## College of Business

Larry E. Penley, Ph.D., Dean<br>www.cob.asu.edu



Gregory Moorhead, associate professor, addresses a management class.
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## PURPOSE

The mission of the College of Business is to expand the knowledge of business and to educate men and women for managerial leadership through research activities and professional educational programs. These programs address issues of importance to future managers in a world characterized by demands for continuous improvements in quality; growing sophistication of information technology; globalized markets; racial, cultural, and gender diversity in the work force; and a demand for managers with practical, realistic skills.

Students have many opportunities to supplement their academic experiences. The college offers an honors program for academically talented students, an Academic Access Program to assist underrepresented and other targeted students, an international component to provide a variety of international opportunities, an internship program which provides related practical experience, and 18 cocurricular organizations to increase student interaction and learning.

The college is a member of AACSB—The International Association for Management Education, the official accrediting organization in the field of business. The undergraduate and graduate programs and the School of Accountancy and Information Management are accredited by this organization.

The college is host to a chapter of Beta Gamma Sigma, a national society that recognizes high academic achievement in AACSB-accredited schools. Selection to Beta Gamma Sigma is the highest scholastic honor a student in business can earn.

In addition to the regular degree curricula, other programs of study in the college are designed to meet special needs. Selected majors are available in the evening and continuing education courses are conducted for qualified persons who are regularly employed and who otherwise would be unable to enroll in college courses. Short courses and institutes on a noncredit basis are organized in cooperation with various business groups for the furtherance of in-service training of employed personnel.

The college works in partnership with the business community, and the board of the Dean's Council of 100 serves as a primary source of advice and counsel for the college. Through the various divisions of the L. William Seidman Institute, the college reaches out to the business community through research and executive education. For more information, visit the college's Web site at www.cob.asu.edu.

## ORGANIZATION

The courses offered by the College of Business are organized into groups so that a related sequence may be established for the various subject fields. For administrative purposes, these fields are organized into the following academic units:
School of Accountancy and Information Management
Department of Economics
Department of Finance
School of Health Administration and Policy
Department of Management
Department of Marketing
Department of Supply Chain Management

## ADMISSION

The Prebusiness Program. Each student admitted to the College of Business is designated as a prebusiness student. The student follows the freshman and sophomore sequence of courses listed in the curriculum outline. Students are required to follow the recommendations of an academic advisor in completing the prescribed background and skill courses in preparation for the subsequent professional program. The skill courses follow.

ACC 230 Uses of Accounting Information I................................... 3
ACC 240 Uses of Accounting Information II ................................. 3
CIS 200 Computer Applications and Information Technology CS ............................................................... 3
ECN 111 Macroeconomic Principles $S B$........................................ 3
ECN 112 Microeconomic Principles SB......................................... 3
Choose between the course combinations below..................... 6 or 3
ENG 101 First-Year Composition (3)
ENG 102 First-Year Composition (3)
ENG 105 Advanced First-Year Composition (3)
MAT 119 Finite Mathematics MA................................................. 3
MAT 210 Brief Calculus MA......................................................... 3
QBA 221 Statistical Analysis CS .................................................... 3
Total .................................................................................... 27 or 30
Accountancy and Computer Information Systems majors should refer to their specific requirements under the "School of Accountancy and Information Management," page 155, which lists variations in the skill courses.

Completion of lower-division requirements does not ensure acceptance to the upper-division professional program. Prebusiness students are not allowed to register for 300- and 400-level business courses.

The Professional Program. The junior and senior years constitute the professional program of the undergraduate curriculum. Admission to the professional program is competitive and limited by available resources. Admission is awarded to those applicants demonstrating the highest promise for professional success.

Students who wish to apply to the College of Business Professional Program must submit an application during one of the three annual application periods. Candidates are strongly encouraged to visit the Undergraduate Programs Office, BA 123, at the beginning of the semester in which they wish to apply to pick up information regarding academic qualifications, admissions criteria, and application deadlines. The application can be found at the following internet address: www.cob.asu.edu/up. All applicants must be admitted to ASU by the time they submit their professional program application. Students are also encouraged to complete the Business Basics workshop before applying to the Professional Program.
Nonbusiness Students. A nonbusiness student is permitted to register for selected 300- and 400-level business courses during online registration and only if, (1) at the time of registration, the student has junior standing ( 56 semester hours completed) and (2) the student has a minimum cumulative GPA of 2.50 at ASU and a minimum GPA of 2.50 for all business courses completed at ASU. Students who have 56 semester hours completed but have never attended ASU are given a one-semester period to register and to establish a

GPA at ASU. Students must meet all prerequisites and course requirements as listed in the catalog.

Nonbusiness majors are limited to a maximum of 15 semester hours of selected upper-division business courses (excluding economics [ECN] courses).

Bachelor of Interdisciplinary Studies. The College of Business participates in the Bachelor of Interdisciplinary Studies degree. For details, refer to the Bachelor of Interdisciplinary Studies degree described in "Division of Undergraduate Academic Services," page 114.

Minors. Two Business minors are available to nonbusiness students-a minor in Business and a minor in Small Business. To complete either of the minors, students must obtain the requirements from the Undergraduate Programs Office in the College of Business and complete the specified business courses with a grade of "C" or higher. Courses used in a student's major may not be used toward a minor. Students are advised to consult an advisor in the colleges of their majors to ensure the proper selection of courses for the minor. The upper-division courses for the minor are restricted to students with 56 hours who are in good standing. For details on the minor in Small Business, see "Small Business Programs," page 170.

Nondegree Undergraduate and Graduate Students. A nondegree undergraduate or graduate student is permitted to enroll in selected 300- and 400-level business courses only during online registration and only if (1) the student has an ASU cumulative GPA of at least 2.50 and an ASU cumulative business GPA of at least 2.50 at the time of online registration or (2) the student has never attended ASU, in which case he or she is given a one-semester period to register during online registration and to establish a GPA at ASU. Students must meet all prerequisites and course requirements as listed in the catalog.
Nondegree undergraduate and graduate students are limited to a maximum of 15 semester hours of selected upperdivision business courses (excluding economics courses).

## ADVISING

The student should follow the sequence of courses in the "Curriculum Outline Prebusiness Program," listed below, and the recommendations of the academic advisor in completing the prescribed background and skill courses in preparation for the subsequent professional program.
For additional advising information, please visit the Undergraduate Programs Web site at www.cob.asu.edu/up/ indexupo.cfm.

## Curriculum Outline Prebusiness Program First Year

## First Semester

ECN 111 Macroeconomic Principles $S B$....................................... 3 or ECN 112 Microeconomic Principles $S B$ (3)
ENG 101 First-Year Composition................................................. 3
General Studies .....  3
PGS or SOC course .....  3
Total .....  .15
Second Semester
COM 100 Introduction to Human Communication $S B$ .....  .3
or COM 230 Small Group Communication $S B$ (3)or COM 259 Communication in Business and theProfessions (3)
ECN 112 Microeconomic Principles $S B$ .....  .3
or ECN 111 Macroeconomic Principles $S B$ (3)ENG 102 First-Year Composition 3
MAT 119 Finite Mathematics MA .....  3
Laboratory science $S Q$ .....  4
Total ..... 16
Second Year
Third Semester
ACC 230 Uses of Accounting Information I .....  3
QBA 221 Statistical Analysis CS .....  3
General Studies .....  3
Laboratory science $S Q / S G$ .....  4
PGS or SOC course. .....  3
Total ..... 16
Fourth Semester
ACC 240 Uses of Accounting Information II .....  3
CIS 200 Computer Applications and Information Technology CS .....  .3
General Studies .....  9
Total ..... 15
Prebusiness program total ..... 62

Accountancy and Computer Information Systems majors should refer to their specific course requirements under the "School of Accountancy and Information Management," page 155 , which lists course requirement variations.

Students are encouraged to have College Algebra (MAT 117) proficiency before registering in ECN 111 and 112. ECN 111 and 112 may be taken during the second and third semesters without any delay in the prebusiness program.

Professional Program. Students admitted to the professional program should select the necessary upper-division business courses to complete the major by consulting their departmental advising guide and faculty advisor. Professional program students must complete BUS 301 and COB 301 during their first semester in the professional program.

Transfer Credit. Credit from other institutions is accepted subject to the following guidelines. Students planning to take their first two years of work at a community college or another four-year college should take only those courses in business and economics that are offered as freshman- or sophomore-level courses at any of the state-supported Arizona universities. These lower-division courses are numbered 100 through 299. A maximum of 30 hours of business and economics courses from community colleges are accepted toward a bachelor's degree in business.

Students may transfer a maximum of nine semester hours of approved upper-division business course work required for the business degree to ASU Main. Professional business

[^0]College of Business Baccalaureate Degrees and Majors

| Major | Concentration | Degree | Administered By |
| :--- | :--- | :--- | :--- |
| Accountancy | - | B.S. | School of Accountancy and Information <br> Management |
| Computer Information Systems | - | B.S. | School of Accountancy and Information <br> Management |
| Economics | - | B.S. | Department of Economics |
| Finance | - | B.S. | Department of Finance |
| Management | - | B.S. | Department of Management |
| Marketing | B.S. | Department of Marketing |  |
| Real Estate | B.S. | Department of Supply Chain Management |  |
| Supply Chain Management | - | B.S. | Department of Supply Chain Management |

courses taught in the junior or senior year in the state universities may not be completed at a two-year college for transfer credit in the business core or major. The introductory course in the legal, ethical, and regulatory issues in business is accepted as an exception to this policy, but only lower-division credit is granted. Such courses may be utilized in the free elective category subject to the 30-hour limitation. Courses taught as vocational or career classes at the community colleges that are not taught in the colleges of business at any one of the state universities are not accepted for credit toward a bachelor's degree. Courses taught in the upper-division business core at the state universities must be completed at the degree-granting institution unless transferred from an accredited four-year school. Normally, upper-division transfer credits are accepted only from AACSB-accredited schools. To be accepted for credit as part of the professional program in business, all courses transferred from other institutions must carry prerequisites similar to those of the courses they are replacing at ASU.

An Associate in Transfer Partnership degree is available to Maricopa community college students who wish to complete their first two years of course work at a Maricopa community college and transfer to the College of Business without loss of credit. An Associate of Business degree is available to students who wish to complete their first two years of course work at an Arizona community college and transfer to the College of Business without loss of credit. Students should consult with an academic advisor in the Undergraduate Programs Office to plan curriculum requirements and/or access Business Transfer Guides for optimal course selection at www.asu.edu/provost/articulation.

## DEGREES

The faculty in the College of Business offer the B.S. degree in Accountancy, Computer Information Systems, Economics, Finance, Management, Marketing, Real Estate, and Supply Chain Management upon successful completion of a four-year curriculum of 120 semester hours. Students may select one of the majors shown in the "College of Business Baccalaureate Degrees and Majors" table, on this page. Each major is administered by the academic unit indicated.

## GRADUATE PROGRAMS

The faculty in the College of Business offer graduate degrees as shown in the "College of Business Graduate Degrees and Majors" table, page 151. Students have the opportunity to obtain dual degrees in two years with several
master's degree programs in the College of Business, including these examples:
M.B.A./M.H.S.A.
M.B.A./M.S.I.M.
M.B.A./M.A.I.S.
M.B.A./M.S. degree in Economics
M.B.A./M.Tax.

Other concurrent degrees available are as follows:
M.B.A./J.D.
M.B.A./Master of Architecture
M.B.A./M.I.M. with American Graduate School of International Management (Thunderbird), Glendale, AZ; ESC Toulouse, Toulouse, France; Universidad Carlos III, Madrid, Spain; and ITAM and ITESM-CEM, Mexico City, Mexico.

