Prerequisite: admission to the MSES program.

ESM 502 Fundamentals of Engineering Economy (1-0-1). Covers the basics of engineering economic analysis methods and principles, including time value of money and the effects of interest, alternative evaluation methods, breakeven analysis and economic analysis of public projects. Prerequisite: admission to the MSES program.

ESM 520 Management for Engineers (3-0-3). Explores a full range of integrated topics for individuals in both public and private sector organizations who coordinate and manage engineering projects, personnel, resources and systems. Covers human resources, communication skills, leadership styles, team building, the basics of marketing management and financial management, and the management needs in multicultural and multinational environments. Integrates the core management principles with engineering experiences using case studies and applications.

ESM 532 Introduction to Applied Operations Research (3-0-3). (Formerly ESM 632). Covers formulation of mathematical models and explores solution techniques such as linear programming, sensitivity and cost analysis, simulation and stochastic modeling. Applications include transportation and networks, inventory control, and production planning and control. Team project is required. Prerequisite: Admission to the MSES program.

ESM 555 Information Technology Management (3-0-3). Provides an overview of the important managerial and strategic issues associated with using IT in today's networked organization. Covers IS/IT strategy, IT/business strategy alignment, IT-enabled business models, IT governance, managing integration with partners, planning and implementing new systems in organizations, and managing IT outsourcing. Previous knowledge of statistics is required. Includes case studies and team projects.

ESM 560 Quality Engineering and Management (3-0-3). Covers the techniques and applications of quality control using total quality management and reliability engineering. Includes sampling procedures, product quality and control, statistical process control charts and troubleshooting, product acceptance sampling plans, process capability analysis, an introduction to six sigma and design of experiment, time-to-failure, failure rate, reliability and system reliability.

ESM 570 Project Management (3-0-3). Covers the elements of project management critical to the success of engineering projects: project management framework, strategic management and project selection, project organization, human aspects of project management, conflicts and negotiations, scope management, time management, cost management, risk management, contracts and procurement, project termination, the project management office, and modern developments in project management. Integrates and clarifies the principles and tools through case studies from a variety of disciplines.

ESM 575 Advanced Engineering Economy (3-0-3). Covers the theory and application of advanced engineering economy principles and methods. Studies the effects of inflation, depreciation and taxes, cost estimation, sensitivity analysis, risk and uncertainty, capital budgeting, multi-attribute decision making, advanced asset replacement analysis and real option analysis. Includes case studies and a term project related to the topic.

ESM 580 IT Project Management (3-0-3). Provides an overview and explores concepts of IT project management. Includes the following topics: IT project planning and its relationship to CMMI levels, IT project risk management and configuration management techniques for IT projects. Discusses prevailing alternative life-cycle models such as RUP/Agile/SCRUM and their relationship to PMBOK and CPM. Covers IT project estimation techniques such as COCOMO.

Includes case studies in IT project management.

ESM 600 Research Methodology (3-0-3). Introduces the methodology of scientific research. Covers topics such as internal and external construct validity and reliability issues in research; normative, prescriptive and descriptive theories; process and variance approaches to theory formulation; introduction to quasi-experimental design and case study methodologies; practical strategies for literature review; APA and IEEE style guidelines; and presenting research results and conclusions. Includes invited speakers from industry and business. Prerequisites: ESM 501 and ESM 520.

ESM 612 Advanced Information Systems Management (3-0-3). Introduces topics in IT services management, resource planning and governance. Covers IT value-chain and related processes. Discusses IT portfolio management and maturity models. Discusses enterprise architectures and outsourcing strategies. Includes an overview of CMMI, CoBIT and ITIL. Prerequisite: ESM 555.

ESM 614 Communication and Network Management (3-0-3). Addresses the key technological and managerial issues related to the design, operation and maintenance of computer networks and the enterprise telecommunication system. Provides an overview of telecom technologies, including telecom architectures and protocols, voice technologies, LANs, WANs, cellular and mobile networks, satellite systems and Internet/intranet architectures. Covers feasibility analysis, service level agreements, service quality monitoring, network planning, network management, survivability, telecom equipment procurement, contracting, outsourcing, technology forecasting and replacement, telecom investment decisions, legal and regulatory issues in telecommunications, and performance modeling and monitoring tools. Includes case studies related to the topic. Prerequisite: ESM 555.

ESM 620 Security Management (3-0-3). Provides a solid background in the administration and management of security for computer-based systems. Introduces the management of security, including managing identity, IT threats, vulnerabilities and trust. Covers planning for security and contingencies, the development of security programs and policies, security models, practices and standards, security risk management, personnel and security, and legal and ethical issues in security. Prerequisite: ESM 555.

ESM 624 Knowledge Management (3-0-3). Introduces the roots of knowledge and knowledge management (KM); theories/definitions of knowledge; theories, applications, tools, and practices of KM; the Knowledge Management Life-Cycle Framework and Models; significant issues in KM (e.g., best practices, culture, economics, strategy, intellectual capital and sustainable innovation). Includes case studies related to the topic. Prerequisite: ESM 555.

ESM 634 Advanced Modeling and Simulation (3-0-3). (Formerly ESM 540). Covers advanced principles associated with systems modeling and simulation using contemporary software tools. Includes topics such as problem formulation, queuing theory, discrete event simulation modeling, and analysis of alternatives and selection of the optimum solution. Prerequisite: ESM 532.

ESM 636 Human Resources Management (3-0-3). Covers human resource planning processes, tools and techniques, job specification and methods of job analysis. Describes the requirements and ethical context of HRM methods of recruitment, evaluation, career training and development programs, salary systems and employee benefits, HR information systems and international HR issues. Integrates HR management practices and methodologies with engineering experiences. Prerequisite: ESM 520.

ESM 638 Decision Analysis (3-0-3). Covers the theory and practice of analyzing decisions in the public

and private sectors. Covers multiple objectives, influence diagrams, decision trees, sensitivity analysis, probability assessment, multi-attribute utility and human biases. Describes practical applications through real-world systems model building. Uses decision analysis software and spreadsheets to solve real-life problems through case studies. Prerequisite: ESM 501.

ESM 640 Supply Chain Management (3-0-3). Explores key issues related to the design, planning and operation of supply chains. Includes topics such as supply chain structure, supply chain performance metrics, network design, facility location in a supply chain, aggregate planning, planning and managing inventory in a supply chain, transportation in a supply chain, pricing and revenue management. Prerequisite: ESM 532.

ESM 642 Business Process Management (3-0-3). Introduces the important issues in alignment of business internal activities and resources with external requirements through process design and process improvements. Includes process types and hierarchies, workflow management systems, incremental process improvement, process re-engineering and benchmarking. Covers implementation and change management. Prerequisite: ESM 520.

ESM 644 Financial Management for Engineers (3-0-3). Provides engineers with financial management knowledge necessary for value-added decision making. Covers structure and analysis of financial statements, corporate valuation, working capital management, capital structure and budget, securities analysis and financial markets, and financial forecasting. Includes practical financial management case studies in technical organizations. Prerequisite: ESM 575.

ESM 650 Construction Management (3-0-3). Covers both the fundamental concepts and contemporary applications of construction management. Discusses elements of the construction project life cycle, project stakeholders, project administration and coordination

and construction delivery methods. Provides the student with the opportunity to simulate real-life construction management problems and apply acquired skills in their solution through case studies and team projects. Prerequisite: ESM 570.

ESM 652 Construction Planning and Scheduling (3-0-3). Covers the application of planning and scheduling techniques critical to the success of construction projects, critical path method, resource allocation and leveling, time-cost optimization, project monitoring, updating and control, linear scheduling, stochastic scheduling, contractual implications of construction schedules, analysis of time-related change orders and delays, schedule diagnostics, and use of construction planning and scheduling software. Includes case studies from the construction industry. Prerequisite: ESM 570.

ESM 660 Legal Aspects of ESM (3-0-3). Introduces construction contracts and their administration with special emphasis for engineering. Covers construction claims, matters of time, delays and litigation. Includes the following professional topics: analysis of specific issues concerning contracts, subcontracting, tort claims, insurance and bonds. Covers strategies for avoiding or terminating litigation, methods of dispute resolution, key aspects of prosecuting and defending claims, the role of dispute review boards and their use, procedures of claims presentation, conducting cost evaluation of claims and methods of international construction contracts. Covers actual legal cases involving construction and law. Prerequisite: ESM 570.

ESM 668 Construction Safety Management (3-0-3). Covers safety and health concerns in the construction worksite. Concentrates on safety process development and management in construction. Provides the student with a comprehensive background in worksite hazard assessment, safety and health program development, and risk management in the construction industry. Prerequisite: ESM 570.

ESM 685 Capstone Course in Engineering Management (3-0-3). Presents students with an opportunity to showcase the theory and the practical knowledge accumulated throughout their studies. The general intent of the engineering capstone is to demonstrate students' knowledge of the integrative aspects of ESM tools through rigorous written and oral communication of case analysis and a team project. Uses case studies to demonstrate the integrative aspects of ESM applications. Prerequisite: ESM 600.

ESM 686 Capstone Course in Construction Management (3-0-3). Presents students with an opportunity to showcase the theory and the practical knowledge accumulated throughout their studies. The general intent of the engineering capstone is to demonstrate students' knowledge of the integrative aspects of ESM tools through rigorous written and oral communication of case analysis and a team project. Uses case studies to demonstrate the integrative aspects of ESM applications. Prerequisite: ESM 600.

ESM 687 Capstone Course in Information Technology Management (3-0-3). Presents students with an opportunity to showcase the theory and the practical knowledge accumulated throughout their studies. The general intent of the engineering capstone is to demonstrate students' knowledge of the integrative aspects of ESM tools through rigorous written and oral communication of case analysis and a team project. Uses case studies to demonstrate the integrative aspects of ESM applications. Prerequisite: ESM 600.

ESM 698 Professional Project (6 credits). Requires completion of an approved professional project on a selected area of engineering management and systems engineering. Requires students to demonstrate the ability to integrate the information and the skills accumulated in their study plan through rigorous written and oral communication. A final report and presentation must be submitted to the examining committee. Graded as Pass/Fail.

ESM 699 Master's Thesis (6 credits). Requires students to complete original research work in a multidisciplinary area in engineering systems management. Requires students to demonstrate the ability to integrate the information and the skills accumulated in their study plan through rigorous written and oral communication. The thesis is completed under the supervision of a faculty member serving as the thesis advisor, and a final defense to the examining committee is required. Graded as Pass/Fail.

MCE Mechanical Engineering

MCE 550 Mechanical Systems Design (3-0-3). Introduces the design methodology applicable to mechanical systems. Includes the following topics: materials selection; specialized design methods such as design for manufacture, design for reliability and life cycle design; applications of optimization techniques; and finite element analysis to solve typical mechanical engineering problem. Prerequisite: admission to the MSME program.

MCE 551 Advanced Thermofluids (3-0-3). Explores the design and analysis of thermofluid systems using principles of thermodynamics, fluid mechanics and heat transfer. Covers single and multiphase thermofluid systems, multicomponent thermofluid systems, non-equilibrium thermofluid systems, heat loads, fluid flow network, exergy analysis, entropy generation minimization, heat exchangers and system design optimization. Prerequisite: admission to the MSME program.

MCE 552 Modeling and Simulation of Mechanical Systems (3-0-3). Addresses the importance of modeling and simulation and the interface between computer models and actual processes. Covers the formulation of systems of equations representing linear and non-linear mechanical systems behavior, and black box

modeling of mechanical systems such as artificial intelligence schemes. Employs commercial software applied to the different fields of mechanical engineering. Prerequisite: admission to the MSME program.

MCE 650 Advanced Machine Dynamics (3-0-3). Covers the following topics: kinematics and kinetics of three-dimensional rigid bodies and multibody systems, momentum and energy methods, and holonomic and non-holonomic constraints. Introduces Hamilton's principle for holonomic systems, Lagrange's equations, relativistic dynamics, central force motion, Euler equations of motion, Hamilton's equations and phase space, and the Hamilton-Jacobi equation. Prerequisite: MCE 550.

MCE 651 Advanced Engineering Materials (3-0-3). Explores advanced materials used in engineering applications. Covers the following topics: fatigue, fracture, experimental techniques, nondestructive evaluation, inelastic behavior, and the effect of processing and environmental conditions on mechanical properties. Prerequisite: MCE 550.