In addition to the full-time M.B.A. program, the evening M.B.A. program offers a high technology M.B.A. at ASU Research Park and an evening M.B.A. at the ASU Downtown Center.

The Executive M.B.A. program is available to those with significant work experience.

For more information about M.B.A. programs, see the Graduate Catalog.

## UNIVERSITY GRADUATION REQUIREMENTS

In addition to fulfilling college and major requirements, students must meet all university graduation requirements. For more information, see "University Graduation Requirements," page 83.

## General Studies Requirement

All students enrolled in a baccalaureate degree program must satisfy a university requirement for a minimum of 35 hours of approved course work in General Studies, as described under "General Studies," page 87. Note that all three General Studies awareness areas are required.

General Studies courses are listed under the "General Studies" section, in the course descriptions, in the Schedule of Classes, and in the Summer Sessions Bulletin.

## First-Year Composition Requirement

Completion of both ENG 101 and 102 or ENG 105 with a grade of "C" or higher is required for graduation from ASU in any baccalaureate program.

College of Business Graduate Degrees and Majors

| Major | Concentration | Degree | Administered By |
| :---: | :---: | :---: | :---: |
| Accountancy and Information Systems | - | M.A.I.S. | School of Accountancy and Information Management |
| Business Administration | - Acoun min 1 | M.B.A. | College of Business |
| Business Administration | Accountancy, finance, health services research, ${ }^{1}$ information management, management, marketing, supply chain management | Ph.D. | College of Business |
| Economics | - | M.S., Ph.D. | Department of Economics |
| Health Services | - | M.H.S.A. | School of Health |
| Administration |  |  | Administration and Policy |
| Information Management | - | M.S. | School of Accountancy and Information Management |
| Statistics | - | M.S. ${ }^{2}$ | Committee on Statistics |
| Taxation | - | M.Tax. | School of Accountancy and Information Management |

[^1]
## COLLEGE DEGREE REQUIREMENTS

College degree requirements supplement the General Studies requirement with additional course work from the approved university general studies list or the College of Business Policy statement. Business courses may not be used to fulfill college degree requirements except for ECN 111 and 112 and QBA 221.
A well-planned program of study may enable students to complete many General Studies and college degree requirements concurrently. Students are encouraged to consult with an academic advisor in planning a program to ensure that they comply with all necessary requirements.

Specific courses from the following areas must be taken to fulfill the college degree requirement.
Social and Behavioral Sciences. College of Business students must complete ECN 111 and 112, one course with a PGS prefix, one course with an SOC prefix, and may include these courses toward the General Studies requirements.
Science and Mathematics. College of Business students must complete MAT 119 and MAT 210 (or a more advanced MAT course), QBA 221, and may include these courses toward the General Studies requirements.
Communication. All students in the College of Business except Accountancy majors must complete COM 100, 230, or 259. Accountancy majors must complete COM 230 (or 100) and 259.

Additional Courses. Additional courses, as needed to complete 60 hours ( 54 hours for Accountancy majors), may be selected from the General Studies areas (see "General Studies," page 87) or from the College of Business Policy Statement. Students are encouraged to consult with an academic advisor to ensure that they comply with all necessary
requirements. Business courses may not be used to fulfill this requirement except for ECN 111 and 112 and QBA 221.

## Additional Graduation Requirements

In addition to completion of courses outlined under "Major Requirements," page 152, to be eligible for the B.S. degree in the College of Business, a student must

1. have completed at least 30 semester hours at ASU Main;
2. have attained a cumulative GPA of 2.00 or higher for all courses taken at this university, for all business courses taken at this university, and for all courses for the major taken at this university;
3. have earned a " $C$ " or higher in each lower-division core course and each course in the major;
4. have earned a minimum of 51 semester hours in traditional courses designed primarily for junior or senior students and completed in an accredited, fouryear institution; and
5. have met all university degree requirements.

Exceptions. Any exception to these requirements must be approved by the Standards Committee of the College of Business.

Declaration of Graduation. A student in a professional program must complete a Declaration of Graduation during the semester in which the student completes 87 semester hours. The Degree Audit Reporting System should be used to guide the student in accomplishing successful completion of degree requirements in a timely manner. Students who have not met this requirement are prevented from further registration. Some students may be required to complete a Program of Study in place of the Declaration of Graduation. Students should consult their advisors for the proper procedure.

[^2]
## Pass/Fail

Business majors may not include among the credits required for graduation any courses taken at this university on a pass/fail basis. Pass/fail credits taken at another institution may be petitioned for use, but only if the student can demonstrate proof that the pass grade was equivalent to a " C " or higher.

## MAJOR REQUIREMENTS

Students seeking a B.S. degree in the College of Business must satisfactorily complete a curriculum of 120 semester hours.

A major consists of a pattern of 18-24 semester hours in related courses falling primarily within a given subject field. Available majors are shown in the "College of Business Baccalaureate Degrees and Majors" table, page 150.
Major Proficiency Requirements. Students must receive grades of " C " or higher in upper-division courses for the major. If a student receives a grade below " C " in any course in the major, this course must be repeated. If a second grade below "C" is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in that major. University policy states a course may be repeated only one time.

## Business Core Requirements

To obtain an understanding of the fundamentals of business operation and to develop a broad business background, every student seeking a B.S. degree in the College of Business must complete the following courses:

## Lower-Division Business Core

ACC 230 Uses of Accounting Information I.
ACC 240 Uses of Accounting Information II ................................. 3
CIS 200 Computer Applications and Information Technology CS .
... 3
Lower-division business core total.

## Upper-Division Business Core

BUS 301 Fundamentals of Management Communication $L$ (first semester) 3
COB 301 Business Forum (first semester) .....  1
FIN 300 Fundamentals of Finance .....  3
LES 305 Legal, Ethical, and Regulatory Issues in Business.$\ldots$
MGT 301 Management and Organization Behavior .....  3
MKT 300 Principles of Marketing .....  3
OPM 301 Operations and Logistics Management. .....  3
International business course .....  3
Upper-division business core total ..... 22
Business core total ..... 31

Accountancy and Computer Information Systems majors should refer to their specific requirements under the "School of Accountancy and Information Management," page 155, which lists variations in the business core courses.

## Elective Courses

Sufficient elective courses are to be selected by the student to complete the total of 120 semester hours required for graduation.

## ACADEMIC STANDARDS

Probation. All students, freshman through senior, must maintain a minimum GPA of 2.00 for all courses completed
at ASU. If these standards are not maintained, the student is placed on probation. Students on probation must attend an Academic Success Workshop.
Disqualification. A student who is on probation becomes disqualified if (1) the student obtains a semester GPA below 2.50 or receives a grade below "C" in one or more courses and if (2) the student has not returned to good standing by the end of two consecutive semesters on probation.

Students who have been academically disqualified are not permitted to enroll in upper-division business courses during summer sessions.
Reinstatement and Readmission. Students seeking reinstatement (after disqualification) or readmission (after an absence from the university) should contact the Undergraduate Programs Office regarding procedures and guidance for returning to good standing.

Academic Dishonesty. The faculty of the College of Business follow the guidelines in the Student Academic Integrity Policy on academic dishonesty. A copy of the policy may be obtained in the Undergraduate Programs Office.

Student Appeal Procedure on Grades. The faculty of the College of Business have adopted a policy on the student appeal procedure on grades. A copy of the policy may be obtained in the Undergraduate Programs Office.

## SPECIAL PROGRAMS

Academic Access Program. The primary mission of the Academic Access Program (AAP) is to help the underrepresented and first generation college student populations of the College of Business successfully navigate the college's rigorous academic demands. To that end, the office manages a number of programs to assist students, including these:

Academic advising
Advising ethnic student business organizations
Mentoring
Ongoing seminar and workshop series on study, work issues, and strategies
Referring students to other campus support offices
Teaching Academic Success courses COB 294 and 394
Tutoring
Students can visit the office in BA 122, call 480/ 965-4066, or access the Academic Access Program's Web site at www.cob.asu.edu/up/aap.

Asian Studies. Students in the College of Business may pursue a program with an emphasis in Asian studies as part of the B.S. degree requirements in business. At least 30 upper-division semester hours of the program must be in Asian studies content courses. Reading knowledge of an Asian language is required. The Asian studies content program must be approved by the Center for Asian Studies (see "Asian Studies," page 340). Fulfillment of the requirements is recognized on the transcript as a bachelor's degree with a designation of the Asian studies discipline. It is possible to complete the certificate program in International Business Studies and the Asian studies emphasis concurrently. For further information, contact the Center for Asian Studies, in WHALL 109, or call 480/965-7184.

Certificate in Small Business and Entrepreneurship. A curriculum in small business and entrepreneurship is available to business majors at ASU. See "Small Business Programs," page 170.

Certificate in International Business Studies. See "Certificate in International Business Studies," page 163, for requirements.

Certificate in Quality Analysis. The program of study leading to the Certificate in Quality Analysis prepares students to perform technical analyses associated with quality measurement and improvement of manufacturing and service processes. Graduates with the ability to implement these analyses are in high demand in the marketplace. This program is not a substitute for the listed areas of business specialization; rather, the courses required for the certificate add quantitative strength and implementation skills for quality tools to the student's chosen field of specialization.
Students are required to complete a bachelor's degree from any of the major fields of study at ASU and to complete a minimum of 15 semester hours of approved course work, including the following nine hours:

QBA 321 Applied Quality Analysis I L .......................................................................................
QBA 450 Operations and Process Analysis L.................................. 3
To complete the certificate, the student selects at least six additional hours of course work related to quality analysis approved in advance by the advisor for the certificate program. The student must also complete the 15 hours of course work with a minimum GPA of 2.50 .
Honors Program. College of Business students who have been admitted to the University Honors College and the professional program are eligible to participate in the Business Honors Program.

The Business Honors Program provides opportunities for academically talented undergraduate business students to interact with other leading students, faculty, and business professionals inside and outside the classroom. The result is a challenging and enriched education experience that is valuable for professional career or graduate work.

To be admitted into the Business Honors Program students must meet the following criteria:

1. be enrolled in the University Honors College,
2. have a cumulative GPA of 3.40 or higher,
3. be admitted into the college's professional program, and
4. have sufficient time to complete the honors requirements.
Upon acceptance into the program, a valuable learning experience begins. The honors course work consists of HON 171 and 172 The Human Event or HON 394 Special Topics and an additional 18 semester hours of upper-division honors courses, including the following six semester hours:
COB 301 Business Forum......................................................... 1
COB 492 Honors Directed Study............................................... 1
COB 494 ST: Honors Research ................................................. 1

-     -         - 493 Honors Thesis* ........................................................ 3
* See "Honors Courses," page 60, for an explanation of this course.

The ASU Honors Curriculum normally allows students to complete all requirements within the 120 semester hours of credit required for graduation. All courses taken for honors credit count toward graduation even if the student does not graduate from the University Honors College.

The Business Honors Program emphasizes activities beyond the normal classroom setting in order to broaden the educational experience. Such activities include special honors scholarships, student/faculty mixers, and professional seminars and panel discussions. Students are also encouraged to participate in the Mentoring Program, which allows students the opportunity to interact with local business professionals.

An academic advisor is assigned strictly to assist honors students in course selection, to monitor progress toward the honors recognition, and to be actively involved in career and educational guidance upon completion of the degree.

While the program focuses on students in the professional program, freshman and sophomore honors students are offered break-out sections in core classes, are invited to attend selected events, and can be assigned a junior or senior honors mentor.

For more information see "Craig and Barbara Barrett Honors College," page 323, call 480/965-8710, fax 480/ 965-3846, or stop by the Honors Program Office located in BAC 226. Additional information may be obtained by visiting the Business Honors Program's Web site at www.cob.asu.edu/hon.
Internships. The college encourages students to complement their academic program with career-related work. This practical experience gives students a distinct advantage in the job market when seeking their first full-time professional positions. Additional benefits include industry contacts, a deeper understanding of career options, and monetary compensation that helps students finance their education.

Formal internships and co-ops offer professional work experience and experiential learning opportunities that enrich the student's academic preparation. Students may do internships in the summer or part-time during semesters. Co-op positions are full-time and require a one-semester or longer break in school attendance. The college provides guidelines to companies and encourages them to sponsor internship and co-op positions that benefit both the firm and the student. This is accomplished by building positions around projects and challenging responsibilities that enable students to apply learning acquired in advanced business classes.

ASU Career Services and the College of Business work cooperatively to help students identify and obtain careerrelated work. The process of obtaining internships and coops is a learning opportunity. Students use the same jobsearch skills and resources that are utilized to obtain
permanent career positions. Informational materials, workshops, and required class activities help students learn jobsearch and career-exploration skills, and locate internship and co-op opportunities.
Some academic units within the college offer internship courses. Work assignments for these courses must be approved in advance by a designated faculty member and all internship courses include an academic component.
For additional information, visit the Undergraduate Internship coordinator at BA 122 (480/965-4066), faculty advisors in the departments or Career Services, or access the College of Business Web site at www.cob.asu.edu/up/ internship.cfm.

Latin American Studies Center. Students in the College of Business may pursue a program with an emphasis in Latin American area studies. For additional information on this program, contact the Latin American Studies Center in SS 213 or call 480/965-5127.

Prelaw Studies. Prelaw students may pursue a program of study in the College of Business. Courses in accounting, economics, finance, insurance, labor relations, and statistics are recommended for any student planning to enter the legal profession.
The admission requirements of colleges of law differ considerably. The student should communicate with the dean of the law school the student hopes to attend and should plan a program to meet the requirements of that school. Most law schools, including the ASU College of Law, require a baccalaureate degree for admission.

Students who plan to complete a bachelor's degree before entering law school may follow any field of specialization in the College of Business. Within the College of Business are faculty members who are lawyers and who serve as advisors for students desiring a prelaw background.

## RESEARCH CENTERS

## L. William Seidman Research Institute

The College of Business has six research centers operating under the umbrella of the L. William Seidman Research Institute. The following centers provide support for faculty research, give opportunities for advanced graduate students' involvement with faculty, and provide information and assistance to the business community on a wide variety of subjects:

Arizona Real Estate Center
Bank One Economic Outlook Center
Center for Advanced Purchasing Studies
Center for the Advancement of Small Business
Center for Business Research
Center for Services Marketing and Management

## Center for the Study of Finance

The Seidman Research Institute's mission is to encourage and support applied business research by serving as a public access point to the College of Business, by supporting faculty and student research, by transferring new knowledge to the public, by encouraging the development of education programs grounded in applied business research, and by conducting high-quality, applied business research.

The institute increases the level of funded research by adding support services to facilitate grant preparation and assistance in grant administration and by facilitating the mission of research centers as liaisons between faculty and businesses. In addition, the institute provides desktop publishing services.

For more information, call 480/965-5362 or write:
L. WILLIAM SEIDMAN RESEARCH INSTITUTE

660 S MILL AVE, SUITE 300
TEMPE AZ 85281-3656
The institute's Web site is www.cob.asu.edu/seid.

## COLLEGE OF BUSINESS (COB)

COB 294 Special Topics. (1-4) F, S
COB 301 Business Forum. (1) F, S, SS
Provides professional program business students with information on careers, interviewing, job hunting, and resume skills. Must be taken in the first semester of the professional program for business students. Prerequisite: professional program business student.
COB 380 Small Business Leadership. (3) F, S
Develops leadership skills needed to form, lead, and operate a small business. Emphasis on visioning, research, and problem solving. Team teaching, collaborative learning. Prerequisites: 2.00 GPA; 47 hours; non-business major.
COB 381 Small Business Accounting and Finance. (3) F, S Accounting and finance skills needed by a small business to acquire, allocate, and track monetary resources and evaluate performance. Team teaching, collaborative learning. Prerequisites: COB 380; 2.00 GPA; 56 hours; non-business major.
COB 382 Small Business Sales and Market Development. (3) F, S Building and maintaining customers, developing a market persona and a niche, and the importance of sales. Team teaching, collaborative learning. Prerequisites: $\operatorname{COB} 380 ; 2.00$ GPA; 56 hours; non-business major.
COB 383 Small Business Working Relationships. (3) F, S
Addresses communication and the people in a business-consumers/ clients, employees, suppliers/providers, competitors, governments, family, and self development. Team teaching, collaborative learning. Prerequisites: COB 380; 2.00 GPA; 56 hours; non-business major.
COB 384 Small Business Operations and Planning. (3) F, S
Planning and executing plans-the what, when, where, how, and who from product/service/project idea to pay back or completion. Team teaching, collaborative learning. Prerequisites: COB 380; 2.00 GPA; 56 hours; non-business major.
COB 394 Special Topics. (1-4) F, S
COB 492 Honors Directed Study. (1) F, S
COB 494 Special Topics. (1) F, S
(a) Honors Research

## School of Accountancy and Information Management

Philip M.J. Reckers<br>Director<br>(BA 223) 480/965-3631<br>Fax 480/965-8392<br>www.cob.asu.edu/acct

## PROFESSORS

J.R. BOATSMAN, BOYD, JOHNSON, KAPLAN, PANY,
PHILIPPAKIS, RECKERS, RENEAU, ROY, SCHULTZ,
SHRIVER, R. SMITH, STEINBART, WYNDELTS

ASSOCIATE PROFESSORS
CHRISTIAN, GOLEN, GOUL, GUPTA, KEIM, KULKARNI, MOECKEL, O'DELL, O'LEARY, PEI, REGIER, ST. LOUIS, VINZE

ASSISTANT PROFESSORS<br>BHATTACHERJEE, CHEN, CHENOWETH, DAVID, DOWLING, HWANG, IYER, MISHRA, O'DONNELL, SANTANAM, SHAO, WHITECOTTON<br>\section*{SENIOR LECTURERS}<br>MACCRACKEN, SHREDNICK<br>\section*{LECTURERS}<br>BALOGH, J.L. BOATSMAN, GEIGER, HAYES, TAYLOR

The School of Accountancy and Information Management houses separate undergraduate degree programs in Accountancy and Computer Information Systems. The school also offers a dual degree program in which students complete requirements for both degree programs (Accountancy and Computer Information Systems) simultaneously. For more information on courses, faculty, and programs, visit the school's Web site.

## ADMISSIONS

The School of Accountancy and Information Management follows the College of Business policies and procedures for admission to its undergraduate professional programs in Accountancy, Computer Information Systems, and the dual degree program of Accountancy and Computer Information Systems.
To be considered for admission to the Accountancy major, a student must meet the College of Business admission requirements, have a grade of " B " or higher in both ACC 230 and 240 or their equivalents, and have a grade of "C" or higher in CIS 220 or its equivalent in place of CIS 200.

To be considered for admission to the Computer Information Systems major, a student must meet the College of Business admission requirements and have a grade of "C" or higher in CSE 100 or its equivalent, in place of CIS 200.
Due to resource limitations, admission to all of the school's programs is very competitive. Approximately one
third of all applicants who apply to the professional programs in Accountancy and Computer Information Systems may be admitted. Applicants are reviewed using a portfolio approach. Among the factors considered are: cumulative GPA, skill course GPA, transfer GPA and institution (if applicable), work experience, demonstrated community involvement and leadership skills, and responses to questions located in the professional program application. Current admission statistics are available at the Undergraduate Programs Office in the College of Business.

## ACCOUNTANCY—B.S.

The major in Accountancy includes the essential academic preparation for students

1. pursuing professional careers in public, corporate, and governmental accounting;
2. seeking positions in consulting; or
3. planning to operate their own businesses.

The major in Accountancy consists of the following courses:

ACC 330 Enterprise Process Analysis and Design L..................... 4
ACC 340 External Reporting I........................................................ 4
ACC 350 Internal Reporting .......................................................... 4
ACC 430 Taxes and Business Decisions L .................................... 4
ACC 440 External Reporting II ....................................................... 4
ACC 450 Principles of Auditing .................................................... 4
Total ........................................................................................ 24
As part of the requirements, all Accountancy majors must complete the following courses:

ACC 250 Introductory Accounting Lab......................................... 1
CIS 220 Programming Concepts for Accountancy Majors ${ }^{1}$........ 3
CIS 335 Visual Paradigms for Information Systems $\begin{gathered}\text { Development ................................................................ } 3\end{gathered}$
CIS 420 Business Database Concepts.......................................... 3
COM 100 Introduction to Human Communication ${ }^{2} S B$.................. 3 or COM 230 Small Group Communication $S B$ (3)
COM 259 Communication in Business and the Professions .......... 3
ECN 306 Survey of International Economics $S B, G^{3}$..................... 3
ENG 301 Writing for the Professions $L^{4}$........................................ 3
Total ......................................................................................... 22
${ }^{1}$ CIS 220 is counted in the business core in place of CIS 200.
${ }^{2}$ COM 230 is recommended over COM 100.
${ }^{3}$ ECN 306 may be counted in the business core in place of the international business course.
4 ENG 301 is counted in the business core in place of BUS 301.

## COMPUTER INFORMATION SYSTEMS—B.S.

The major in Computer Information Systems prepares students for professional careers involving the analysis, configuration, programming, and database aspects of the design and implementation of computerized business information systems. The course work prepares the student for a career in business information systems and for admission to graduate programs in information systems or information management.

NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

The major in Computer Information Systems consists of the following courses:
ACC 330 Enterprise Process Analysis and Design $L$ .....  4
CIS 335 Visual Paradigms for Information Systems Development .....  3
CIS 410 Object-Oriented Modeling and Programming .....  3
CIS 420 Business Database Concepts 3
CIS 430 Networks and Distributed Systems .....  3
CIS 440 Systems Design and Electronic Commerce $L$ .....  3
Total ..... 19

All Computer Information Systems majors must complete CSE 100 Principles of Programming with C++ (CS) or a C or $\mathrm{C}++$ programming language course, which may be used as a college requirement, and CIS 235 Business Information Systems Development, which is used in the business core.

## MAJOR PROFICIENCY REQUIREMENTS

In addition to college and university requirements, Accountancy and Computer Information Systems majors must receive grades of "C" or higher in the required upperdivision major and major support courses. If a student receives a grade below " C " in any required upper-division major course, this course must be repeated before any other upper-division major course can be taken. If a second grade below "C" is received in either an upper-division major course already taken or in a different upper-division major course, the student is no longer eligible to take additional upper-division major courses.

## GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and college requirements. See "University Graduation Requirements," page 83 and "College Degree Requirements," page 151.

## ACCOUNTANCY (ACC)

ACC 230 Uses of Accounting Information I. (3) F, S, SS
Introduction to the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes. Prerequisite: sophomore standing.
ACC 240 Uses of Accounting Information II. (3) F, S, SS Introduction to the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes. Prerequisites: ACC 230; sophomore standing.
ACC 250 Introductory Accounting Lab. (1) F, S, SS
Procedural details of accounting for the accumulation of information and generation of reports for internal and external users. Lab. Prerequisites: ACC 230; sophomore standing.
ACC 315 Financial Accounting and Reporting. (3) F, S
Accounting theory and practice related to uses of financial statements by external decision makers. Prerequisites: ACC 240, 250; nonAccountancy major.
ACC 316 Management Uses of Accounting. (3) F, S Uses of accounting information for managerial decision-making, budgeting, and control. Prerequisites: ACC 240; non-Accountancy major.
ACC 330 Enterprise Process Analysis and Design. (4) F, S, SS Analysis and design of efficient and effective business processes. Emphasizes taking advantage of new information technologies to improve managerial decision making. 3 hours lecture, 3 hours lab. Prerequisite: professional program business student majoring in Accountancy or Computer Information Systems. General Studies: L.