MCE 652 Advanced Topics in Manufacturing (3-0-3). Provides an in-depth study of manufacturing processes. Covers a quantitative analysis of metal cutting and analyzes the relationship between production performance and crucial process parameters. Introduces contemporary manufacturing technologies. Prerequisite: MCE 550.

MCE 653 HVAC Systems Design (3-0-3). Aims at developing a solid background in the practical design and analysis of HVAC systems. Covers building load using transfer functions and energy estimation methods, renewable energy technologies (solar, wind, geothermal, photovoltaics) and their applications on HVAC systems, solar thermal energy and wind energy conversion systems, passive design strategies, HVAC system controls, thermal energy storage, absorption chillers, energy efficiency for buildings, and design of large

commercial and industrial HVAC systems w/without renewable energy. Prerequisite: MCE 551.

MCE 654 Advanced Fluid Dynamics (3-0-3). Examines the conservation equations for viscous fluids and Navier-Stokes equations. Covers advanced topics such as Stokesian flow, boundary layer concept, laminar boundary layer equations and methods of solutions, theory of stability of laminar flows and introduction to turbulent flow. Prerequisite: MCE 551.

MCE 655 Advanced Measurements and Design of Experiments (3-0-3). Explores advanced experimental methods used in mechanical engineering systems. Covers the following topics: advanced measurement techniques in fluids, solids and motion variables; instrumentation; data acquisition; error and noise reduction; experimental data processing; error analysis; and design of experiments. Prerequisite: MCE 552.

MCE 695 Seminar (1-0-0). Introduces research methodologies. Explores the planning and realization of research projects. Examines current research issues in engineering using case studies that emphasize the utilization of applied research in designing engineering systems. Graded as Pass/Fail. Prerequisite: admission to the MSME program.

MCE 698 Professional Project (3 credits). Requires an approved professional project on selected area of mechanical engineering for completion of the MS degree. Includes development of the project concept, investigation of needs, initial data collection and assembly of written and field materials necessary to conduct a professional project, as well as exploration of alternative means to conduct the project. Requires a report and final presentation to the examining committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: MCE 695.

MCE 699 Master's Thesis (9 credits). Requires students to complete original research work in the field of study. Requires the thesis to be

completed under the supervision of a faculty member serving as thesis advisor, and a final defense to the examining committee. Graded as Pass/Fail. Prerequisite: approval of department head; prerequisite/concurrent: MCE 695.

MTR Mechatronics Engineering

MTR 501 Introduction to Mechatronics (2-3-3). Covers applied mechanical and electrical engineering principles used in mechatronics products. Introduces students to system modeling of mechanics, electromechanics, basic electronics design, signal processing and conditioning filters, power amplifiers and switches, semiconductor devices, and thermal and fluidic systems. Develops design skills in mechanisms, electronics devices and software in order to create, test and verify system functions. Includes laboratory projects. Graded as Pass/Fail. Prerequisite: admission to the MSMTR program.

MTR 515 Information Technology for Mechatronics (3-1-3). Covers computer organization, operating systems, computer networking (LAN and WAN), Internet programming and application, and web-based monitoring. Prerequisite: admission to the MSMTR program.

MTR 520 Embedded Systems for Mechatronics (2-3-3). Explores microprocessor hardware and software modules. Covers microcontroller hardware and software architectures, microcontrollers programming and interface with real-time mechatronics systems, data acquisition unit and designing stand-alone embedded systems for mechatronics products. Includes case studies and course projects. Prerequisite: admission to the MSMTR program.

MTR 540 Advanced Control Systems (3-0-3). Covers state variable models, design of control systems in state space, full state observers, reduced order observers, digital

compensator design LQ regulator and LQG theory, servomechanism design, and design of continuous and digital control systems using modern analytic and computer design tools. Prerequisite: admission to the MSMTR program.

MTR 590 Mechatronics Design (2-3-3). (Formerly MTR 525). Requires individual and team projects involving the development and integration of hardware and software into a smart system, which includes sensing, processing and controlling functions. Prerequisites: MTR 501 and MTR 520.

MTR 600 Modeling and Simulation of Dynamic Systems (3-0-3). Introduces multi-domain systems. Covers mechanical, thermal, fluid, electrical, electronic and electromechanical system dynamics. Emphasizes modeling and simulation of hybrid systems using computer-aided tools. Prerequisite: NGN 500.

MTR 605 Digital Signal Processing (3-0-3). Covers signal representation and system response, signal sampling and reconstruction, convolution, transfer function and system characteristics, digital filter design and realization, adaptive filters, spectral analysis, multirate signal processing, and time-frequency analysis and wavelets. Prerequisite: NGN 500.

MTR 610 Automated Manufacturing Systems (3-0-3). Describes and demonstrates automated machine tools and machining cells. Covers machining center configuration and operation, machine tool controller, machining code generation, in-process sensing and control, cell controllers and system simulation. Prerequisite: MTR 520.

MTR 615 Artificial Intelligent Systems (3-0-3). Covers biological and cognitive paradigms, concepts of machine intelligence, intelligent agents, vision and image analysis, principles of decision making, fuzzy logic, decision trees, case-based reasoning, genetic algorithms, neural networks and expert systems. Prerequisites: MTR 515 and MTR 520.

MTR 630 Real-Time Robotics Systems (2-3-3). Covers components of robot systems, analysis and design of modern robotic and industrial control systems, hardware and software, computational methods and techniques used in vision-based robotics, real-time embedded control, optimization techniques, matrix analysis and analytic 2D/3D geometry. Prerequisites: MTR 520 and NGN 500.

MTR 640 Nonlinear and Intelligent Control Systems (3-0-3). Introduces nonlinear systems, Lyapunov stability theory, linearization by high gain and sliding modes, nonlinear observers, Lyapunov design methods, feedback linearization, and intelligent control strategies, such as neural networks and fuzzy logic. Prerequisite: MTR 540.

MTR 644 Electric Drives for Mechatronics Systems (3-0-3). Provides an overview of modern electrical machines in terms of their dynamic and steady-state performance. Covers power electronic conversion and modulation principles, magnetic systems, dynamic models of AC and DC machines, and pulse-width modulated power electronic converters. Includes case studies with practical current control techniques. Prerequisite: MTR 501.

MTR 645 Image Processing and Computer Vision (3-0-3). Discusses fundamentals of digital images, image enhancement, restoration and segmentation. Covers color representation, morphological image processing, representation of images and object recognition. Prerequisite: NGN 500.

MTR 650 Applied Linear Estimation (3-0-3). Presents a review of probability and stochastic processes. Introduces deterministic and stochastic least squares estimators. Defines the innovation process and its properties. Introduces state space models, Weiner-Kalman filters for scalar and vector processes as well as smoothed estimators, and non-linear parameter estimation. Introduces fast array algorithms. Includes a project that applies the estimation algorithms on mechatronics application case studies. Prerequisite: NGN 500.

MTR 691 Mechatronics Design Project (0-6-3). Requires an extended project of interdisciplinary nature in which elements of computing, mechanics and electronics should be involved. Graded as Pass/Fail. Prerequisite: MTR 590; prerequisite/concurrent: MTR 695.

MTR 695 Mechatronics Seminar (1-0-0). Explores project planning development and realization, case studies of engineering systems design and realization, and current research topics in mechatronics engineering, including areas such signal processing, image processing, control, robotics, intelligent systems, computer vision and MEMS. Prerequisite: approval of program director.

MTR 699 Master's Thesis (6 credits). Requires students to complete extended and original research work on a topic related to elements of computing, mechanics, electronics and intelligence. Graded as Pass/Fail. Prerequisite: approval of program director; prerequisite/concurrent: MTR 695.

NGN Engineering

NGN 500 Advanced Engineering Mathematics (3-0-3). Covers analysis of linear and nonlinear physical systems equations of motion (ODEs and PDEs), tensors, partial differential equations of mathematical physics (wave, diffusion, Laplace, Poisson Equations), transform and integral methods for solving boundary and initial value problems, and numerical methods for ordinary and partial differential equations. Prerequisite: admission to the MSChE or MSCoE or MSCE or MSEE or MSME or MSMTR program.

NGN 501 Research Methods and Analysis in Engineering (3-0-3). Introduces basic knowledge and advanced skills necessary for conducting research in engineering. Covers techniques and tools for carrying out literature surveys and reviews, forming research goals, designing appropriate research method of approach, designing experiments and conducting data analyses, and preparing manuscripts and

presentations of findings. Prerequisite: admission to the MSChE or MSCoE or MSCE or MSEE or MSME program.

NGN 505 Random Variables and Stochastic Processes (3-0-3). Covers the following topics: random variables, transformation of functions of random variables, vectors of random variables, random processes: correlation and power spectral density, LTI systems with stochastic signals, Markov chains and queuing theory. Prerequisite: admission to the MSChE or MSCoE or MSCE or MSEE or MSME program.

NGN 509 Advanced Computational Methods (3-0-3). Covers topics such as numerical analysis methods (error analysis, roots of equation, linear algebraic equations, interpolation, approximation, finite difference and quadrature); numerical linear algebra; numerical solutions of ordinary differential equations; numerical solutions of partial differential equations; control volume technique; and numerical modeling, simulation and visualization of engineering problems using MATLAB. Prerequisite: admission to the MSChE or MSCoE or MSCE or MSEE or MSME program.

Directed study courses are numbered as 596 or 696 courses. The three-letter course prefix reflects the field of study of the course (e.g., independent study courses in ESM are coded as ESM 696).

Special Topics Courses

Special Topics (1 to 4 credits).

Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses. Can be repeated for credit. Prerequisites: topic specific. Lab/tech fee may apply.

Special topic courses are numbered as 594 or 694 courses. The three-letter course prefix reflects the field of study of the course.

Descriptions of particular special topics courses are made available in the college/school offering the course during registration.

Independent Study

Independent study is the umbrella term used to label two types of independent work: independent course and directed study.

For conditions governing registration in an independent study, please refer to the Registration in Independent Study Courses section under Academic Policies and Regulations.

Independent Course (1 to 4 credits).

A course listed in the catalog but offered in an independent study format. The course is coded using the course number in the catalog.

Students are not allowed to repeat courses in an independent course format.

Directed Study (1 to 4 credits). An investigation under faculty supervision beyond what is offered in existing courses.

School of Business and Management

EMB Executive Business Administration

EMB 701 Leadership and the Executive (6-0-6). Focuses on building the leadership skills required to prepare an organization for changes that will lead to higher levels of performance. Considers the behavior of people in organizations, principles and attributes of leadership, motivation theory, business ethics and effective management communication in the context of the Gulf Region. Explores approaches to organizational learning, strategic management of human capital, organizational development, and team building as the business enterprise positions itself to compete in a globalizing economy. Graded as Pass/Fail. Prerequisite: admission to the EMBA program.

EMB 702 Analytical Foundations (6-0-6). Introduces principles and techniques of analysis used to support decision making in business organizations, drawing primarily on economics, statistics and management science. Reviews essential elements of micro- and macroeconomic theory as they apply to competition, market behavior, interest rates and other phenomena impacting Gulf enterprises. Examines the use and analysis of data in decision making, including probability distributions, regression, modeling and other quantitative methods. Graded as Pass/Fail. Prerequisite: admission to the EMBA program.

EMB 703 Financial Management (9-0-9). Focuses on executive decisions in the framework of international financial markets. Explores fundamentals of financial record keeping and decision making, including cash flow, cost accounting and financial ratio analysis. Reviews management of assets and liabilities, followed by consideration of managerial and capital budgeting processes. Investigates the use of

corporate leverage and introduces methods of appraising corporate debt and equity securities. Examines portfolio optimization and risk management techniques, including the use of financial derivatives. Graded as Pass/Fail. Prerequisite: admission to the EMBA program.

EMB 704 Process and Innovation (6-0-6). Focuses on manufacturing and service management decisions, as well as sourcing and distribution functions of an organization. Considers principles of operations strategy, productivity, capacity planning, facility location quality, supply chain management, and the design and control of projects, products and processes. Explores a wide variety of analytical techniques for critically evaluating and continuously improving business processes. Graded as Pass/Fail. Prerequisite: admission to the EMBA program.