ACC 340 External Reporting I. (4) F, S, SS
Financial accounting theory and practice related to external reporting. 3 hours lecture, 3 hours lab. Prerequisites: FIN 300; professional program business student majoring in Accountancy. Prerequisites with a grade of "C" or higher: ACC 250, 330.
ACC 350 Internal Reporting. (4) F, S, SS
Internal reporting systems for planning, control, and decision making. 3 hours lecture, 3 hours lab. Prerequisites: OPM 301; professional program business student majoring in Accountancy. Prerequisites with a grade of "C" or higher: ACC 250, 330.
ACC 394 Special Topics. (3) F, S
(a) Financial Analysis and Accounting for Small Businesses

ACC 430 Taxes and Business Decisions. (4) F, S, SS
Federal income taxation of sole proprietors, partnerships, corporations, fiduciaries, and individuals with an emphasis on tax consequences of business and investment decisions. 3 hours lecture, 3 hours lab. Prerequisites: LES 305; professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 340. General Studies: L.
ACC 432 Problems in Managerial Accounting. (3) N
Cases and computer applications in decision-making, planning and control, and capital budgeting. Prerequisite: professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 350.
ACC 440 External Reporting II. (4) F, S, SS
Continuation of ACC 340 External Reporting I with emphasis on the recognition, research, and resolution of financial reporting issues. 3 hours lecture, 3 hours lab. Prerequisite: professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 340.
ACC 450 Principles of Auditing. (4) F, S
Standards and procedures in auditing. Planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations. 3 hours lecture, 3 hours lab. Prerequisite: professional program business student majoring in Accountancy. Prerequisite with a grade of "C" or higher: ACC 440.
ACC 467 Management Advisory Services. (3) N
Concepts and methods of providing advisory services with respect to accounting information systems and financial analysis. Administration of consulting practices. Prerequisite: professional program business student majoring in Accountancy. Prerequisite with a grade of " C " or higher: ACC 330.
ACC 502 Financial Accounting. (3) A
Financial accounting concepts and procedures for external reporting. Prerequisite: M.B.A. degree program student.
ACC 503 Managerial Accounting. (3) A
Managerial accounting concepts and procedures for internal reporting. Prerequisite: M.B.A. degree program student.

## ACC 511 Taxes and Business Strategy. (3) A

Economic implications of selected management decisions involving application of federal income tax laws. Recognition of tax hazards and tax savings. Prerequisite: ACC 502 or equivalent.
ACC 515 Professional Practice Seminar. (3) A
History, structure, environment, regulation, and emerging issues of the accounting profession.
ACC 521 Tax Research. (3) A
Tax research source materials and techniques. Application to business and investment decisions. Prerequisite: ACC 430.
ACC 533 Application Solutions in the Connected Economy. (3) N Analysis of software solutions and evaluation methods. Emphasis on current topics such as enterprise modeling, ERP software, and interorganizational solutions. Prerequisite: M.S. in Information Management degree program student or Master of Accountancy and Information Systems degree program student.
ACC 541 Strategic Innovations in Information and Cost Management. (3) A
Strategic cost management emphasizing contemporary topics, including activity-based costing and strategic uses of information technology systems. Cooperative learning, lecture. Prerequisite: ACC 503 or M.S. in Information Management degree program student or Master of Accountancy and Information Systems degree program student.
ACC 567 Financial Models in Accounting Systems. (3) A Development and application of financial models by accountants. Analysis of decision support systems as financial modeling environments. Prerequisite: ACC 330.

ACC 571 Taxation of Corporations and Shareholders. (3) A
Tax aspects of the formation, operation, reorganization, and liquidation of corporations and the impact on shareholders. Prerequisite: ACC 430.
ACC 573 Taxation of Partners and Partnerships. (3) A
Tax aspects of the definition, formation, operation, liquidation, and termination of a partnership. Tax planning is emphasized. Prerequisite: ACC 430.
ACC 575 Estate and Gift Taxation. (3) A
Tax treatment of wealth transfers at death and during life time, with emphasis on tax planning. Prerequisite: ACC 430.
ACC 577 Taxation of Real Estate Transactions. (3) A
Income tax aspects of acquisition, operation, and disposal of real estate; syndications; installment sales; exchanges; dealer-investor issues; alternative financing; and planning. Prerequisite: ACC 521 or instructor approval.
ACC 582 Auditing Theory and Practice. (3) N
Function and responsibility of the auditor in modern society. Advanced topics in auditing theory and methods. Contemporary issues in auditing. Prerequisite: ACC 450.
ACC 585 Performance Measurement of Emerging Business Models. (3) A
Application of quantitative techniques to accounting problems. Prerequisite: ACC 503 or M.S. in Information Management degree program student or Master of Accountancy and Information Systems degree program student.
ACC 586 Shareholder Value Creation and Financial Statement Analysis. (3) N
Develop skills necessary to exploit financial reporting information in a business environment and appreciation of reporting issues faced by management.
ACC 587 Business Process Integrity Controls. (3) A
Design and evaluation of computer-based accounting information system. Development of computer-based business models for planning and control. Prerequisite: Master of Accountancy and Information Systems degree program student.
ACC 591 Seminar on Selected ACC Topics. (3) A
Topics such as the following are offered:
(a) Computer Security
(b) Data Warehouse and Data Mining
(c) Electronic Commerce
(d) Enterprise Modeling

## COMPUTER INFORMATION SYSTEMS (CIS)

CIS 200 Computer Applications and Information Technology. (3) F, S, SS
Introduction to business information systems and the use of business application software. Prerequisite: MAT 117 or higher. General Studies: CS
CIS 220 Programming Concepts for Accountancy Majors. (3) F, S, SS
Introduction to business computer programming. Program languages such as C and $\mathrm{C}++$ are used to familiarize students with proper programming style and practice. Prerequisite: prebusiness student.
CIS 235 Business Information Systems Development. (3) F, S, SS Developing information systems and electronic commerce applications using object-oriented languages (e.g., JAVA). Introduction to business technology and systems analysis. Prerequisites: CSE 100; MAT 119 or 210.
CIS 300 Computers in Business. (3) N
Introduction to information systems in business. Use of computers for business problem solving. Prerequisites: CIS 200; professional program business student.
CIS 307 Systems Modeling. (3) N
Procedures for investigating and analyzing decision systems. Use of special languages as tools of analysis and simulation. Prerequisites: CSE 100; MAT 119 or 210 or 270; professional program business student.

CIS 335 Visual Paradigms for Information Systems Development. (3) F, S, SS

Using visual programming languages such as Visual Basic to implement data structures, file structures, and interfaces in business information systems. Prerequisites: CSE 100 and professional program business student majoring in Computer Information Systems or CIS 220 and professional program business student majoring in Accountancy.
CIS 410 Object-Oriented Modeling and Programming. (3) F, S
Object-oriented modeling of business information systems. Abstract data types and object-oriented programming using a language such as C++. Prerequisite: professional program business student majoring in Computer Information Systems. Prerequisites with a grade of " C " or higher: CIS 235, 335.
CIS 420 Business Database Concepts. (3) F, S
Database theory, design, and application, including the entity-relationship model; the relational, hierarchical, and network database models; and query languages. Prerequisite: professional program business student majoring in Computer Information Systems or Accountancy. Prerequisites with a grade of "C" or higher: ACC 330; CIS 335.

## CIS 430 Networks and Distributed Systems. (3) F, S

Advanced topics such as communications protocols, distributed systems, and client-server systems; applications based on platforms such as networked UNIX. Prerequisites: CIS 410; professional program business student majoring in Computer Information Systems.
CIS 440 Systems Design and Electronic Commerce. (3) F, S Systems design for organizational and electronic commerce systems; use of project management and systems analysis and design tools.
Prerequisites: professional program business student majoring in Computer Information Systems. Prerequisites with a grade of "C" or higher: CIS 410, 420. Pre- or corequisite with a grade of " $C$ " or higher: CIS 430. General Studies: L.
CIS 502 Management Information and Decision Support Systems. (3) A
Fundamentals of computer-based management information and decision support systems. Prerequisite: M.B.A. degree program student.
CIS 505 Object-Oriented Modeling and Programming. (3) A Object-oriented modeling of business information systems, abstract data types and object-oriented programming using a visual language. Prerequisite: M.S. in Information Management or Master of Accountancy and Information Systems degree program student.
CIS 506 Business Database Systems. (3) A
Hierarchical, network, relational, and other recent data models for database systems. Processing issues such as concurrency control, query optimization, and distributed processing. Prerequisite: M.S. in Information Management or Master of Accountancy and Information Systems degree program student.
CIS 512 Intelligent Decision Systems and Knowledge Management. (3) A
Definition, description, construction, and evaluation of computerbased decision systems. Prerequisite: M.S. in Information Management or Master of Accountancy and Information Systems degree program student.
CIS 515 Management Information Systems. (3) N
Systems theory concepts applied to the collection, retention, and dissemination of information for management decision making. Prerequisite: M.S. in Information Management or Master of Accountancy and Information Systems degree program student.
CIS 520 Systems Design and Evaluation. (3) N
Methodologies of systems analysis and design. Issues include project management, interface, organizational requirements, constraints, documentation, implementation, control, and performance evaluation. Prerequisite: M.S. in Information Management or Master of Accountancy and Information Systems degree program student.
CIS 530 Information Systems Development. (3) A
Object-oriented and interprocess communication and control concepts for information systems; applications based on languages such as C++ and platforms such as networked UNIX. Prerequisite: M.S. in Information Management or Master of Accountancy and Information Systems degree program student.

NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

CIS 535 Distributed Information Systems. (3) A Introduction to distributed systems and their impact on information systems in business. Prerequisite: M.S. in Information Management or Master of Accountancy and Information Systems degree program student.
CIS 591 Seminar on Selected CIS Topics. (1-12) A
Topics such as the following are offered:
(a) Computer Security
(b) Computing Architectures
(c) Data Warehouse and Data Mining
(d) Electronic Commerce
(e) Enterprise Modeling

Prerequisite: M.S. in Information Management or Master of Accountancy and Information Systems degree program student.
CIS 593 Applied Project. (1-12) N

## Department of Economics

Arthur E. Blakemore<br>Chair

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## PROFESSORS

BLAKEMORE, BOYES, BRADA, BURDICK, BURGESS, DeSERPA, FAITH, GOODING, HAPPEL, HOFFMAN, HOGAN, KINGSTON, LOW, MANELLI, MAYER, McDOWELL, McPHETERS, MELVIN, MÉNDEZ, ORMISTON, SANTOS, SCHLEE
ASSOCIATE PROFESSORS
AHN, COGLEY, REFFETT, REISER, WILSON, WINKELMAN

## ASSISTANT PROFESSORS

CHADE, DATTA, HENDRICKS

## SENIOR LECTURER

ROBERTS
The study of economics can give students a general knowledge of the ways goods and services are allocated and incomes generated; economics can help students understand why prices, employment, money, and financial markets behave as they do. Some knowledge of economics is crucial not only for students of business but for students pursuing graduate education in law or careers in journalism and communications.
Economists obtain positions at universities and in government, financial institutions, brokerage houses, private nonfinancial corporations, international organizations such as the International Monetary Fund and the World Bank, as financial journalists, and as marketing and management specialists in domestic and international firms.