EMB 705 Markets and Innovation (3-0-3). Introduces segmentation and market positioning using the four strategic dimensions of marketing, together with the basic principles of consumer behavior and market research. Explores the balance between standardization and adaptation of marketing programs in an era of globalization. Examines techniques to stimulate innovation in the development of new marketing strategies, product and service offerings, and e-business applications. Graded as Pass/Fail. Prerequisite: admission to the EMBA program.

EMB 706 Society and Governance (3-0-3). Focuses on the position of business in society and examines its relations with other stakeholders. Considers societal expectations, corporate accountability and strategic approaches to social responsibility. Discusses concepts of management accountability and fiduciary responsibility based on agent and stewardship models, particularly as they apply to corporate governance

and the challenges faced by boards of directors. Explores the evolving legal structure of the UAE and examines such issues as contracts, dispute resolution, employment law and government regulation. Graded as Pass/Fail. Prerequisite: admission to the EMBA program.

EMB 711 Gulf to Global Strategy (6-0-6). Provides opportunities for students to integrate theories and principles in the development of corporate strategies for businesses in the Gulf Region. Employs case studies and experiential learning activities to create situations in which participants can synthesize concepts and apply analytical skills or leadership techniques to the creation of comprehensive strategies capable of supporting expansion into world markets. Considers the appropriate combination of marketing, financial, operations, technology and human resources. Graded as Pass/Fail. Prerequisite: admission to the EMBA program.

EMB 712 Executive Toolkit (6-0-6). Focuses on experiential development of specific leadership skills that help executives tie strategy to implementation. Introduces team building, negotiation, financial control, process mapping, project management and other useful techniques. Employs case studies, simulations, group exercises, role plays and a variety of analytical techniques to put management theory into effective practice. Graded as Pass/Fail. Prerequisite: admission to the EMBA program.

EMB 793 Matriculation Continuation (0-0-1). Maintains current matriculation for EMBA students whose coursework does not correspond to traditional academic semesters. This course does not generate credits for graduation. Tuition charged corresponds to one fourth of the program fee. Prerequisite: admission to the EMBA program.

GMPA Gulf Executive Public Administration

GMPA 500 Executive Writing and Research (2-0-2). Teaches the elements of effective writing and research. Introduces students to online research and available information resources, including journals and databases. Includes writing concepts such as organizing and prewriting, wordiness, parallel structure, paragraphing, subordination, passive voice, transitions, report structure, nominalizations, prepositional decay, proofreading, and document design and layout. Prerequisite: admission to the GEMPA program.

GMPA 501 Economics for Public Executives (3-0-3). Explores micro- and macroeconomic theory for management decisions and emphasizes basic economic reasoning in the analysis of public policy choices. Covers topics such as resource scarcity, supply and demand, household and firm behavior, market equilibrium, externalities, market failure, public goods and benefit-cost analysis. Discusses the comparative advantages of short-run fiscal and monetary policy changes and of longer-run growth policy options. Prerequisite: admission to the GEMPA program.

GMPA 504 Executive Problem Solving (3-0-3). Introduces basic quantitative methods and their application to executive decision making and problem solving. Presents a variety of techniques for data analysis. Covers topics such as defining problems, choosing appropriate techniques, descriptive data analysis, probability theory, sampling, point and interval estimation, analysis of comparisons and associations, and hypothesis testing. Prepares participants to be effective initiators, consumers and evaluators of quantitative studies. Prerequisite: admission to the GEMPA program.

GMPA 506 Government Informatics (3-0-3). Explores the organizational

integration and performance implications of networked information assets in the public sector. Explores information architecture planning, open standards and interoperability of IT infrastructures, open source software applications in government, and IT investment planning and evaluation. Addresses the role of information systems at all levels of government. Considers trust and privacy issues, ethics, access and security aspects. Outlines models for organization of the IT function and management of IS resources in the government sector. Prerequisite: admission to the GEMPA program.

GMPA 600 Public Administration Colloquium (1-0-0). Introduces participants to each other, the GEMPA staff, SBM and AUS. Incorporates registration, computer configuration, calendaring and logistics activities. Establishes expectations and procedures for testing, assignment submission and communication with faculty. Frames key challenges for public administration in the Gulf region. Prerequisite: admission to the GEMPA program.

GMPA 601 Policy, Politics and Administration (3-0-3). Introduces the public policy process and considers concepts such as competing values, externalities, market failure, risk and uncertainty. Explores alternate models of policy decision making and teaches approaches used by public managers to build support for specific programs. Examines the roles of agency culture, administrative reform, public trust, judgment and ethical norms. Prerequisite: admission to the GEMPA program.

GMPA 605 Financial Management and Budgeting (3-0-3). Presents use of the executive budget as a device for management planning and control. Emphasizes underlying concepts of public finance and the elements of budget analysis, strategy, review and execution. Highlights factors that influence budgetary commitments and considers the interplay among tax policy, budgets

and fiscal policy. Examines basic financial management functions including cash management, debt administration and communication with their impact on financial performance. Prerequisite: admission to the GEMPA program.

GMPA 606 Strategic Human Resource Management (1.5-0-1.5). Examines the management of human resources as a key element in organizational strategy and implementation. Presents the human resource inventory and considers principles of effective hiring, performance management, employee development, position classification, job analysis and managerial discretion in the context of ethical theories on equity, equality and representative governance. Prerequisite: admission to the GEMPA program.

GMPA 607 Public Marketing and Strategic Communication (1.5-0-1.5). Examines the principles of effective marketing and communication as they apply in the public sector. Encourages participants to improve their interpersonal, group and representational communication skills in written and oral form. Explores conceptual and theoretical frameworks for developing communication campaigns aimed at advancing organizational priorities and public policy. Prerequisite: admission to the GEMPA program.

GMPA 612 Organizational Transformation (3-0-3). Explores the principles of organizational diagnosis, planning and change. Presents methods for identifying root causes, analyzing processes, evaluating alternatives and securing support for implementation. Covers topics such as data collection methods, diagnostic models, organizational design principles, process reengineering, business case analysis and training alternatives. Cases will allow students to apply theories, models and methods to real situations. Prerequisite: admission to the GEMPA program.

GMPA 614 Analysis and Evaluation (3-0-3). Focuses on quantitative and qualitative research activities essential for designing, implementing and

appraising government programs. Explores approaches to assessing the effectiveness and efficiency of public services, new initiatives and ongoing agency activities. Considers the US Government Performance and Results Act, along with parallel initiatives for program reform in other nations. Prerequisite: admission to the GEMPA program.

GMPA 615 Managing the Public-Private Partnership (3-0-3). Explores the broad range of public-private interaction in delivery of public services. Considers tenets of the New Public Management, including entrepreneurialism in government, public-private partnerships and their implications for political, managerial, legal and ethical questions associated with use of non-governmental service providers. Considers types of services amenable to new approaches and introduces elements of performance monitoring in acquisition, contracting and program delivery. Prerequisite: admission to the GEMPA program.

GMPA 616 e-Governance (1-0-1). Introduces the concept of e-governance and the basic stage model of e-government. Distinguishes between models of government automation and transformation. Considers the potential influence of government information access on the development of an informed and empowered citizenry. Explores the potential of electronic media for stimulating citizen participation in public decision making. Prerequisite: admission to the GEMPA program.

GMPA 617 Public Ethics and the Rule of Law (3-0-3). Presents public ethics, the public good and stewardship as derived from liberal theory and moral reasoning. Considers the relationship between law and ethics in Western thought, stressing the implications of rule of law and due process for administrative practice. Reviews the impact of interests, privilege, political power and conflict of interest on integrity and public trust. Addresses differences in values, norms and social objectives based on local culture and tradition. Prerequisite: admission to the GEMPA program.

GMPA 619 Executive Leadership (3-0-3). Explores leadership roles and responsibilities in creating high-performing public organizations. Emphasizes creation and implementation of an organizational vision integrating key program goals, priorities and values. Considers adaptive leadership, team-building, conflict resolution, crisis management, emotional intelligence, integrity and dealing with diversity in a cross-cultural context. Employs case analysis and discussion, role plays and an active learning project. Prerequisite: admission to the GEMPA program.

GMPA 632 Learning in Public Management (3-0-3). Synthesizes and integrates principles and theories from throughout the GEMPA Program, applying them to leadership, human resource management, law and ethics, policy and evaluation. Presents the notion of a learning organization and explores its implications for government performance. Introduces the concept of policy transfer and considers the ability of public organizations to learn by analogy. Explores the importance of administrative capacity and the relationship between policy and implementation. Prerequisite: admission to the GEMPA program.

GMPA 680 Project Management for Executives (1-0-1). Explores techniques, models and tools for management of government projects. Uses case studies to evaluate leadership challenges in managing complex, highly technical and time-sensitive projects. Considers project design, planning, scheduling, systems engineering, cost estimation and control. Prerequisite: admission to the GEMPA program.

MBA Business Administration

MBA 501 Foundations of Economics (3-0-3). Provides an introductory survey of microeconomics and macroeconomics, designed primarily for MBA students unfamiliar with economics principles. The

microeconomics side of the course includes elements of demand and supply, consumer behavior, costs, market structures and income distribution. The macroeconomic side of the course analyzes movements in prices and national output, inflation, unemployment, and monetary and fiscal policy.

MBA 503 Financial Accounting for Managers (3-0-3). Addresses reading, analyzing and interpreting financial statements for the purpose of making managerial as well as investing and financing decisions. Explores management motivation in choosing accounting policies and how these policies have social, ethical and legal implications. Considers the basic financial statements, basis of valuations and the extent of financial disclosure.

MBA 504 Managerial Statistics (3-0-3). Examines the decision-aiding tools that can be applied by managers to gain insight into decision problems, ranging 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. Prerequisite: placement test or completion of a college-level statistics course.

MBA 505 Financial Management (3-0-3). Covers 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/concurrent: MBA 503.

MBA 508 Analytical Methods and Modeling (1.5-0-1.5). Examines analytical tools and methods used to make effective management decisions. Introduces decision analysis, process analysis and design, capacity management and queuing with an emphasis on the use of analytical models to solve complex business

problems. Includes such techniques as decision trees, value stream mapping, process modeling, spreadsheet simulations and dynamic modeling. Prerequisites: MBA 504 and computer proficiency.

MBA 509 Marketing Concepts (1.5-0-1.5). Covers the fundamental aspects of marketing including the marketing mix (product, pricing, advertising and promotion, and distribution), by focusing on problem-solving and decision-making abilities. Includes lectures, case studies and experiential learning activities in which students learn to research customer needs, segment markets and perform other basic marketing functions.

MBA 512 Organizational Behavior (1.5-0-1.5). Applies management theory to factors that influence individual and group performance while incorporating current management theory and research. Topics discussed range from motivation to the use of power and influence, organizational design and culture, and the role of leadership.

MBA 601 Managerial Economics (3-0-3). Covers the 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. Prerequisite: MBA 501.

MBA 606 Management Information Systems (3-0-3). Provides the theoretical, technological, practical and managerial foundations of management information systems. Covers 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. Prerequisite: MBA 508.

MBA 607 Business Communication (3-0-3). Focuses on the written and oral communication skills of the participants. Emphasizes

the use of technology in business communication. Covers effective business writing and presentation, listening and negotiation skills. Stresses the study and practice of advanced techniques of argumentative writing.

MBA 609 Operations Management (3-0-3). Takes an analytical approach to solving problems in production and operations management. Explores basic principles, functions and concepts involved in the design, operation and control of operations in contemporary organizations as well as key elements of supply chain management. Covers development of operations strategy, the application of linear programming, quality management, supply chain design and procurement, inventory management, and lean production. Prerequisites: MBA 504 and MBA 508.

MBA 610 Business Research Applications (3-0-3). Introduces students to the basic tools of business research by explaining various research methodologies and techniques. Includes numerous illustrations, portraying actual research in management, marketing, finance, accounting and other areas of business, that show how to perform the research function. Prerequisite: MBA 504.

MBA 611 Advanced Financial Management (3-0-3). 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. Familiarizes students with both the basic theories in each of these areas and various strategies for integrating the theory with practice. Prerequisite: MBA 505.

MBA 612 Leadership and Change Management (3-0-3). Investigates the role of leadership in the context of global change. Gives particular attention to leadership issues as they pertain to organizational development, culture and the dynamics of change. Prerequisite: MBA 512.

MBA 613 Accounting Analysis for Managers (3-0-3). Explains the role of accounting information in facilitating the functions of management. Covers decision making, planning, performance evaluation, budgeting, cost control and international transfer prices. Prerequisite: MBA 503.

MBA 614 Marketing Management (3-0-3). Introduces 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. Incorporates issues such as ethics, minorities and the ecological environment. Requires familiarity with microeconomic theory, basic concepts of accounting and relevant support software. Prerequisite: MBA 509.

MBA 615 Innovation and Entrepreneurship (3-0-3). Introduces business innovation and explores the entrepreneurial process through which new ideas become the basis for viable enterprises. Considers the development of a product or concept, assessment of technical and commercial feasibility, preparation of a business plan, and the need for funding. Requires students to take part in an interdisciplinary, team-based project developing a proposal for the prospective commercialization of a product, process or other business concept. Exposes the constant interplay between innovation and risk, feasibility and function, ownership and financing, marketing and delivery. Prerequisite: completion of all foundation courses or approval of the SBM Director of Graduate Programs.

MBA 616 e-Commerce Business Models and Technology (3-0-3). 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). Intensively introduces the legal and ethical issues confronting the global business manager. Addresses

the legal system, legal processes and several areas of substantive commercial law relevant to the business manager. 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. Integrates previous course experiences to hone decision making, analysis, and oral and written communication skills. Requires students to 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. Normally taken during the last semester in the MBA program. Prerequisites: completion of all MBA foundation courses and completion of at least five MBA core courses. Prerequisites/concurrent: MBA 609 and MBA 611.

MBA 620 Public Administration and the Policy Process (3-0-3). Introduces the public policy process and considers concepts such as competing values, externalities, market failure, risk and uncertainty. Presents alternate models of policy decision making and explores the approaches used by public service managers to build support for specific programs. Examines the roles of agency culture, administrative reform, public trust, judgment and ethical norms. Prerequisite: MBA 501.

MBA 621 Management of Nonprofit Organizations (3-0-3). Focuses on the application of management theory and practice in nonprofit organizations. Examines the establishment of nonprofits, strategic planning, governance, accountability, communication, budgeting and fundraising, human resource

management, design of volunteer programs, ethics and responsiveness to stakeholders. Prerequisite: MBA 512.

MBA 622 The Public-Private Partnership (3-0-3). Explores key tenets of the New Public Management and their implications for the delivery of public services. Examines the political, managerial, legal and ethical issues associated with use of non-governmental organizations. Considers types of services amenable to new approaches and introduces elements of performance monitoring in acquisition, contracting and program delivery. Prerequisite: MBA 620.

MBA 623 e-Government (3-0-3). Introduces the concept of e-government and explores the role of IT and the Internet in the delivery of public services and reengineering of administrative processes. Explores dramatic changes in public administration and methods of transformation. Examines issues of technology, public interfaces, transparency and accountability, access and security, equity, privacy and their impact on the deployment of government electronic services. Considers the influence of government information delivery in the development of an informed citizenry and expanded citizen participation in public decision making. Prerequisite: MBA 606.

MBA 624 Ethics, Law, Democracy and Society (3-0-3). Considers ethical issues and moral reasoning in the context of public policy formulation and implementation. Examines ethical standards and legal requirements that apply to managers in the public sector. Explores concepts such as the rule of law, constitutional constraints, administrative legitimacy, due process, rule making, administrative appeal and managerial liability. Reviews the impact of interests, privilege, political power and conflict of interest on public trust. Addresses differences in values, norms and social objectives based on culture and tradition. Prerequisite: MBA 620.

MBA 625 Public Financial Management (3-0-3). Introduces fundamental concepts and practice in budgeting, financial administration and revenue generation. Considers the budget process, budget preparation, resource allocation, cost analysis and audit. Presents basic management functions including cash management, debt administration and communication of financial performance. Surveys various public funding sources in the context of the Gulf Region. Prerequisite: MBA 503.

MBA 632 Investment Analysis (3-0-3). Covers the purpose and operations of security markets; investment instruments and their characteristics; introduction to portfolio and capital market theory; theory of valuation, bonds and the term structure of interest rates; options, commodity and financial futures investment companies; and international investments. Prerequisite: MBA 611.

MBA 633 Financial Derivatives (3-0-3). Covers conceptual and practical aspects of financial derivatives and derivatives markets with a detailed look at options, forwards, and futures on stocks, stock indices, bonds, currencies and commodities. Discusses in detail alternative hedging strategies and speculative elements of derivatives. Analyzes option pricing aspects by applying the Binomial Model and the Black-Scholes Model. Prerequisite: MBA 632.

MBA 634 Commercial Banking (3-0-3). Focuses on decision making based on an integrated approach that exposes students to the understanding of bank management. Discusses factors that influence credit, investment, funding and pricing decisions. Introduces topics that help develop an appreciation of the trade-offs between risk and return. Discusses a wide range of cases related to bank performance evaluation, making new loans, managing the investment portfolio, asset and liquidity management as well as the macro and international environment

in which commercial banks operate. Prerequisite: MBA 505.

MBA 635 Islamic Economics (3-0-3).

Provides the theoretical foundation for advanced studies in Islamic economics. Addresses questions concerning the need for an Islamic economic system, the viability of an economic system that is built on religious paradigm, how that system should be and how it relates to contemporary economic systems. Investigates the socioeconomic dynamics of classical Islamic economics and its views on wealth creation and distribution, optimum growth and employment, economic stability, public finance and the role of the state in economic activity. Prerequisite: MBA 501.

MBA 636 Islamic Banking and Finance (3-0-3).

Provides students with a formal and intuitive understanding of the essentials of Islamic finance, including the foundation of traditional Islamic financial tools and practices and the development of modern Islamic banking and financial instruments and institutions. Relates the theory of Islamic finance to current development in Islamic banking and the finance industry. Prerequisite: MBA 505.

MBA 637 Investing in Real Estate (3-0-3).

Introduces the importance of real estate to consumers and investors as well as its role in economic development and growth. Considers real estate from a variety of perspectives. Explores topics such as loan underwriting, property development, financial performance and market analysis. Discusses new property and lending trends around the world and particularly within the Middle East. Prerequisite: MBA 505.

MBA 651 Supply Chain

Management and Strategy (3-0-3).

Introduces basic concepts of logistics and supply chain management. Examines supply chain management topics, tools and issues from a general management point of view. Covers supplier selection and collaboration, performance measurement along the supply chain, strategic outsourcing,

just-in-time partnership and distribution, customer relationship management, logistics, procurement, inventory and warehousing strategies, and service supply chains. Includes case assignments, discussions and mini-projects. Prerequisite: MBA 508.

MBA 655 Information Systems

Design (3-0-3). Introduces students to basic elements of IS infrastructures, such as networks, intranets and XML, databases, and data warehouses and data centers. Teaches students how to plan and develop IT architectures and business applications based on business requirements. Emphasizes building shared databases and planning integrated applications such as CRM, SCM and ERP and other knowledge management and business intelligence platforms. Covers alternative paradigms for designing business solutions, including outsourcing, utility computing, open source software and grid computing. Requires a course-long project within a real-world context. Prerequisite: MBA 606.

MBA 661 Strategic Human Resource

Management (3-0-3). Focuses on the strategic role of HRM. Examines the role of HRM in strategy formulation and implementation and measuring and improving HRM effectiveness. Discusses how to align HRM practices with organizational business goals. Focuses on strategic recruitment and retention practices, high-performance management practices, strategies for developing employees, and the role of HR in supporting change and in managing mergers and alliances. Prerequisite: MBA 512.

MBA 662 International Human

Resource Management (3-0-3).

Explores the roles of HR managers in multinational corporations and identifies and analyzes efficient management strategies and practices in the field of international HR and effective HRM policies and practices in international contexts. Focuses on the internationalization of the organizations and the cultural dimensions that have an impact on HRM activities. Studies recruitment and selection, training, development,

and evaluation and compensation practices in an international context. Covers ethics and social responsibility issues in the MNE as well as the challenges of designing and implementing an iHRM policy. Prerequisite: MBA 512.

MBA 663 Staffing (3-0-3).

Allows students to develop critical, analytical and integrative thinking about the staffing process in today's organizations. Examines in detail the six steps in the staffing process: job design and analysis, HR planning, recruitment, selection, orientation and retention. Explores selection interviews, interviewing skills and selection tests. Covers how to manage diversity in the staffing context as well as evaluation and improvement of the important steps in the staffing process. Includes concrete exercises and case studies. Prerequisite: MBA 512.

MBA 664 Training and Development

(3-0-3). Adopts a systematic approach to training and development systems, focusing on the blend between theory and practice. Covers training in organizations, the training process, identifying learning needs and appropriate learning opportunities, designing and delivering training, the transfer of learning, reviewing and evaluating training activities, the management of transfers and promotions, the strategic development of leaders and managers, numerous developmental techniques, the learning organization and knowledge management. Studies the strategic management of training and development activities. Prerequisite: MBA 512.

MBA 670 Management Consulting

(3-0-3). Explores the theoretical and analytical foundations of management consulting practice. Helps students to develop skills necessary for successful consulting engagements. Includes the following topics: marketing professional services, needs assessment, selection of key performance indicators, proposal preparation, liaising with senior management, change leadership, training, managing

deliverables, project documentation and presentation styles. Exposes students to common consulting tools, technologies and techniques used for problem identification, data collection, process analysis, quality management, team building, etc. Students who have not completed all foundation courses will require approval of the SBM Director of Graduate Programs. Prerequisite: MBA 612.

MBA 680 Project Management

(3-0-3). Examines the concepts and techniques associated with managing projects in business organizations. Considers project design, planning, scheduling, systems engineering, cost estimation and control. Explores the relationship between innovation and risk. Prerequisite: MBA 508.

MBA 690 Global Consulting

Practicum (0-9-3). Provides student teams with an opportunity to participate in a consulting engagement under the direction of SBM faculty. Requires students to carry out a complete project with a team from a US partner institution. Develops skills in problem definition, needs analysis, strategic planning, market research and other techniques appropriate to the needs of the client. Students may enroll only with the approval of the SBM Director of Graduate Programs. Travel is required. Prerequisite: MBA 670.

Directed Study (1 to 4 credits). An investigation under faculty supervision beyond what is offered in existing courses.

Directed study courses are numbered as 596 or 696 courses. The three-letter course prefix reflects the field of study of the course (e.g., independent study courses in MBA are coded as MBA 696).

Special Topics Courses

Special Topics (1 to 4 credits).

Presents a theoretical or practical topic proposed by the faculty beyond what is offered in existing courses. Can be repeated for credit. Prerequisites: topic specific. Lab/tech fee may apply.

Special topic courses are numbered as 594 or 694 courses. The three-letter course prefix reflects the field of study of the course.

Descriptions of particular special topics courses are made available in the college/school offering the course during registration.

Independent Study

Independent study is the umbrella term used to label two types of independent work: independent course and directed study.

For conditions governing registration in an independent study, please refer to the Registration in Independent Study Courses section under Academic Policies and Regulations.

Independent Course (1 to 4 credits).

A course listed in the catalog but offered in an independent study format. The course is coded using the course number in the catalog.

Students are not allowed to repeat courses in an independent course format.





Graduate Student Handbook

Foreword

The Graduate Student Handbook provides information on the policies and procedures related to theses, final projects, graduate student employment and graduate student work-study opportunities at AUS.

The preceding 2011–2012 catalog section contains detailed information on admission, tuition, academic policies and regulations, and program requirements.

1.0 Office of the Vice Provost for Research and Graduate Studies

The Office of the Vice Provost for Research and Graduate Studies is a division of the Office of the Provost.

The office is responsible for graduate academic-related matters and for facilitating the activities of the Office of Research.

Office of the Vice Provost for
Research and Graduate Studies
American University of Sharjah
PO Box 26666, Sharjah, UAE
Tel +971 6 515 4024
Fax +971 6 515 4025
vpgrs@aus.edu

2.0 Graduate Program Committee

The Graduate Program Committee (GPC) is a standing university-level committee responsible for overseeing curricular issues and developing graduate program policies and procedures.