## ECONOMICS-B.S.

Economics majors are required to earn a minimum grade of "C" in MAT 210 Brief Calculus before taking upper-division courses in economics. While MAT 210 meets the minimum mathematics requirement to major in Economics, all Economics majors who anticipate going on to graduate school in economics or in business or to law school are encouraged to take MAT 270 Calculus with Analytic Geom-
etry I. Majors are encouraged to pursue further course work in mathematics. MAT 270 may be taken in lieu of MAT 210.

The major in Economics consists of 18 semester hours of upper-division courses in economics. The following six hours must be included:

ECN 313 Intermediate Macroeconomic Theory $S B$
ECN 314 Intermediate Microeconomic Theory $S B$ . 3

ECN 313 and 314 should be taken before other upperdivision courses in economics. Students must earn a minimum grade of "C" in ECN 313 and 314. Concurrent enrollment in ECN 313 and 314 is permitted. Concurrent enrollment in ECN 313 or 314 and other upper-division courses in economics is subject to the approval of the faculty advisor.

## MAJOR PROFICIENCY REQUIREMENTS

Students must receive grades of "C" or higher in upperdivision courses for the major. If a student receives a grade below "C" in any course in the major, this course must be repeated. If a second grade below " C " is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in the major.

Other Economics Programs. For information on majoring in Economics in the College of Liberal Arts and Sciences, see "Economics" page 362.

For information on the minor in General Economics and on the minor in Economics for Students Planning a Career in Law, see "Minor in Economics for Students Planning a Career in Law," page 362.

## GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and college requirements. See "University Graduation Requirements," page 83 and "College Degree Requirements," page 151.

ECONOMICS (ECN)
ECN 111 Macroeconomic Principles. (3) F, S, SS
Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels. General Studies: SB.
ECN 112 Microeconomic Principles. (3) F, S
Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm. General Studies: SB.
ECN 306 Survey of International Economics. (3) F, S
Survey of international trade issues, commercial policy, trade theory, customs unions, and international monetary topics. Not for Economics majors. Lecture, discussion. Cross-listed as IBS 306. Credit is allowed for only ECN 306 or IBS 306. Prerequisites: ECN 111 or 112; 2.00 ASU GPA; junior standing. General Studies: SB, G.
ECN 313 Intermediate Macroeconomic Theory. (3) F, S
Determinants of aggregate levels of employment, output, and income of an economy. Prerequisites: ECN 111, 112. Prerequisite with a grade of "C" or higher: MAT 210. General Studies: SB.
ECN 314 Intermediate Microeconomic Theory. (3) F, S
Role of the price system in organizing economic activity under varying degrees of competition. Prerequisites: ECN 111, 112. Prerequisite with a grade of " $C$ " or higher: MAT 210. General Studies: SB.
ECN 315 Money and Banking. (3) SS
Functions of money. Monetary systems, credit functions, banking practices, and central banking policy. This course cannot be applied to the Economics major. Prerequisite: ECN 111.

ECN 331 Comparative Economic Systems. (3) N
Alternative institutions, past and present, for organizing the social division of labor. Property rights, information, and incentives in industrial societies. Prerequisite: ECN 111 or 112. General Studies: SB, G.
ECN 360 Economic Development. (3) N
Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth. Prerequisite: ECN 111 or 112. General Studies: $S B, G$.
ECN 365 Economics of Russia and Eastern Europe. (3) A
Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century. Prerequisite: ECN 111 or 112. General Studies: SB, G.
ECN 382 Managerial Economics. (3) A
Application of economic analysis to managerial decision making. Market analysis in the context of the socio-legal environment. Lecture, discussion. Not for Economics majors. Prerequisites: ECN 111, 112; 2.00 ASU GPA; junior standing.
ECN 384 Economics of Social Behavior. (3) A
Application of economic analysis to contemporary behavior: discrimination, work versus leisure, crime, medical care, macroeconomic policies. Not for Economics majors. Lecture, student participation.
Prerequisites: 2.00 ASU GPA; junior standing. General Studies: L/SB.
ECN 394 Special Topics. (3) N
Current topics of domestic or international interest. Analytical emphasis may be macro, micro, or both. See current Schedule of Classes for offerings. Not for Economics majors. Prerequisite: ECN 111 or 112.
ECN 404 History of Economic Thought. (3) N
Development of economic doctrines, theories of mercantilism, physiocracy, classicism, neoclassicism, Marxism, and contemporary economics. Prerequisite: ECN 314 or instructor approval. General Studies: L/SB.
ECN 421 Earnings and Employment. (3) A
Analysis of earnings, employment, unemployment, training, education, and related topics. Policy issues are emphasized. Prerequisite: ECN 314 or instructor approval. General Studies: L/SB.
ECN 436 International Trade Theory. (3) A
The comparative-advantage doctrine, including practices under varying commercial policy approaches. The economic impact of international disequilibrium. Prerequisite: ECN 314 or instructor approval. General Studies: SB, G.
ECN 438 International Monetary Economics. (3) A
History, theory, and policy of international monetary economics. Balance of payments and exchange rates. International financial markets including Eurocurrency markets. Prerequisite: ECN 313 or instructor approval. General Studies: SB, G.
ECN 441 Public Finance. (3) A
Public goods, externalities, voting models, public expenditures, taxation, and budget formation with emphasis on the federal government. Prerequisite: ECN 314 or instructor approval. General Studies: L/SB.
ECN 450 Law and Economics. (3) A
Economics of the legal system including analysis of property, contracts, torts, commercial law, and other topics. Discussion, analysis. Prerequisite: ECN 314. General Studies: L.
ECN 453 Government and Business. (3) A
Development of public policies toward business. Antitrust activity. Economic effects of government policies. Prerequisite: ECN 314 or instructor approval.
ECN 480 Introduction to Econometrics. (3) A
Elements of regression analysis: estimation, hypothesis tests, prediction. Emphasis is on use of econometric results in assessment of economic theories. Prerequisite: instructor approval. General Studies: CS.

ECN 484 Economics Internship. (3) F, S, SS
Academic credit for professional work organized through the Internship Program. Prerequisites: ECN 313, 314; outstanding academic record.
ECN 485 Mathematical Economics. (3) A
Integration of economic analysis and mathematical methods into a comprehensive body of knowledge within contemporary economic theory. Prerequisite: instructor approval.

ECN 493 Honors Thesis. (3) N
General Studies: L
ECN 494 Special Topics. (3) N
Current economic topics of domestic or international interest. Analytical emphasis may be macro, micro or both. See current Schedule of Classes for offerings.
(a) Manufacturing Processes
(b) Public Choice

Prerequisites: ECN 313 and 314 or instructor approval
ECN 498 Pro-Seminar. (3) A
Topic chosen from current area of interest. Prerequisites: ECN 313 and 314 or instructor approval.
ECN 502 Managerial Economics. (3) F, S
Application of microeconomic analysis to managerial decision-making in areas of demand, production, cost, and pricing. Evaluation of competitive strategies. Prerequisite: MBA degree program student.
ECN 503 Global Economics for Managers. (3) F, S
Macroeconomic analysis of issues related to economic growth, inflation, interest rates behavior, unemployment, exchange rate determination, and global competitiveness.
ECN 504 History of Economic Thought. (3) S
Historical development of economic theory. Emphasis on the development of economic analysis from preclassical economics through Keynes. Prerequisite: ECN 510 or instructor approval.
ECN 509 Macroeconomic Theory and Applications. (3) F
Theory of income, output, employment, and price level. Influence on business and economic environment. Prerequisites: ECN 111 and calculus or instructor approval.
ECN 510 Microeconomic Theory and Applications. (3) F, S
Application of economic theory to production, consumer demand, exchange, and pricing in a market economy. Prerequisites: ECN 112 and calculus or instructor approval.
ECN 511 Macroeconomic Analysis I. (3) F
Current theories of output, employment, inflation, and asset prices as well as major aggregates. Introduction to dynamic optimization techniques. Prerequisites: ECN 313 and calculus or instructor approval.

## ECN 512 Microeconomic Analysis I. (3) F

Theory of production, consumer demand, resource use, and pricing in a market economy. Prerequisites: ECN 314 and calculus or instructor approval.
ECN 513 Macroeconomic Analysis II. (3) F
Focus on growth theory, dynamic general equilibrium models, monetary theory, open-economy issues. Prerequisite: ECN 511 or instructor approval.
ECN 514 Microeconomic Analysis II. (3) S
General equilibrium, welfare economics, production, and capital theory. Prerequisite: ECN 512 or instructor approval
ECN 515 Advanced Macroeconomic Analysis. (3) F
Focus on current research areas in macroeconomics and monetary theory with emphasis on methods in economic dynamics and numerical techniques. Prerequisite: ECN 511 or instructor approval.

## ECN 516 Economics of Uncertainty, Information, and Strategic

 Behavior. (3) FEconomic behavior under uncertainty; markets and contracts under asymmetric information; the theory of games with incomplete information and applications. Prerequisite: ECN 512 or instructor approval.

## ECN 517 Monetary Theory. (3) F

Traditional and post-Keynesian monetary theory, interest rate determination, the demand and supply of money. Prerequisite: ECN 511 or instructor approval.
ECN 521 Labor Economics I. (3) F
Development of basic theoretical models for analyzing labor market issues. Prerequisite: ECN 510 or instructor approval.
ECN 522 Labor Economics II. (3) N
Extensions/criticisms of labor market theories. Applications to a variety of policy issues. Prerequisite: ECN 521.

## ECN 525 Econometrics I. (3) S

Problems in the formulation of econometric models. Emphasis on estimation, hypothesis testing, and forecast of general linear models. Prerequisite: 6 hours of statistics or instructor approval.

NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

ECN 526 Econometrics II. (3) F
Estimation and inference of qualitative and limited dependent variable models as well as general multiple equation models. Prerequisite: ECN 525 or instructor approval.
ECN 527 Econometrics III. (3) S
Generalized method of moment estimation, estimation with censored and truncated samples, nonlinear models, panel-data models, econometrics of nonstationarities. Prerequisite: ECN 526 or instructor approval.
ECN 531 Comparative Economic Systems. (3) F
Philosophical foundations of major economic systems and of properties of principal system models. Comparison of alternative institutions and system components of contemporary economies. Prerequisites: ECN 509 and 510 or instructor approval.
ECN 536 International Trade Theory. (3) S
Theories of comparative advantage and their empirical verification. Theory and political economy of commercial policy. Resource transfers and the role of the multinational corporation. Prerequisites: ECN 509 and 510 or instructor approval.
ECN 538 International Monetary Theory and Policy. (3) F
The foreign exchange market, balance of payments, and international financial institutions and arrangements; theory and applications. Prerequisites: ECN 509 and 510 or instructor approval.
ECN 541 Public Economics. (3) S
Economics of collective action, public spending, taxation, and politics. Impact of central governmental activity on resource allocation and income distribution. Prerequisite: ECN 510 or instructor approval.
ECN 553 Industrial Organization. (3) S
Analysis of structure, conduct, and performance in industrial markets; the economics of organizations. Prerequisite: ECN 510 or instructor approval.
ECN 560 Economics of Growth and Development. (3) F Economic problems, issues, and policy decisions facing the developing nations of the world. Prerequisites: ECN 509 and 510 or instructor approval.
ECN 584 Economics Internship. (1-3) SS
Academic credit for professional work organized through the Internship Program. Prerequisites: ECN 510 and 511 or instructor approval.
ECN 585 Mathematics for Economists. (3) F
Survey of mathematical ideas encountered in economics and econometrics: nonlinear programming, the Kuhn-Tucker theorem, concave programming, optimization over time. Prerequisite: calculus or instructor approval.
ECN 591 Economics Seminar. (1-3) F, S, SS
Presentations by outside speakers, department faculty, and graduate students of work in progress. Prerequisite: instructor approval.
ECN 593 Applied Projects. (3) F
Preparation of a supervised applied project typically in conjunction with an internship. Prerequisites: ECN 510, 511.
ECN 594 Conference and Workshop in Economics. (1-12) F, S, SS
Topics such as the following are offered:
(a) Economic Analysis Workshop.