Following a deliberative process, the GPC makes its recommendations to the Vice Provost for Research and Graduate Studies.

3.0 Master's Thesis

A thesis is a formal manuscript that identifies theories or hypotheses, tests these hypotheses and accepts or rejects them using formal, systematized research methodology. On the basis of the findings, the researcher draws conclusions and makes recommendations.

The thesis is an opportunity for the student to conduct developmental research or a focused project on a particular topic of personal interest.

A thesis presents the results of an original, creative investigation leading to new insights, conclusions and recommendations appropriate to the investigated topic. The key outcome is the development and documentation of new knowledge. Therefore, students are expected to prepare and submit scholarly papers to peer-reviewed journals based on the research presented in the formal and approved thesis document.

The master's thesis at AUS must have appropriate depth for graduate work. As the culmination of the program of study, it should reflect scholarly depth and rigor. "Literature review" and "routine implementation" theses are not acceptable for completing the master's degree.

Several distinct steps occur in the preparation of a thesis:

- selecting the thesis research topic
- preparing and submitting the formal thesis proposal for approval by the thesis supervisor and master's thesis committee
- conducting research and writing the thesis under the direction of the thesis supervisor and committee
- conducting the oral thesis defense
- submitting the approved thesis for certification by the Office of the Vice Provost for Research and Graduate Studies
- submitting the thesis to the AUS Archives within the AUS Library for binding and archiving

3.1 Selecting the Thesis Research Topic

Prior to registering for the thesis course (e.g., XXX 699), students must select a thesis topic and obtain approval from the program/director. The student, in consultation with their thesis supervisor, may also identify external master's thesis advisory committee members. External advisory members must have a terminal degree in a relevant field or equivalent professional and/or research experience. Students must ensure that the External Thesis/Final Project Advisory Committee Member Approval Form (available at www.aus.edu/academic/gup/graduate/forms.php) is submitted by the school/college deadline. The master's thesis advisory committee must approve the thesis research topic.

After the final thesis topic is approved, the student must provide the thesis supervisor with an outline of the work to be conducted, which should include a schedule. All members of the master's thesis committee must approve in writing the topic and work outline.

While students are given a great deal of latitude in selecting thesis topics, work must be done within an area appropriate to the chosen graduate program. Furthermore, the thesis must not have been submitted for credit elsewhere or have been published previously.

3.2 Preparing and Submitting a Thesis Proposal

The thesis proposal must be formally presented to and approved in writing by the master's thesis committee. Only students in good academic standing may register for thesis credits.

The thesis proposal should, at a minimum, include the following sections in the order listed below:

- proposed thesis title
- abstract

- problem statement (must include a hypothesis and/or a list of basic research questions central to the problem)
- significance of the research
- review of the literature
- summary of planned research methodology (summarizes the research methods to be used and why these particular methods are appropriate)
- preliminary bibliography

Specific graduate programs may have requirements for additional sections and page limitations. Students should consult their thesis supervisor and graduate program director.

3.3 Conducting Thesis Research and Writing the Thesis

When beginning the process of researching and writing the thesis, the student and the thesis supervisor must agree upon a review process and schedule to ensure satisfactory and timely completion of the final written document. Frequent consultation with the thesis supervisor is expected throughout the research and writing phase. The final draft of the thesis must be distributed to the master's thesis committee at least three weeks prior to the final defense and review.

3.4 Conducting the Oral Thesis Defense

An oral presentation (defense of the thesis) explaining the thesis and responding to questions by members of the master's thesis committee is required of all thesis students. It is the student's responsibility to schedule this presentation with the thesis committee members and to notify the graduate program director. All committee members must be present unless an unforeseen emergency occurs. The committee meeting may not be scheduled until the entire committee approves the final draft of the thesis as ready for defense.

The oral defense has two parts. The first part is open to the public and should be no longer than 40 minutes, with an additional 15–30 minutes for

questions. The presentation should include a summary of key content points that explain the intellectual contributions of the work, conclusions, recommendations and lessons learned.

The second part of the oral defense is a 30-minute closed session limited to the student, the thesis supervisor and the thesis committee. In this session, the committee may ask additional questions and may convene privately to deliberate on their recommendations for the thesis grade.

3.5 Guide for Preparing the Thesis

A complete guide for preparing the thesis is available at: www.aus.edu/academic/gup/graduate/thesesguide.

4.0 Graduate Student Employment Opportunities

4.1 Graduate Assistantships: Policies, Selection Requirements and Application Procedures

The purpose of offering graduate assistantships at AUS is to attract highly qualified students who bring benefit to the academic community. Two categories of graduate assistantships are provided: graduate research assistantships (GRAs) and graduate teaching assistantships (GTAs). Both types of assistantships are competitively awarded on a semester-by-semester basis and follow the same application process. Graduate assistantships can be held for a maximum of two years.

4.1.1 Eligibility Requirements

Graduate assistantships are available to graduate students who have been admitted to the university in good standing, meeting or exceeding all university and program-level requirements for full admission. Students on conditional or probationary status are not eligible for graduate assistantships. Applicants to AUS must indicate whether they wish to be considered for a graduate

assistantship on the graduate admission application form.

Students already enrolled in a graduate program but not holding a graduate assistantship may also apply through the relevant program at the college/school level. The graduate assistantship application form for continuing students can be found at www.aus.edu/academic/gup/graduate/.

Graduate assistants must achieve and maintain a satisfactory academic record with a CGPA of 3.0 or greater.

Specific graduate programs may establish additional and/or higher standards, which can be found on the relevant graduate program's website.

4.1.2 Types of Assistantships Available at AUS and Corresponding Workload

For each of the two categories of graduate assistantship (GRA and GTA), AUS offers two types of assistantships within its master's degree programs (excluding the GEMPA program):

- full-time assistantships
- part-time assistantships

Full-Time Assistantships

This type of graduate assistantship is highly competitive and is for full-time graduate students at AUS. Students must take a minimum of nine credit hours each term of their assistantship or be registered for thesis/project credit. They may take no more than 12 credit hours per term. They work a maximum of 20 hours per week in a regular semester as research assistants or teaching assistants for members of the graduate faculty. Full-time graduate assistants receive a tuition waiver for nine credit hours, as well as a work stipend.

Full-time graduate students may hold full-time graduate assistantships and concomitantly serve as work-study students at AUS only if the total hours worked in a regular semester does not exceed 20 per week.

Graduate students who are employed full-time may not hold full-time graduate assistantships but are eligible for part-time assistantships.

Part-Time Assistantships

The part-time assistantship is also highly competitive. It is open to both full- and part-time graduate students at AUS. Part-time assistants must take six credit hours or be registered for thesis/project credit each term of their assistantship. They work a maximum of 10 hours per week in a regular semester as research assistants or teaching assistants for members of the graduate faculty. Part-time assistants receive up to six credit hours of tuition waiver each term of their assistantship and a stipend based on the level of support offered.

Part-time graduate students may hold part-time graduate assistantships and concomitantly serve as work-study students at AUS only if the total hours worked in a regular semester does not exceed 10 per week.

4.1.3 Appointments and Responsibilities

Graduate assistants are appointed on semester-by-semester basis.

The director of the relevant graduate program or faculty supervisor is required to provide a detailed statement of duties and assignments for the graduate assistant at the beginning of the appointment. Graduate assistants are responsible for adhering to weekly workload expectations.

Both full- and part-time assistants may conduct research, serve as lab assistants, teaching assistants or research assistants.

Information about stipends and benefits is posted at www.aus.edu/academic/gup/graduate/Graduate_Student_Employment/assistantship.php.

4.1.4 Application Package

New Students Applying for a Graduate Assistantship

New students applying for graduate assistantships must submit the following to the Office of Enrollment Management/Graduate Admissions:

- a complete Application for Graduate Admission with the box requesting consideration for assistantship marked

- three recommendation forms/letters of recommendation

Continuing Students Applying for a Graduate Assistantship for the First Time

Continuing students applying for a graduate assistantship for the first time must submit the following to the relevant graduate program director by the deadline established by each college/school:

- an Application for Graduate Assistantship (Continuing Students Only)
- AUS transcripts
- three recommendation forms/letters of recommendation

Continuing Students Seeking to Maintain a Graduate Assistantship

Continuing students seeking to maintain a graduate assistantship must submit the following to the relevant graduate program director by the deadline established by each college/school:

- an Application for Graduate Assistantship (Continuing Students Only)
- AUS transcripts

The recommendation form and the Application for Graduate Assistantship (Continuing Students Only) are available at www.aus.edu/academic/gup/graduate/forms.php.

4.1.5 Deadlines

New Students Applying for a Graduate Assistantship

Please refer to the Graduate Academic Calendar at the front of this catalog.

Each college/school must submit recommendations for graduate assistantship assignments to the Office of the Vice Provost for Research and Graduate Studies by 5:00 p.m. on the last day of the undergraduate registration week in the semester during which the assistantship is requested.

Recommendations must be signed by the relevant graduate program director and dean and must include the following:

- a cover letter from the dean's office
- a photocopy of the completed Application for Graduate Admission form (with the box requesting consideration for assistantship marked) for each student
- a photocopy of the transcripts of each student
- photocopies of three recommendation forms/letters of recommendation for each student

Continuing Students Applying for a Graduate Assistantship for the First Time

Each college/school establishes an internal deadline when applications for an assistantship should be submitted.

Each college/school must submit recommendations for graduate assistantship assignments to the Office of the Vice Provost for Research and Graduate Studies by 5:00 p.m. on the last day of the undergraduate registration week in the semester during which the assistantship is requested.

Recommendations must be signed by the relevant graduate program director and dean and must include the following:

- a cover letter from the dean's office
- an Application for Graduate Assistantship (Continuing Students Only) for each student
- a photocopy of up-to-date AUS transcripts for each student
- photocopies of three recommendation forms/letters of recommendation for each student

Continuing Students Seeking to Maintain a Graduate Assistantship

Each college/school establishes an internal deadline when applications for continuation of an assistantship should be submitted.

Each college/school must submit recommendations for graduate assistantship continuation to the Office of the Vice Provost for Research and Graduate Studies by 5:00 p.m. on the last day of the undergraduate registration week in the semester during which the assistantship is requested.

Recommendations must be signed by the relevant graduate program director and dean and must include the following:

- a cover letter from the dean's office
- a photocopy of up-to-date AUS transcripts for each student

4.1.6 Address for Submission

New students should submit completed admissions application packages to:

Office of Enrollment Management
Graduate Admissions
American University of Sharjah
Main Building
PO Box 26666, Sharjah, UAE
graduateadmissions@aus.edu

Continuing students should submit completed assistantship application packages to the relevant graduate program director before the deadline established by each college/school.

4.1.7 Review Process

Complete application packages of students who meet the minimum requirements are fully reviewed by selection committees within relevant graduate programs. These program committees are made up of faculty members who teach in the graduate program, and they report to the graduate director.

After selection committees review application packages, the graduate program director will forward application packages to the dean of the relevant college/school along with committee review comments and recommendations.

The dean will review the application packages and make a recommendation. He/she will forward application packages with all recommendations and comments to the Vice Provost for Research and Graduate Studies.

The Vice Provost for Research and Graduate Studies will forward his/her comments and recommendations along with the recommendation of the dean of the relevant college/school to the Provost, who will make the final selection.

4.2 Graduate Student Work-Study Opportunities: Policies, Selection Requirements and Application Procedures

AUS provides a variety of student employment opportunities for graduate students through specific departments, graduate programs and through work on AUS internal research grants to faculty members. The following sections describe the general policies governing graduate student employment at AUS.

4.2.1 Eligibility Requirements

To be employed as a graduate student worker, a student must be enrolled in a graduate program and registered for at least six credit hours.

Graduate student workers may work up to 20 hours per week in a regular semester while courses are in session. Graduate student workers may work up to 40 hours per week during breaks as long as they are enrolled as full-time students in the regular semesters before and after the break. Students are not paid for work beyond these limits.

Note: *Graduate students who have received a graduate assistantship are eligible for employment as student workers provided their total working hours, in a regular semester, do not exceed 20 hours per week for graduates with a full-time assistantship and 10 hours for graduates with a part-time assistantship.*

4.2.2 Pay Range and Work Records

The hourly rate for a specific position is based on range and complexity of duties, skill requirements and equity. Graduate program directors are responsible for consistency and equity in pay rates among the graduate workers within their college/school. The college/school also determines the starting wage and pay increases.

4.2.3 Timesheets

All AUS colleges/schools and departments are required to keep detailed timesheets for each student worker. Work-study students will check their posted hours and sign

the timesheet. Timesheets should be submitted by the department or college/school through their dean to the Vice Provost for Research and Graduate Studies for approval. Timesheets must be completed at the end of each month.

Graduate student timesheets are posted at www.aus.edu/academic/gup/graduate/forms.php.

4.2.4 Payment

Checks for work-study students are issued from the Finance Department (second floor, Main Building). Students must present a valid ID to receive their paychecks.

4.2.5 Application Process

Graduate students must apply for student employment through their graduate program directors.

Those who wish to hire graduate student workers must complete the form posted at www.aus.edu/academic/gup/graduate/forms.php.



Full-Time Faculty

A

- Abdalla, Jamaeldin**, PhD, University of California at Berkeley, 1989; Professor in Civil Engineering and Head, Department of Civil Engineering
- Abdallah, Abed Al-Nasser**, PhD, University of Lancaster, 2004; Assistant Professor in Accounting
- Abdelaziz, Fouad**, PhD, Laval University, 1992; Professor in Engineering Systems Management
- Abdelfatah, Akmal**, PhD, University of Texas at Austin, 1999; Associate Professor in Civil Engineering
- Abdel-Hafez, Mamoun**, PhD, University of California at Los Angeles, 2003; Associate Professor in Mechanical Engineering
- Abdel-Jabbar, Nabil**, PhD, University of Michigan, 1996; Professor in Chemical Engineering
- AbdulHadi, Zayid**, PhD, Université Laval, 1987; Professor in Mathematics and Statistics
- Abed, Farid**, PhD, Louisiana State University, 2005; Associate Professor in Civil Engineering
- Abouleish, Mohamed Yehia**, PhD, Tennessee Technological University, 2003; Assistant Professor in Biology, Chemistry and Environmental Sciences
- Abu Al-Foul, Bassam**, PhD, University of Utah, 1994; Associate Professor in Economics (on sabbatical Academic Year 2011–2012)
- Abualrub, Taher**, PhD, University of Iowa, 1998; Professor in Mathematics and Statistics
- Abukhaled, Marwan**, PhD, Texas Tech University, 1995; Professor in Mathematics and Statistics
- Abu-Lebdeh, Ghassan**, PhD, University of Illinois at Urbana-Champaign, 1999; Associate Professor in Civil Engineering
- Abu-Muhanna, Yusuf**, PhD, State University of New York at Albany, 1979; Professor in Mathematics and Statistics
- Abu-Yousef, Imad**, PhD, McGill University, 1996; Professor in Biology, Chemistry and Environmental Sciences
- Ahmad, Norita**, PhD, Rensselaer, 2001; Assistant Professor in Management Information Systems
- Ahmad, Shoaib Nabi**, MID, Rhode Island School of Design, 1991; Associate Professor in Design
- Ahmed, Khawlah**, PhD, State University of New York at Buffalo, 1998; Assistant Professor in English
- Ahmed, Rana**, PhD, Duke University, 1991; Associate Professor in Computer Science and Engineering
- Ahmed, Saad**, PhD, Georgia Institute of Technology, 1981; Professor in Mechanical Engineering
- Al-Ali, Abdul-Rahman**, PhD, Vanderbilt University, 1990; Professor in Computer Science and Engineering
- Al-Assaf, Yousef**, PhD, Oxford University, 1988; Professor in Electrical Engineering and Dean, College of Engineering
- Albasha, Lufti**, PhD, University of Leeds, 1995; Assistant Professor in Electrical Engineering
- Al-Ghoussein, Tarek**, MA, University of New Mexico, 1989; Professor in Design
- AlHamaydeh, Mohamed**, PhD, University of Southern California, 2005; Assistant Professor in Civil Engineering
- Ali, Ahmed**, PhD, University of Durham, 1999; Assistant Professor in Arabic and Translation Studies
- Ali, Naghmana**, PhD, University of Toronto, 2004; Assistant Professor in English
- Ali, Tarig**, PhD, Ohio State University, 2003; Associate Professor in Civil Engineering
- Alibrandi, Thomas**, EdD, University of San Francisco, 1999; Assistant Professor in Writing Studies and Director, Achievement Academy
- Al-Issa, Ahmad**, PhD, Indiana University of Pennsylvania, 1998; Associate Professor in English (on sabbatical Fall 2011)
- Al-Jurf, Saladin**, JD, University of Iowa College of Law; 1998; Assistant Professor in Management
- Alkafaji, Yass**, DBA, Mississippi State University, 1983; Associate Professor in Accounting
- Al-Kaisi, Meis**, PhD, University of London, 2006; Assistant Professor in Arabic and Translation Studies
- Al-Kaisy, Ahmed**, PhD, Carleton University, 1999; Visiting Associate Professor in Civil Engineering
- Al-Kattan, Ibrahim**, PhD, Tennessee Technical University, 1994; Professor in Engineering Systems Management
- Al-Khazali, Osamah**, PhD, University of Memphis, 1997; Professor in Accounting and Finance (on sabbatical Academic Year 2011–2012)
- Allagui, Ilhem**, PhD, University of Montreal, 2001; Associate Professor in Mass Communication
- Alnaizy, Raafat**, PhD, Texas A&M University, 1999; Associate Professor in Chemical Engineering
- Al-Najjar, Abeer**, PhD, University of Edinburgh, 2003; Assistant Professor in Mass Communication (on leave Academic Year 2011–2012)
- Alnaser, Ali Sami**, PhD, Western Michigan University, 2002; Associate Professor in Physics (on sabbatical Academic Year 2011–2012)
- Al-Nashash, Hasan**, PhD, Kent University, 1988; Professor in Electrical Engineering
- Alobaidi, Ghada**, PhD, University of Western Ontario, 2000; Associate Professor in Mathematics and Statistics
- Aloul, Fadi**, PhD, University of Michigan, 2003; Associate Professor in Computer Science and Engineering
- Al-Sayah, Mohamed**, PhD, University of Alberta, 2002; Associate Professor in Biology, Chemistry and Environmental Sciences
- Al-Tamimi, Adil**, PhD, Strathclyde University, 1990; Professor in Civil Engineering and Director, Institute of Material Systems
- Amador, Victoria**, PhD, University of Denver, 1986; Assistant Professor in English
- Anabtawi, Mahmoud**, PhD, University of Texas, 1998; Professor in Mathematics and Statistics and Head, Department of Mathematics and Statistics

Anderson, Pia-Kristina, PhD, University of California at Berkeley, 2001; Assistant Professor in International Studies; Associate Dean, College of Arts and Sciences; and Director, CAS Graduate Programs

Angell, Linda, DBA, Boston University, 1996; Director, International Exchange Programs

Araujo, Anderson, PhD, University of Western Ontario, 2006; Assistant Professor in English

Arenfeldt, Pernille, PhD, European University Institute, 2006; Assistant Professor in International Studies

Arzaghi, Mohammad, PhD, Brown University, 2005; Assistant Professor in Economics

Ashill, Nicholas, PhD, University of Bradford, 2004; Professor in Marketing and Head, Department of Marketing

Assaleh, Khaled, PhD, Rutgers University, 1993; Professor in Electrical Engineering

Atabay, Serter, PhD, University of Birmingham, 2001; Assistant Professor in Civil Engineering

Attom, Mousa, PhD, Kansas State University, 1989; Professor in Civil Engineering

Aveyard, Mark, PhD, Florida State University, 2007; Assistant Professor in International Studies

B

Badawi, Ayman, PhD, University of North Texas, 1993; Professor in Mathematics and Statistics

Badry, Fatima, PhD, University of California at Berkeley, 1983; Professor in English

Baghestani, Hamid, PhD, University of Colorado, 1982; Professor in Economics

Bahloul, Maher, PhD, Cornell University, 1994; Associate Professor in English

Baker, Jeffrey, PhD, Texas Tech University, 2008; Assistant Professor in Management Information Systems

Bakri-Kassem, Maher, PhD, University of Waterloo, 2007; Assistant Professor in Electrical Engineering

Bantey, Paul, MFA, Whitecliffe College of Arts and Design, 2005; Assistant Professor in Design (on sabbatical Spring 2012)

Barlas, Gerassimos, PhD, National Technical University, Athens, 1996; Professor in Computer Science and Engineering

Barnett, Andy, PhD, University of Virginia, 1978; Professor in Economics

Bartholomew, Aaron, PhD, College of William and Mary, 2001; Associate Professor in Biology, Chemistry and Environmental Sciences

Bateman II, Robert E., PhD, University of Utah, 2004; Associate Professor in Management and Director, SBM Graduate Programs and Outreach

Battenburg, John, PhD, Purdue University, 1989; Professor and Head, Department of English

Beheiry, Salwa, PhD, University of Texas at Austin, 2005; Assistant Professor in Civil Engineering

Belkhodja, Omar, PhD, Laval University, 2006; Assistant Professor in Management

Berbić, Amir, MFA, The School of the Art Institute of Chicago, 2004; Associate Professor in Design

Berenger, Ralph, PhD, Idaho State University, 2002; Visiting Associate Professor in Mass Communication

Bieber-Roberts, Peggy, PhD, University of Washington, 1990; Associate Professor in Mass Communication

Bley, Jörg, PhD, Florida Atlantic University, 2000; Associate Professor in

Bodolica, Virginia, PhD, HEC Montreal Business School, 2006; Associate Professor in Management

Boisvert, Jean, PhD, Macquarie Graduate School of Management, 2007; Assistant Professor in Marketing

Boubakri, Narjess, PhD, Université Laval, 2000; Professor in Finance

Breslow, Harris, PhD, University of Illinois, Champaign-Urbana, 1995; Associate Professor in Mass Communication

Brodtkorb, Tor, LLB, McGill University, 2000; Assistant Professor in Management

C

Caesar, Judith, PhD, Case Western Reserve University, 1976; Professor in English

Carnegie, Paul, PhD, The University of Queensland, 2006; Visiting Assistant Professor in International Studies

Chazi, Abdelaziz, PhD, University of North Texas, 2004; Associate Professor in Finance

Chebbi, Rachid, PhD, Colorado School of Mines, 1991; Professor in Chemical Engineering

Chen, Kim Heng, PhD, Washington State University, 2002; Associate Professor in Quantitative Methods

Chiravuri, Ananth, PhD, University of Wisconsin, Milwaukee, 2007; Assistant Professor in Management Information Systems

Conty, Arianne, PhD, University of California, 2009; Assistant Professor in International Studies

Crompton, Peter, PhD, Lancaster University, 2003; Assistant Professor in English

D

Dabous, Saleh Abu, PhD, Concordia University, 2008; Visiting Assistant Professor in Civil Engineering

Daghfous, Abdelkader, PhD, Pennsylvania State University, 1997; Associate Professor in Management Information Systems (on sabbatical Fall 2011)

Dahm, Carl Bob, MFA, University of Hartford, 2007; Assistant Professor in Design

Danila, Liliana, MA, Clemson University, 2005; Assistant Professor in Economics

Darayseh, Musa, PhD, University of Nebraska-Lincoln, 1990; Professor in Accounting

Darras, Basil, PhD, University of Kentucky, 2008; Assistant Professor in Mechanical Engineering

Darwish, Naif, PhD, Oklahoma State University, 1991; Professor in Chemical Engineering

DeGeorges, Thomas, PhD, Harvard University, 2006; Assistant Professor in International Studies

Deiab, Ibrahim, PhD, McMaster University, 2003; Associate Professor in Mechanical Engineering and Coordinator of Research

Desai, Gaurang, PhD, University of Western Sydney, 2009; Assistant Professor in Design

Dezhbakhsh, Ibrahim, PhD, Ohio State University, 1989; Professor of Economics

Dhaouadi, Rached, PhD, University of Minnesota, 1990; Professor in Electrical Engineering; Director, Mechatronics Engineering Program; and Coordinator, Mechatronics Center