Introduction to Economic Analysis. Prerequisite: Ph.D. degree program student.
(b) Macroeconomic Topics Workshop.

Issues in macroeconomic theory. Prerequisite: ECN 513 or instructor approval
(c) Microeconomic Topics Workshop.

Issues in microeconomic theory. Prerequisite: ECN 514 or instructor approval.
ECN 598 Special Topics. (3) N
Advanced topics in economics. Consult the Schedule of Classes for offerings. Prerequisite: instructor approval.

## QUANTITATIVE BUSINESS ANALYSIS (QBA)

For additional QBA courses, see "Department of Management."
QBA 221 Statistical Analysis. (3) F, S
Methods of statistical description. Application of probability theory and statistical inference in business. Prerequisite: MAT 119. General Studies: CS.
QBA 321 Applied Quality Analysis I. (3) A
Applications of statistical tools employed in empirical studies related to quality analysis. Applications focus on service processes. Prerequisite: QBA 221. General Studies: L.

QBA 410 Applied Business Forecasting. (3) N
Application of forecasting techniques in business and institutional environments. Prerequisite: QBA 321.
QBA 421 Applied Quality Analysis II. (3) A
Applications of statistical tools employed in manufacturing and experimental research. Applications focus on design and improvement of processes. Prerequisite: QBA 321.
QBA 525 Applied Regression Models. (3) A
Simple linear regression, multiple regression, indicator variables, and logistic regression. Emphasis on business and economic applications. Prerequisite: MAT 210
QBA 527 Categorical Data Analysis. (3) A
Discrete data analysis in business research. Multidimensional contingency tables and other discrete models. Prerequisite: QBA 525.
QBA 530 Experimental Design. (3) A
Experimental designs used in business research. Balanced and unbalanced factorial designs, repeated measures designs, and multivariate analysis of variance. Prerequisite: QBA 525 or equivalent.
QBA 535 Multivariate Methods. (3) A
Advanced statistical methods used in business research. Multivariate analysis of association and interdependence. Prerequisite: QBA 525.
QBA 540 Forecasting. (3) N
Foundation of statistical forecasts and forecast intervals; application of classical and computer-assisted forecasting methods to business forecasting problems. Prerequisites: MAT 210; QBA 502

QBA 593 Applied Project. (1-12) N
QBA 599 Thesis. (1-12) N

## Department of Finance

Herbert M. Kaufman<br>Chair<br>(BAC 519) 480/965-3131<br>Fax 480/965-8539<br>www.cob.asu.edu/fin

# PROFESSORS <br> BOOTH, COLES, JOEHNK, KAUFMAN, POE, SUSHKA <br> ASSOCIATE PROFESSORS <br> CESTA, GALLINGER, HERTZEL, HOFFMEISTER, MARTIN, WILT <br> ASSISTANT PROFESSORS <br> GRIFFIN, LEMMON, NARDARI, PERRY 

## FINANCE—B.S.

The study of finance prepares students to understand the financial implications inherent in virtually all business decisions. Students majoring in Finance are prepared for entrylevel careers in corporate management, depository institutions, investment management, and financial services. The finance curriculum emphasizes financial markets, evaluation of investments, and efficient allocation of resources.The major in Finance consists of the following courses:

ACC 315 Financial Accounting and Reporting ............................ 3
FIN 331 Financial Markets and Institutions................................ 3
FIN 361 Managerial Finance.................................................... 3
FIN 421 Security Analysis and Portfolio Management................. 3
Two additional 400-level FIN courses .............................................. 6
Total
As part of the requirements, all Finance majors must complete ACC 250 Introductory Accounting Lab. Finance
majors are strongly advised to take ACC 316 Management Uses of Accounting. FIN 484 Finance Internship is available for nonmajor elective credit.

ACC 250 must be completed before taking ACC 315 . FIN 331,361 , and ACC 315 must be completed before taking 400-level FIN courses.

## MAJOR PROFICIENCY REQUIREMENTS

Students must receive grades of "C" or higher in upperdivision courses for the major. If a student receives a grade below "C" in any course in the major, this course must be repeated before taking any further courses for which this course is a prerequisite. If a second grade below "C" is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in that major.

## GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and college requirements. See "University Graduation Requirements," page 83, and "College Degree Requirements," page 151.

## FINANCE (FIN)

FIN 300 Fundamentals of Finance. (3) F, S, SS
Theory and problems in financial management of business enterprises. Prerequisites: ACC 240; ECN 112; QBA 221.
FIN 331 Financial Markets and Institutions. (3) F, S
Analysis of financial markets and intermediaries. Theory of financial intermediation, interest rate theory, money and capital market instruments, and government regulation. Prerequisite: professional program business student majoring in Finance. Prerequisite with a grade of " C " or higher: FIN 300.
FIN 361 Managerial Finance. (3) F, S
Theories and problems in resource allocation, cost of capital, CAPM and capital budgeting, asset valuation, capital structure, and financing policy. Prerequisite: professional program business student majoring in Finance. Prerequisite with a grade of "C" or higher: FIN 300.
FIN 380 Personal Financial Management. (3) F, S
Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning. Prerequisites: minimum cumulative GPA of 2.00 ; junior standing; non-Finance major.
FIN 421 Security Analysis and Portfolio Management. (3) F, S Security analysis theory and practice. Selection and management of financial asset portfolios. Securities markets and portfolio risk-return analysis. Lecture, discussion. Prerequisite: professional program business student majoring in Finance. Prerequisites with a grade of " C " or higher: ACC 315; FIN 331, 361.
FIN 427 Derivative Financial Securities. (3) A
Study of stock options, index options, convertible securities, financial futures, warrants, subscription rights, and arbitrage pricing theory. Lecture, discussion. Prerequisite: professional program business student majoring in Finance. Prerequisite with a grade of "C" or higher: FIN 421.
FIN 431 Management of Financial Institutions. (3) A
Asset/liability and capital management in financial institutions. Influence of market factors and regulatory agencies. Emphasis on commercial banks. Lecture, discussion. Prerequisite: professional program business student majoring in Finance. Prerequisites with a grade of " $C$ " or higher: ACC 315; FIN 331, 361.

FIN 451 Working Capital Management. (3) N
Analysis of short-term profitability and liquidity. Emphasis on managing cash, accounts receivable, inventory, and current liabilities. Lecture, discussion. Prerequisite: professional program business student. Prerequisites with a grade of " C " or higher: ACC 315; FIN 331, 361.
FIN 456 International Financial Management. (3) A
Exchange rate determination, financial markets, managing multinational corporations, capital budgeting, and hedging currency risk exposure from an international perspective. Prerequisite: professional program business student majoring in Finance. Prerequisites with a grade of "C" or higher: ACC 315; FIN 331, 361. General Studies: G.

## FIN 461 Financial Cases and Modeling. (3) A

Case-oriented capstone course in managerial finance. Contemporary issues of liquidity management, capital budgeting, capital structure, and financial strategy. Lecture, discussion, group work. Prerequisite: professional program business student majoring in Finance. Prerequisites with a grade of "C" or higher: ACC 315; FIN 331, 361. General Studies: L.

## FIN 481 Honors Seminar in Finance. (3) A

Honors course covering topics that include theory and applications concerning managerial finance, investments, and financial institutions. Lecture, discussion. Prerequisite: Finance College of Business honors program student. Prerequisites with a grade of "C" or higher: ACC 315; FIN 331, 361.
FIN 484 Finance Internship. (3) F, S, SS
Academic credit for field work in finance organized through the Internship Program. Prerequisites: FIN 331, 361; strong academic record; instructor approval.
FIN 502 Managerial Finance. (3) A
Theory and practice of financial decision making, including risk analysis, valuation, capital budgeting, cost of capital, and working capital management. Prerequisites: ACC 502; ECN 502; QBA 502.
FIN 521 Investment Management. (3) A
Valuation of equities, fixed incomes, and options/financial futures in an individual security and portfolio context; mathematical asset allocation approaches. Lecture, discussion. Prerequisite: FIN 502.
FIN 527 Derivative Financial Securities. (3) A
Analysis of forwards, futures, and option contracts on bonds, commodities, equities, and foreign exchange. Design of speculative and hedging strategies. Lecture, discussion. Prerequisites: FIN 502, 521
FIN 531 Capital Markets and Institutions. (3) A
Recent theoretical and operational developments in economic sectors affecting capital markets and institutions. Lecture, discussion. Prerequisite: FIN 502.
FIN 551 Financial Statement Analysis. (3) A
Analysis of corporations' financial statements to ascertain their financial strength and default risk. Emphasis is on studying cash flows. Lecture, cases. Prerequisites: ACC 502; FIN 502.
FIN 556 International Financial Management. (3) A
Behavior of real and nominal currency exchange rates, management of international investment portfolios, corporate exchange exposure, and hedging exchange risk. Lecture, discussion. Prerequisite: FIN 502.

FIN 561 Financial Management Cases. (3) A
Case-oriented course in applications of finance theory to management issues. Acquisition, allocation, and management of funds within the business enterprise. Working capital management, capital budgeting, capital structure, and financial strategy. Lecture, discussion, presentation. Prerequisite: FIN 502.
FIN 581 Applied Corporate Finance. (3) A
Application of theories in corporate finance. Market efficiency, capital structure, "principal-agent" theory, corporate control, dividend policy, and capital budgeting. Prerequisite: FIN 502.
FIN 781 Theory of Finance. (3) A
Fundamental tools of financial economics; asset pricing, arbitrage, option pricing, capital structure, dividend policy, asymmetric information, and transaction-cost economics. Prerequisites: FIN 502, 521, 531.

NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

FIN 791 Doctoral Seminar in Finance. (3) A
(a) Financial Institutions and Markets Economic and monetary theory applied to financial markets and institutions; implications of financial structure for market performance and efficiency. Prerequisite: FIN 781.
(b) Financial Management

Financial theory pertaining to capital structure, dividend policy, valuation, cost of capital, and capital budgeting. Prerequisite: FIN 781.
(c) Investments

Investments and market theory; efficient markets hypothesis; option and commodity markets. Prerequisite: FIN 781.

## School of Health Administration and Policy

Eugene S. Schneller<br>Director<br>(BAC 554) 480/965-7778<br>Fax 480/965-6654<br>www.cob.asu.edu/hap

## PROFESSORS

FORSYTH, JOHNSON, KIRKMAN-LIFF, SCHNELLER, WESBURY, WILLIAMS
ASSISTANT PROFESSOR
RIVERS
While the school does not offer an undergraduate major, a number of courses at the 200 and 400 level are available to students who have a strong interest in health care, public health, and health policy. Students may enroll in these courses regardless of their undergraduate major. Registration for courses at the 400 level is with permission of the instructor and due to seat availability.

Students have the opportunity to enhance their skills by completing courses in one of the M.B.A. specializations, including information management, supply chain management, finance, or service marketing:

HSA 560 Health Services Administration and Policy .................... 3
HSA 561 Biostatistics.................................................................... 3
HSA 562 Health Care Organization and Systems .......................... 3
HSA 563 Health Care Economics................................................... 3
HSA 564 Health Care Finance................................................................... 3

HSA 598 ST: Epidemiology ........................................................... 3
For more information, see the Graduate Catalog.
HEALTH SERVICES ADMINISTRATION (HSA)
HSA 220 Health Care Organizations. (3) F, S
Overview of United States health care delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management. Cross-listed as HCR 220. Credit is allowed for only HCR 220 or HSA 220. Prerequisites: ENG 101, 102. General Studies: L.
HSA 473 Comparative Health Systems. (3) N
Comparison of health care financing and delivery in industrialized countries; covers insurance, hospital management and physician payment. Lecture, discussion.