Dickerson, Dwight, PhD, University of Los Angeles, California, 1998; Associate Professor in Visual and Performing Arts Program

Di Sabatino, Peter, MArch, Washington University, 1985; Professor in Architecture and Dean, College of Architecture, Art and Design

Dougan, Brian, MArch, Texas A&M University, 1989; Associate Professor in Architecture

E

East, Ken, MFA, University of Delaware, 1992; Assistant Professor in Performing Arts

Eberlein, Armin, PhD, University of Wales, 1998; Professor in Computer Science and Engineering and Coordinator of CEN Accreditation

Eischen, Erich, LL.M., University of Denver, 2006; Assistant Professor in Accounting

El-Baz, Hazim, PhD, University of Missouri, Rolla, 1991; Associate Professor in Engineering Systems Management

Eldred, Gary, PhD, University of Illinois, 1973; Associate Professor in Finance

El-Emam, Magdi, PhD, Queen's University, 2003; Assistant Professor in Civil Engineering

El-Fakih, Khaled, PhD, University of Ottawa, 2002; Associate Professor in Computer Science and Engineering

El-Hag, Ayman, PhD, University of Waterloo, 2004; Associate Professor in Electrical Engineering

El Kadi, Hany, PhD, University of Alberta, 1993; Professor in Mechanical Engineering; Associate Dean, College of Engineering; and Director, CEN Graduate Programs

El-Kadri, Oussama, PhD, Wayne State University, 2006; Assistant Professor in Biology, Chemistry and Environmental Sciences

El-Khatib, Sami, PhD, New Mexico State University, 2007; Assistant Professor in Physics

El-Mousfy, Mona, MArch, Georgia Institute of Technology, 1983; Assistant Professor in Architecture

El-Sadek, Ibrahim, PhD, University of California at Santa Barbara, 1983; Professor in Mathematics and Statistics, and Associate Dean, College of Arts and Sciences

El-Sakran, Tharwat, PhD, University of Bangor, 1990; Professor in English

El-Sayed, Yehya, PhD, Graduate School of City University of New York, 2006; Assistant Professor in Biology, Chemistry and Environmental Sciences

El-Sayegh, Sameh, PhD, Texas A&M University, 1998; Associate Professor in Civil Engineering

El-Sinawi, Ameen, PhD, University of Dayton, 1999; Associate Professor in Mechanical Engineering

El-Tarhuni, Mohamed, PhD, Carleton University, 1997; Associate Professor in Electrical Engineering and Head, Department of Electrical Engineering

Erduran, Kutsi, PhD, University of Newcastle Upon Tyne, 2002; Visiting Associate Professor in Civil Engineering

Erice, Leopoldo, DMA, Stony Brook University, 2008; Assistant Professor in Performing Arts

F

Fahim, Abeer, MA, University of Durham, 2007; Assistant Professor in English

Fahim Aly, Elrefaie, PhD, Polytechnic Institute of New York, 1993; Visiting Professor in Electrical Engineering

Faiq, Said, PhD, Salford University, 1991; Professor in Arabic and Translation Studies (on sabbatical Fall 2011)

Fattah, Kazi, PhD, University of British Columbia, 2010; Assistant Professor in Civil Engineering

Filipović, Zlatan, MFA, Alfred University, 2001; Assistant Professor in Design

Fredrick, Daniel, PhD, Texas Christian University, 2003; Assistant Professor in Writing Studies

G

Gadalla, Mohamed, PhD, University of Alabama, 1988; Associate Professor in Mechanical Engineering

Gajic, Verica, PhD, Rutgers University, 2001; Visiting Assistant Professor in Mechanical Engineering

Galal, Khaled, PhD, McMaster University, 2002; Visiting Associate Professor in Civil Engineering

Gandhi, Neena, PhD, University of Delhi, 2006; Assistant Professor in Writing Studies

Gassan, Richard, PhD, University of Massachusetts, 2002; Associate Professor in International Studies (on sabbatical Spring 2012)

Gatenby, Bruce, PhD, University of Arizona, 1992; Assistant Professor in Writing Studies

Genc, Ismail, PhD, Texas A&M University, 1999; Professor in Economics

Gibbs, Joseph, PhD, Boston University, 1994; Associate Professor in Mass Communication

Giesen, Martin, PhD, Heidelberg University, 1973; Professor in Design

Gold, Gary, JD, Indiana University, 1991; Associate Professor in Management

Golley, Nawar Al-Hassan, PhD, Nottingham University, 1994; Associate Professor in English (on sabbatical Spring 2012)

Gorla, Narasimhaiah, PhD, University of Iowa, 1986; Professor in Management Information Systems

Gouia Ep Zarrad, Rim, PhD, University of Texas at Arlington, 2011; Assistant Professor in Mathematics and Statistics

Gray, Kevin, PhD, University of Laval, 2011; Assistant Professor in International Studies

Griffin, James, PhD, University of London, 2004; Associate Professor in Mathematics and Statistics

Guessoum, Nidhal, PhD, University of California at San Diego, 1988; Professor in Physics and Interim Head, Department of Physics

Gumus, Mehmet, PhD, University of Waterloo, 2006; Assistant Professor of Management Information Systems

Gunatillake, Gajath, PhD, Purdue University, 2005; Assistant Professor in Mathematics and Statistics

Gunn, Cindy, PhD, University of Bath, 2001; Associate Professor in English and Director, Faculty Development Center

H

Hamdan, Nasser, PhD, Middle East Technical University, 1993; Professor in Physics

Haney II, William, PhD, University of California at Davis, 1984; Professor in English

Hariga, Moncer, PhD, Cornell University, 1989; Professor in Engineering Systems Management and Director, Engineering Systems Management Program

Hashem, Mahboub, PhD, Florida State University, 1984; Professor in Mass Communication and Interim Head, Department of Mass Communication (on sabbatical Fall 2011)

Hassan, Mohamed, PhD, University of Arizona, 2005; Associate Professor in Electrical Engineering

Hatim, Basil, PhD, University of Exeter, 1982; Professor in Arabic and Translation Studies

Howileh, Rami, PhD, University of Wisconsin-Milwaukee, 2005; Associate Professor in Civil Engineering

Hazirbaba, Kenan, PhD, University of Texas, 2005; Visiting Assistant Professor in Civil Engineering

Heath, Peter, PhD, Harvard University, 1981; Professor in Arabic and Translation Studies, and Chancellor

Heintz, W. Eirik, MArch, Harvard University, 1994; Associate Professor in Architecture (on sabbatical Spring 2012)

Hewitt, David, MFA, Cornell University, 1979; Associate Professor in Design

Hochstetler, Thomas, PhD, University of Michigan, 1980; Professor in International Studies and Provost

Hughes, Michael, MArch, Princeton University, 1993; Associate Professor in Architecture and Head, Department of Architecture

Husni, Ronak, PhD, University of St. Andrews, 1986; Professor in Arabic and Translation Studies and Head, Department of Arabic and Translation Studies

Husseini, Ghaleb, PhD, Brigham Young University, 2001; Associate Professor in Chemical Engineering

I

Ibahrine, Mohammed, PhD, Hamburg University, 2006; Assistant Professor in Mass Communication

Ibrahim, Taleb, PhD, Auburn University, 1997; Associate Professor in Chemical Engineering

Islam, Mohammad, PhD, Columbia University, 2003; Associate Professor in Physics (on leave Academic Year 2011–2012)

Izwaini, Sattar, PhD, University of Manchester, 2004; Assistant Professor in Arabic and Translation Studies

J

Jaidi, Asad Hasan, PhD, University of Kansas, 1993; Professor in Physics

Jaradat, Mohammad, PhD, Texas A&M University, 2005; Visiting Assistant Professor in Electrical Engineering

Jarrah, Abdul Salam, PhD, New Mexico State University, 2002; Associate Professor in Mathematics and Statistics

Jarrah, Mohammad-Ameen, PhD, Stanford University, 1989; Professor in Mechanical Engineering and Head, Department of Mechanical Engineering

Jayyusi-Lehn, Ghada, PhD, University of Toronto, 2007; Assistant Professor in Arabic and Translation Studies

Jhemi, Ali, PhD, University of Minnesota, 1999; Assistant Professor in Mechanical Engineering

Jumean, Fawwaz, PhD, City University of New York, 1973; Professor in Biology, Chemistry and Environmental Sciences and Head, Department of Biology, Chemistry and Environmental Sciences

K

Kallel, Sadok, PhD, Stanford University, 1995; Visiting Associate Professor in Mathematics

Kanan, Sofian, PhD, University of Maine, 2000; Associate Professor in Biology, Chemistry and Environmental Sciences

Kanoglu, Mehmet, PhD, University of Nevada, 1999; Visiting Professor in Mechanical Engineering

Karavatos, Nicholas, MFA, New College of California, 1999; Assistant Professor in English

Kassam, Meenaz, PhD, University of Toronto, 1996; Assistant Professor in International Studies (on leave Fall 2011)

Katodrytis, George, AADip, Architectural Association, UK, 1985; Associate Professor in Architecture

Kaya, Ilker, PhD, University of Georgia, 2009; Assistant Professor in Economics

Keck, Stephen, DPhil, University of Oxford, 1992; Associate Professor in International Studies and Head, Department of International Studies

Kemp, Linzi, PhD, Manchester Metropolitan University, 2003; Assistant Professor in Management

Kennedy, Thomas, MLA, Cornell University, 1991; Assistant Professor in Architecture (on sabbatical Fall 2011)

Kesrouany, Maya, PhD, Emory University, 2011; Assistant Professor in English

Khalidi, Bouthaina, PhD, Indiana University, 2008; Assistant Professor in Arabic and Translation Studies

Khallaf, Ashraf, PhD, Florida Atlantic University, 2004; Assistant Professor in Accounting

Khan, Sajid, PhD, University of Manchester, 2001; Associate Professor in Marketing

Khan, Zahid, PhD, University of Western Ontario, 2007; Visiting Assistant Professor in Civil Engineering

Kharkhurin, Anatoliy, PhD, City University of New York, 2005; Associate Professor in International Studies

Kherfi, Samer, PhD, Simon Fraser University, 2002; Assistant Professor in Economics

Khoury, Suheil, PhD, Michigan State University, 1994; Professor in Mathematics and Statistics

Kim, Jong, PhD, Emory University, 2005; Assistant Professor in Economics

Klein, Andrew, PhD, University of Illinois at Chicago, 2003; Assistant Professor in Management

Knuteson, Sandra, PhD, Clemson University, 2004; Assistant Professor in Biology, Chemistry and Environmental Sciences

Kocabas, Ibrahim, PhD, Leland Stanford Junior University, 1990; Associate Professor in Chemical Engineering

Kolo, Jerry, PhD, University of Waterloo, 1986; Professor in Urban Planning

Krieg Dosier, Ginger, MArch, Cranbrook Academy of Art, 2005; Assistant Professor in Architecture

Kucuk, Ismail, PhD, University of Utah, 2001; Associate Professor in Mathematics and Statistics (on sabbatical Academic Year 2011–2012)

L

Lahamer, Amer, PhD, Vanderbilt University, 1990; Visiting Professor in Physics

Landolsi, Taha, PhD, University of Texas at Dallas, 1999; Associate Professor in Computer Science and Engineering

Lanteigne, Betty, PhD, Indiana University of Pennsylvania, 2004; Assistant Professor in English

Lea, David, PhD, University of Ottawa, 1990; Professor in International Studies (on sabbatical Fall 2011)

Leduc, Guillaume, PhD, Carleton University, 1995; Associate Professor in Mathematics and Statistics

Loughlin, Kevin, PhD, University of New Brunswick, 1970; Professor in Chemical Engineering

Love, Charles, PhD, London Business School, 1975; Professor in Management Information Systems and Head, Department of Management Information Systems

Love, Don, PhD, Ohio University, 1997; Assistant Professor in Mass Communication

M

Mabura, Lily, PhD, University of Missouri-Columbia, 2010; Assistant Professor in English

Maitner, Angela, PhD, University of California, 2007; Assistant Professor in International Studies

Majdalawieh, Amin, PhD, Dalhousie University, 2006; Associate Professor in Biology, Chemistry and Environmental Sciences

Majdalawieh, Munir, PhD, George Mason University, 2006; Assistant Professor in Management Information Systems

Majeed, Tariq, PhD, York University, 1991; Associate Professor in Physics

Malcolm, Michael, PhD, University of Wisconsin-Madison, 2006; Assistant Professor in Economics

Marchon, Cassia, PhD, Texas A&M University, 2008; Assistant Professor in Economics

Marshall, Timothy, PhD, University of Auckland, 1995; Associate Professor in Mathematics and Statistics

McClelland, Patrick, PhD, University of Kansas, 2008; Assistant Professor in Management

Merched, Aksam, PhD, University of Nancy, 1998; Assistant Professor in Biology, Chemistry and Environmental Sciences

Mir, Hasan, PhD, University of Washington, 2005; Assistant Professor in Electrical Engineering

Mitchell, Kevin, MArch, University of Washington, 1996; Associate Professor in Architecture and Vice Provost for Undergraduate Affairs and Instruction

Mohamed-Sayidina, Aisha, PhD, University of Exeter, 1993; Assistant Professor in English

Mokhtar, Ahmed, PhD, Concordia University, 1998; Associate Professor in Architecture, and Associate Dean, College of Architecture, Art and Design

Moran, Catherine, MFA, University of Texas, 2002; Assistant Professor in Performing Arts

Morey, Susan, PhD, Virginia Commonwealth University, 2002; Assistant Professor in Management

Mortula, MD Maruf, PhD, University of Dalhousie, 2006; Assistant Professor in Civil Engineering

Mounajjed, Nadia, PhD, University of Sheffield, 2007; Assistant Professor in Architecture

Mourtada-Sabbah, Nada, PhD, University of Pantheon-Assas (Paris II), 1997; Professor in International Studies and Vice Chancellor for Development and Alumni Affairs

Moustafa, Amer, PhD, University of Southern California, 1999; Associate Professor in Architecture (on sabbatical Fall 2011)

N

Najm, Husam, PhD, University of Michigan, 1992; Visiting Associate Professor in Civil Engineering

Nashef, Hania, PhD, University of Kent, 2008; Assistant Professor in Mass Communication

Naufal, George, PhD, Texas A&M University, 2007; Assistant Professor in Economics

Naumann, Robert, PhD, Arizona State University, 1981; Professor in Marketing

Noman, Laila, PhD, University of Wales, 2000; Assistant Professor in English

Nsiri, Imed, PhD, Indiana University, 2010; Assistant Professor in Arabic and Translation Studies

O

Olson, Dennis, PhD, University of Wyoming, 1982; Professor in Finance and Head, Department of Finance

Olson Mark, PhD, Cornell University, 1996; Visiting Assistant Professor in International Studies

Orhan, Mehmet, PhD, University of Ontario, 2011; Assistant Professor in Mechanical Engineering

Osman-Ahmed, Ahmed, PhD, University of Calgary, 2003; Associate Professor in Electrical Engineering

Ozkul, Tarik, PhD, Florida Institute of Technology, 1988; Associate Professor in Computer Science and Engineering

P

Pallathucherial, Varkki, PhD, The Ohio State University, 1992; Professor in Urban Planning

Palmer, Jeremy, PhD, University of Arizona, 2009; Assistant Professor in Arabic and Translation Studies

Palmer-Baghestani, Polly, PhD, University of Colorado, 1984; Assistant Professor in Writing Studies

Pappalardo, Lucia, PhD, Syracuse University, 1998; Assistant Professor in Biology, Chemistry and Environmental Sciences

Pasquier, Michel, PhD, National Polytechnic Institute of Grenoble, 1989; Associate Professor in Computer Science and Engineering

Perkins, John, DMA, University of Arizona, Tucson, 2009; Assistant Professor in Visual and Performing Arts

Picken, Gavin, PhD, University of Leeds, 2005; Associate Professor in Arabic and Translation Studies

Pilkington, Mark, MA, Royal College of Art, 1977; Associate Professor in Design

Prescott, David, PhD, Curtin University of Technology, 2001; Associate Professor in English

Q

Qadah, Ghassan, PhD, University of Michigan, 1983; Associate Professor in Computer Science and Engineering

Qaddoumi, Nasser, PhD, Colorado State University, 1998; Associate Professor in Electrical Engineering

Qteish, Abdalla, PhD, Scuola Internazionale Superiore Di Studi Avanzati, 1987; Visiting Professor in Physics

R

Rab, Samia, PhD, Georgia Institute of Technology, 1997; Associate Professor in Architecture

Raddawi, Rana, PhD, Université de La Sorbonne Nouvelle (Paris III), 1995; Associate Professor in English (on sabbatical Fall 2011)

Radnell, David, PhD, Rutgers, The State University of New Jersey, 2003; Associate Professor in Mathematics and Statistics

Randle, Jay, MArch, North Carolina State University, 1971; Professor in Architecture

Ranganathan, Shivakumar, PhD, University of Illinois, 2008; Assistant Professor in Mechanical Engineering

Rashad, Ramzan, PhD, Linköping University, 2009; Visiting Associate Professor in Electrical Engineering

Rehman, Habib-ur, PhD, Ohio State University, 2001; Associate Professor in Electrical Engineering (on leave Academic Year 2011–2012)

Reid, Robert, MS, Pratt Institute, 2000; Assistant Professor in Architecture

Richards, R. Malcolm, PhD, University of Michigan, 1974; Professor in Finance and Dean, School of Business and Management

Rizvi, Syed, PhD, University of Cambridge, 2008; Assistant Professor in Management

Ronesi, Lynne, PhD, University of Connecticut, 2000; Assistant Professor in Writing Studies

Rush, Mark, PhD, Johns Hopkins University, 1990; Professor in International Studies and Dean, College of Arts and Sciences

Russell, Dennis, PhD, University of Hawaii, 1981; Professor in Biology, Chemistry and Environmental Sciences

S

Saad, Mohsen, PhD, University of Delaware, 2003; Assistant Professor in Finance

Sabet, Mehdi, MArch, Virginia Polytechnic Institute, 1978; Associate Professor in Architecture

Sagahyroon, Assim, PhD, University of Arizona, 1989; Associate Professor in Computer Science and Engineering, and Head, Department of Computer Science and Engineering

Saifi, Ali, PhD, University of Sussex, 1978; Professor in Mathematics and Statistics

Sakhi, Said, PhD, University of Montreal, 1994; Associate Professor in Physics

Salama, Mohamed Feras, PhD, University of Texas, 2008; Assistant Professor in Accounting

Salamin, Yousef, PhD, University of Colorado, 1987; Professor in Physics (on sabbatical Fall 2011)

Samara, Fatin, PhD, State University of New York, 2007; Assistant Professor in Biology, Chemistry and Environmental Sciences

Samet, Anis, PhD, HEC Montreal, 2009; Visiting Assistant Professor in Finance

Sarnecky, William, MArch, University of New Mexico, 1999; Assistant Professor in Architecture

Sater, James, PhD, University of Durham, 2003; Associate Professor in International Studies

Scavarda, Annibal, PhD, Pontifical Catholic University of Rio de Janeiro, 2004; Associate Professor in Management Information Systems

Sen, Gautam, PhD, The University of Texas at Dallas, 1981; Professor in Biology, Chemistry and Environmental Sciences, and Vice Provost for Research and Graduate Studies

Seneviratne, Padmapani, PhD, Clemson University, 2007; Assistant Professor in Mathematics and Statistics

Shanableh, Tamer, PhD, University of Essex, 2001; Associate Professor in Computer Science and Engineering (on sabbatical Spring 2012)

Shareefdeen, Zaroook, PhD, New Jersey Institute of Technology, 1994; Associate Professor in Chemical Engineering

Sheil, Phil, MFA, University of Calgary, 1995; Associate Professor in Design

Shih, Shou-Hsing, PhD, University of South Florida, 2008; Assistant Professor in Mathematics and Statistics

Shine, Anne, PhD, Massey University, 2008; Assistant Professor in Writing Studies

Simonet, Daniel, PhD, University of Paris IX Dauphine, 1998; Associate Professor in Management

Smith, Susan, MA, University of Southern California, 1994; Assistant Professor in Mass Communication

Sonmez, Umit, PhD, Pennsylvania State University, 2002; Assistant Professor in Mechanical Engineering

Spraggon-Hernandez, Martin, PhD, HEC Montreal, 2007; Associate Professor in Management

Squalli, Jay, PhD, University of Delaware, 2004; Associate Professor in Economics

Sriramachandran, Ravidran, PhD, Columbia University, 2009; Assistant Professor in International Studies

Stevenson-Abouelnasr, Dana, PhD, Georgia Institute of Technology, 1984; Associate Professor in Chemical Engineering and Head, Department of Chemical Engineering

Storseth, Terri, PhD, University of Washington, 1997; Assistant Professor in Writing Studies, and Head, Department of Writing Studies

Suliman, Hana, PhD, Queen's University, 1998; Associate Professor in Mathematics and Statistics

Swanstrom, John, MFA, American Film Institute, 1998; Assistant Professor in Design

Sweet, Kevin, MArch, Columbia University, 2003; Assistant Professor in Architecture

Sweet, Tonya, MFA, Cranbrook Academy of Arts, 2005; Assistant Professor in Design

Syed, Raza, PhD, Northeastern University, 2005; Assistant Professor in Physics

T

Tabsh, Sami, PhD, University of Michigan, 1990; Professor in Civil Engineering

Taha, Mustafa, PhD, Ohio University, 2001; Assistant Professor in Mass Communication

Tahboub-Schulte, Sabrina, PhD, Manchester Metropolitan University, 2009; Assistant Professor in International Studies

Tassa, Anthony, MFA, The University of Tennessee, Knoxville, 1995; Associate Professor in Performing Arts and Coordinator, Performing Arts Program

Thompson, Seth, MFA, Vermont College of Norwich University, 1997; Assistant Professor in Design

Tijani, Olatunbosun, PhD, University of Edinburgh, 2005; Associate Professor in Arabic and Translation Studies

Toledo, Hugo, PhD, Auburn University, 1999; Associate Professor in Economics and Head, Department of Economics (on sabbatical Spring 2012)

Trenkov, Ludmil, MFA, Art Centre College of Design, 2006; Assistant Professor in Design

Tyson, Rodney, PhD, University of Arizona, 1994; Associate Professor in English

U

Uygul, Faruk, PhD, University of Alberta, 2007; Assistant Professor in Mathematics and Statistics

V

Vincent, Clement, MArch, ENSAD University, 1997; Assistant Professor in Design

W

Wahba, Essam, PhD, University of California, 2004; Associate Professor in Mechanical Engineering

Wallis, Joseph, PhD, Rhodes University, 1984; Professor in Management and Head, Department of Management

Ward, Jason, MArch, Harvard University Graduate School of Design, 2005; Visiting Assistant Professor in Architecture

Waxin, Marie-France, PhD, University of Marseilles, 2000; Associate Professor in Management

Williams, A. Paul, PhD, The University of Western Australia, 2004; Professor in Marketing and Associate Dean, School of Business and Management

Wunderli, Thomas, PhD, University of Florida, 2003; Assistant Professor in Mathematics and Statistics

X

Xu, Xiaobo, PhD, University of Mississippi, 2005; Associate Professor in Management Information Systems

Y

Yehia, Sherif, PhD, University of Nebraska-Lincoln, 1999; Associate Professor in Civil Engineering

Yesildirek, Aydin, PhD, University of Texas at Arlington, 1994; Associate Professor in Electrical Engineering and Mechatronics (on leave Academic Year 2011–2012)

Younas, Javed, PhD, West Virginia University, 2007; Assistant Professor in Economics

Young, Karen, PhD, City University of New York, 2009; Assistant Professor in International Studies

Z

Zantout, Zaher, PhD, Drexel University, 1990; Associate Professor in Finance

Zhao, Fang, PhD, University of Western Sydney, 1998; Associate Professor in Management

Zoubi, Taisier, PhD, University of North Texas, 1992; Professor in Accounting and Head, Department of Accounting

Zuolkernan, Imran, PhD, University of Minnesota, 1991; Associate Professor in Computer Science and Engineering

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Office of the Registrar

PO Box 26666, Sharjah, UAE

Tel +971 6 515 2031

Fax +971 6 515 2040

registration@aus.edu

www.aus.edu