HSA 498 Pro-Seminar. (3) N
(a) Health Care Finance
(b) Health Economics
(c) Health Service Administration and Policy
(d) Policy Issues in Health Care

HSA 502 Health Care Organization. (3) A
Concepts, structures, functions, and values which characterize contemporary health care systems in the United States.
HSA 505 Community Health Care Perspectives. (3) A
Epidemiological, sociological and political perspectives, and techniques for analyzing health problems and responding to health care needs in communities. Prerequisite: HSA 502.
HSA 512 Health Care Economics. (3) A
Economics of production and distribution of health care services, with special emphasis on the impact of regulation, competition, and economic incentives. Prerequisite: HSA 502.
HSA 520 Health Care Organizational Structure and Policy. (3) A
Functional relationships among managerial elements of health care institutions with major focus on hospital governance and policy dynamics. Prerequisite: HSA 502.
HSA 522 Health Care Management Systems. (3) A
Systems concepts, quantitative methods, and information systems applied to management problems in health institutions and community health planning. Prerequisites: HSA 505; QBA 502.
HSA 532 Financial Management of Health Services. (3) A
Acquisition, allocation, and management of financial resources within the health care enterprise. Budgeting, cost analysis, financial planning, and internal controls. Prerequisites: ACC 503; FIN 502; HSA 502.

HSA 542 Health Care Jurisprudence. (3) A
Legal aspects of health care delivery for hospital and health services administration. Legal responsibilities of the hospital administrator and staff. Prerequisites: HSA 505, 520.
HSA 560 Health Services Administration and Policy. (3) F Introduction to organizational theory and management of complex organization within the historical and contemporary contexts of the U.S. public health.

HSA 561 Biostatistics. (3) F
Aspects of descriptive statistics and statistical inference most relevant to health issues, including data, rates, and confidence intervals.
HSA 562 Health Care Organization and Systems. (3) F
Functional relationships among managerial elements of health care institutions with major focus on hospital governance and policy dynamics.
HSA 563 Health Care Economics. (3) S
Introduction to concepts and methods used to direct and understand production and distribution of health care services.
HSA 564 Health Care Finance. (3) S
Overview of the acquisition, allocation, and management of financial resources by health care providers. Focuses on economic, financial, and accounting principles.
HSA 565 Policy Issues in Health Care. (3) F
Current policy issues in health through concepts of access, cost, and quality; issues relating to disease trends and policy formulation.
HSA 571 Managed Care. (3) N
Trends in managed care/integrated systems, complexities of balancing objectives (e.g., financial and quality). A two-trimester-long marketplace simulation. Prerequisite: HSA 502.
HSA 573 Comparative Health Systems. (3) A
Comparison of health care financing and delivery in industrialized countries; covers insurance, hospital management and physician payment. Lecture, discussion.
HSA 575 Chronic Care Administration. (3) A
Management of long-term care services and facilities, including behavioral health and rehabilitation programs.
HSA 589 Integrative Seminar. (3) A
Capstone assessment of current policies, problems, and controversies across the broad spectrum of health services administration. Prerequisites: HSA 505, 520, 522, 532.

HSA 591 Seminar. (3) A
Seminar topics such as the following may be offered:
(a) Behavioral Health
(b) Cost Containment and Quality Assurance
(c) Health Care Economic Outcomes
(d) Health Care Policy
(e) Managing Physicians
(f) Topics in Health Services Research

HSA 593 Applied Project. (3) F, S, SS
Optional on-site experience in advanced development of managerial skills in health services administration and policy. Minimum of 10 weeks. Prerequisites: 18 hours of credit toward program of study; director approval.
HSA 598 Special Topics. (3) A
Special topics such as the following may be offered:
(a) Epidemiology

## International Business Studies

Josef C. Brada<br>Director<br>(BA 122) 480/965-4066<br>www.cob.asu.edu/up/ipo.cfm

## Certificate in International Business Studies

The program of study leading to the Certificate in International Business Studies is designed to prepare students for positions with multinational firms, banks, government agencies, and international organizations. This program is not a substitute for the listed areas of business specialization; rather, the courses required for the certificate add an international dimension to the student's chosen major.
Requirements for the certificate are designed to provide an understanding of international business environments, principles and operations; to provide an awareness of global social processes and a sensitivity to foreign cultures; and to develop competence in a foreign language. These objectives are met in the following ways: international business principles and operations, global and area studies, foreign language, and GPA proficiency.

International Business Principles and Operations. At least 15 semester hours of approved courses in international business are required. Students must take either IBS 300 Principles of International Business or ECN/IBS 306 Survey of International Economics and the international course in their major. Other international business courses from which the remaining hours are selected include:

ECN 306 Survey of International Economics SB, G ...................... 3 or IBS 306 Survey of International Economics SB, G(3)
ECN 331 Comparative Economic Systems $S B$, $G^{*}$....................... 3

ECN 365 Economics of Russia and Eastern Europe $S B, G^{*} \ldots \ldots . . . .3$
ECN 436 International Trade Theory $S B, G^{*}$................................. 3
ECN 438 International Monetary Economics $S B, G^{*}$.................... 3
FIN 456 International Financial Management $G$.......................... 3
IBS 300 Principles of International Business G........................... 3

IBS 394 ST: Regional Business Environment of Southeast Asia............................................................... or IBS 494 ST: Regional Business Environment of Southeast Asia (3)
IBS 400 Cultural Factors in International Business $C, G$............ 3 or MGT 494 ST: Cultural Factors in International Business (3)
IBS 493 International Honors Thesis L........................................ 3
IBS 499 Individualized Instruction of International Business ..... 3
MGT 459 International Management ............................................. 3 or IBS 494 ST: International Management (3)
MGT 494 ST: Applied International Management........................... 3
MKT 394 ST: Global Markets ......................................................... 3
MKT 435 International Marketing ................................................. 3
MKT 494 ST: Applied International Marketing ..........................1-4
SCM 463 Global Supply Chain Management................................. 3

* College of Business students may not use this course to fulfill General Studies SB requirements.

Honors students who select an international topic for their thesis may use that as part of the 15 hours of international course work for the certificate.

Global and Area Studies. This requirement can be satisfied either by means of course work or through participation in approved College of Business exchange programs with foreign schools of business, or by some combination of the two. The course work option requires at least 12 semester hours of approved electives in international and area studies. A minimum of six semester hours must be in courses that provide a cross-cultural perspective from the global point of view of one or more disciplines. A minimum of six semester hours must be in courses that provide an understanding of one region of the world.

Students who participate in an approved College of Business exchange program with a foreign business school for two semesters are deemed to have fulfilled the global and area studies requirements of the Certificate in International Business upon the successful completion of this exchange program. Students who participate in such an exchange program for one semester are deemed to have satisfied the required six hours of area studies courses. Students who participate in a business seminar need only complete three hours of area studies courses to meet the requirements of the certificate.

Foreign Language. Evidence of competence in a foreign language equivalent to one year of college study is required.

GPA Proficiency. Applicants for the Certificate in International Business must earn a "C" or higher in each of the courses selected for the certificate, have at least a 2.50 GPA for all course work applied to the certificate, and complete at least 50 percent of the course work at ASU Main.
Advising. When planning and selecting courses to meet the requirements for the certificate and to take advantage of opportunities for participation in exchanges with foreign schools of business, students should consult with an international business faculty advisor or the coordinator of international programs, BA 122, 480/965-4066, or visit the Web site at www.cob.asu.edu/up/ipo.cfm.

NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

INTERNATIONAL BUSINESS STUDIES (IBS)
IBS 300 Principles of International Business. (3) F, S, SS Multidisciplinary analysis of international economic and financial environment. Operations of multinational firms and their interaction with home and host societies. Prerequisite: ECN 112. General Studies: G.
IBS 306 Survey of International Economics. (3) F, S
Survey of international trade issues, commercial policy, trade theory, customs unions, and international monetary topics. Not for Economics majors. Lecture, discussion. Cross-listed as ECN 306. Credit is allowed for only ECN 306 or IBS 306. Prerequisites: ECN 111 or 112; 2.00 ASU GPA; junior standing. General Studies: SB, G.

## IBS 394 Special Topics. (3) F, S

(a) Regional Business Environment of Southeast Asia.

Prerequisites: 2.00 ASU GPA; junior standing.
IBS 400 Cultural Factors in International Business. (3) F, S, SS Cultural role in international business relations; applied principles of cross-cultural communications, negotiations, and management; regional approaches to business relations. Prerequisites: IBS 300, 306 (or ECN 306). General Studies: C, G.
IBS 493 International Honors Thesis. (3) F, S General Studies: L.
IBS 494 Special Topics. (3) F, S
(a) International Management

Prerequisite: IBS 300 or MGT 301.
(b) Multinational Management
(c) Regional Business Environment of Southeast Asia

IBS 499 Individualized Instruction of International Business. (3) F, S

Department of Management

William H. Glick<br>Chair<br>(BA 323) 480/965-3431<br>Fax 480/965-8314<br>www.cob.asu.edu/mgt

## PROFESSORS

ASHFORTH, BOHLANDER, CARDY, DOOLEY, GLICK, GOMEZ-MEJIA, HERSHAUER, HOM, KINICKI, KIRKWOOD, KULIK, PENLEY, REIF, RUCH
ASSOCIATE PROFESSORS
BOYD, BRENENSTUHL, BROOKS, CALLARMAN, CHOI, COOK, KEATS, KEEFER, KELLER, MOORHEAD, OLIVAS, OSTROFF, ROBERSON, D. SMITH-DANIELS, V. SMITH-DANIELS, VAN HOOK, VERDINI

ASSISTANT PROFESSORS
BLANCERO, KOKA, LANE, RUNGTUSANATHAM
SENIOR LECTURERS
KREITNER, LEA
LECTURERS
DAVILA, SACK
The faculty in ASU's Department of Management is widely recognized for their work in the areas of strategic management, organizational behavior, human resource management, operations management, and management science. Faculty members emphasize high tech management, quality, process and project management, decision and risk analysis, globalization, diversity, small business and entrepreneurship, change management, systems dynamics, organizational identity, corporate governance, and
human resource management practices in their research, consulting, and teaching.

Department of Management faculty take great pride in their teaching excellence and have been very active in continuing to improve collaborative teaching techniques. Eight management faculty and teaching assistants have won recent college- or university-level awards for their excellence in teaching effectiveness.

## MANAGEMENT—B.S.

Understanding of theory and concepts of management are enhanced by experiencing and testing these concepts in skill-based exercises and cases throughout the curriculum. After analyzing surveys of graduates, their employers, and members of the Dean's Council of 100, the department concluded that the major should have a strong emphasis on measurable, competency-based skills. Based on the survey data, the department identified major skill areas that encompass the most important competencies, including

## Administrative

conflict management
diversity awareness/management
project management
Analytical
creativity/innovation
critical analysis skills
planning/decision-making skills
Coaching/Facilitating
employee motivation
employee training/development
mentoring
Communication
persuasion and negotiation
verbal
written
Team Orientation
delegation and empowerment
develop and maintain teamwork
relationship building
The faculty focus on both understanding theory and developing competency in these specific skills in all management courses, particularly the three courses taken by all management majors: MGT 311 Human Resource Management, MGT 352 Human Behavior in Organizations, and MGT 463 Strategic Management. The emphasis is on special participative exercises and assignments to practice the skills. Some of these skills, such as communicating, team building, and critical analysis are also emphasized in college core classes (MGT 301 Management and Organization Behavior and OPM 301 Operations and Logistics Management). Further, all undergraduate management classes emphasize skill development exercises for appropriate course topics. Management majors can choose their electives in one of four tracks: general management, managing human resources, small business and entrepreneurship, or managing business processes.

## General Management Track

The central purpose of the Management major is to prepare men and women for managerial leadership in a world characterized by demands for continuous improvements in quality; growing technological sophistication; racial, cultural, and gender diversity in the work force; and expanding
globalized markets. This emphasis is on accomplishing the organization's goals in a changing environment by successfully coordinating all available resources. As technological change and global markets create new opportunities for modern organizations, there are increasingly complex challenges to be met by the contemporary manager.
To prepare students to meet these challenges, the general management track curriculum is designed to provide exercises and cases that focus on developing competency-based skills. Applications orientations in classroom settings will promote the development of administrative, analytic, and communicating skills; coaching and facilitating skills; and a team orientation. This pragmatic focus is developed in both internal and external contexts:

1. legal environment of management activity;
2. the range of human behavior encountered in organizational settings;
3. the interrelation of the component functions of a business;
4. the responsibilities of a firm in contemporary society;
5. the challenges to an organization active in an international arena; and
6. the role of the entrepreneur in the growth of businesses.
The following courses must be taken to complete this track:

MGT 311 Human Resource Management.......................................... 3
MGT 352 Human Behavior in Organizations............................... 3
MGT 434 Social Responsibility of Management ............................ 3
MGT 459 International Management .............................................. 3
MGT 463 Strategic Management L ................................................ 3
MGT elective .................................................................................... 3
Total .................................................................................................. 18
This generalist perspective addresses such current issues as diversity in the workplace, global involvement, total quality management, ethics, and other managerial emphases that promote success. An interactive, cooperative learning environment is stressed.
As the preferred track for the individual wanting a general grounding in the management discipline, students find a broad range of opportunities available upon graduation. Service and manufacturing firms, for-profit and not-for-profit organizations, and large and small organizations will immediately benefit from the preparation of these graduates and recruit them for challenging trainee positions or entry-level management positions.

## Managing Human Resources Track

People are the common denominator in all organizations. The efficient and effective management of people is central to the success of the organization. Management has been defined as "the process of getting things done through people." The human resource management track in the Management major introduces students to the spectrum of knowledge necessary to effectively manage people.

This track is designed to train and familiarize future employees, general managers, and human resource specialists with the human resource functional areas, such as performance appraisal, dismissal, and the legal environment surrounding the employment relationship.

Students in this track develop key skills in managing work force diversity, team building, and negotiation. Focus in this track is on developing skills in managing people. Students are involved in class activities such as cases and experiential exercises which develop skills in preventing and solving human resource problems.

The following courses must be taken to complete this track:

MGT 311 Human Resource Management.......................................... 3
MGT 352 Human Behavior in Organizations............................... 3
MGT 413 Compensation Management............................................ 3
MGT 423 Employee-Management Relations ................................ 3
MGT 463 Strategic Management $L$............................................... 3
MGT elective ........................................................................... 3
Total ......................................................................................... 18
Large corporations in manufacturing and services, as well as small businesses and consulting firms, hire students who successfully complete this track.

## Small Business and Entrepreneurship Track

Managing, growing, developing, and starting small businesses is one of the most vital and challenging segments of the economy. Most new innovations spring from small to midsize firms. New venture opportunities emerge each day. Smaller firms constitute the job-creation engine of the nation. The potential for individual wealth creation largely resides among entrepreneurial firms, and in an era of downsizing, many current and former corporate employees are looking toward self-employment as a long-term career option. The sequence of courses in the small business and entrepreneurship track does not limit student ability to seek employment in the corporate environment. Rather, it provides an enhanced skill set many firms will value, and it offers alternative career options.

The small business and entrepreneurship course sequence provides a broad-based understanding of the entrepreneurial process and the unique problems and challenges faced by smaller firms. In addition, students gain an opportunity to develop their own potential venture concepts.

The following courses must be taken to complete this track:

MGT 311 Human Resource Management................................... 3
MGT 352 Human Behavior in Organizations................................ 3
MGT 440 Small Business and Entrepreneurship.......................... 3
MGT 445 Business Plan Development........................................... 3 or MGT 494 ST: Small Business Planning (3)
MGT 463 Strategic Management $L$............................................. 3
MGT elective ............................................................................. 3
Total .18

Note that MGT 445 Business Plan Development (BPD) and MGT 494 ST: Small Business Planning (SBP) will have some overlapping sessions. All students will learn about developing business plans and working in small business.

Students in the BPD course will prepare a full-scale business plan. Students in the SBP class will complete a "small business experience." Students may not get credit for both classes.
Students completing the small business and entrepreneurship track are most likely to work in small businesses or new ventures within larger corporations. Students in this track (or other business majors) may also be interested in the Certificate in Small Business and Entrepreneurship. See "Certificate in Small Business and Entrepreneurship," page 170.

## Managing Business Processes Track

Processes are central to all organizations. Designing and manufacturing a product involves a series of steps in a transformation process starting with raw materials acquisition and continuing through product production, delivery, and use. Determining and delivering a service involves a series of steps in setting service characteristics and providing the service. Specific theories and tools for managing, changing, and continuously improving business processes have been developed and are key ingredients to successfully managing businesses in our global economy.
Students in this track develop key skills in communicating and working with people, particularly in planning and managing process changes. The focus in this track is on understanding key aspects of process design and analysis. Students are involved in case studies and industry projects dealing with actual process issues. Students in this track focus on developing knowledge and skills in product/service design and management, process improvement and problem solving, analysis of process costs, change management, team approaches to solving process problems, and project management skills.

The following courses must be taken to complete this track:

MGT 311 Human Resource Management ...................................... 3
MGT 352 Human Behavior in Organizations.................................. 3
MGT 433 Management Decision Analysis..................................... 3 or MGT 468 Management Systems (3) or MGT 480 Team Management Skills (3) or MGT 494 ST: Quality and Human Resource Management (3)
MGT 463 Strategic Management $L$. .. 3

QBA 321 Applied Quality Analysis I L ........................................ 3 or SCM 432 Materials Management (3)
QBA 450 Operations and Process Analysis L................................ 3
Total ............................................................................................... 18
Because managing and controlling the quality of processes is a key issue in process management, students electing this track are strongly urged to also complete the Certificate in Quality Analysis. See "Certificate in Quality Analysis," page 153.

Although large corporate manufacturing and service firms will hire students in this new track, there will also be special opportunities for these students to have a strong positive impact in the many start-up and medium-sized businesses in Arizona. Many management consulting firms that recruit college graduates are very interested in students from this track.

Approved Electives for Management. The following electives have been approved for the management tracks.

ACC 316 Management Uses of Accounting .................................. 3
MGT 413 Compensation Management............................................ 3
MGT 422 Training and Development............................................. 3
MGT 423 Employee-Management Relations .................................. 3
MGT 424 Employee Selection and Appraisal ................................. 3
MGT 433 Management Decision Analysis..................................... 3
MGT 434 Social Responsibility of Management ........................... 3
MGT 440 Small Business and Entrepreneurship............................. 3
MGT 441 Venture Design and Development................................... 3
MGT 442 Small Business Management .......................................... 3
MGT 445 Business Plan Development............................................ 3
MGT 459 International Management ............................................. 3
MGT 468 Management Systems ...................................................... 3
MGT 480 Team Management Skills............................................... 3
MGT 494 Special Topics ................................................................ 3
MKT 302 Fundamentals of Marketing Management ...................... 3
QBA 450 Operations and Process Analysis L................................ 3
Hot Links to Major in Management. Further information, hot links to courses and current faculty, and any updates on the undergraduate major in Management can be found at www.cob.asu.edu/mgt.

## Major Proficiency Requirements

Students must receive grades of "C" or higher in upperdivision courses for the major. If a student receives a grade below "C" in any course in the major, this course must be repeated. If a second grade below " $C$ " is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in that major.

## Graduation Requirements

In addition to fulfilling major requirements, students seeking a degree must meet all university and college requirements. See "University Graduation Requirements," page 83 and "College Degree Requirements," page 151.

## GRADUATE PROGRAMS

The Department of Management participates actively in several master's and Ph.D. programs, particularly the technology M.B.A., executive M.B.A., evening M.B.A., and day M.B.A. programs. For a detailed description of these programs, see the Graduate Catalog. Areas of concentration offered by the Department of Management for technology, evening, and executive M.B.A. students include process management in high technology organizations; globalization and diversity management; entrepreneurship and small business development; and management consulting.

The Department of Management has adopted a modular approach to $\mathrm{Ph} . \mathrm{D}$. education to improve its ability to deliver focused, high-quality seminars, give students more flexibility in defining their areas of expertise, increase their rate of quality publications, and enhance the quality of Ph.D. placements.

Hot Links to Graduate Programs. Further information, hot links to courses and current faculty, and any updates on the Department of Management areas of concentration for the M.B.A. programs can be found at www.cob.asu.edu/ mg .

General information on the M.B.A. programs can be found at www.cob.asu.edu/mba.

Further information, application procedures, hot links to current faculty, and any updates on the Ph.D. program in Management can be found at www.cob.asu.edu/mgt/degree/ phdmainpg.htm.

## MANAGEMENT (MGT)

MGT 301 Management and Organization Behavior. (3) F, S, SS Administrative, organizational, and behavioral theories and functions of management, contributing to the effective and efficient accomplishment of organizational objectives. Prerequisites: 1 psychology (social and behavioral) course and 1 sociology course.
MGT 311 Human Resource Management. (3) F, S, SS Human resource planning, staffing, training and development, compensation, appraisal, and labor relations. Prerequisite: MGT 301.
MGT 352 Human Behavior in Organizations. (3) F, S, SS
Human aspects of business as distinguished from economic and technical aspects and how they influence efficiency, morale, and management practice. Prerequisite: MGT 301.
MGT 380 Management and Strategy for Nonmajors. (3) F Introduction to the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility.

## MGT 394 Special Topics. (3) N

MGT 413 Compensation Management. (3) F, S
Establishing base and incentive pay with job analysis, job evaluation, and wage surveys; performance appraisal; conformance to compensation laws. Prerequisites: MGT 311; professional program business student.
MGT 422 Training and Development. (3) F, S
Learning theory, orientation and basic level training, management development, resource materials and methods. Prerequisites: MGT 311; professional program business student.
MGT 423 Employee-Management Relations. (3) F, S
Employment relationship in union/nonunion setting. Employee-management rights/responsibilities, complaint administration, negotiations, union structure, and mock government negotiations.
MGT 424 Employee Selection and Appraisal. (3) F, S
Concepts and methods of personnel selection and performance appraisal. Includes job analysis, measurement, and legal issues. Experiential exercises emphasized. Prerequisite: MGT 311.
MGT 433 Management Decision Analysis. (3) F, S
Decision-making concepts and methods in the private and public sectors and their application to organizational problems. Understanding of individual and group decision making. Prerequisites: MGT 301; professional program business student.
MGT 434 Social Responsibility of Management. (3) F, S, SS Relationship of business to the social system and its environment. Criteria for appraising management decisions. Managers as change agents. Prerequisites: MGT 301; professional program business student.
MGT 440 Small Business and Entrepreneurship. (3) F, S, SS
Opportunities, risks, and problems associated with small business development and operation.
MGT 441 Venture Design and Development. (3) N
Analysis, design, and development of a business plan for a new venture. Prerequisite: ACC 240.
MGT 442 Small Business Management. (3) N
Students, acting as management consultants, apply business principles and make recommendations to small businesses while learning to manage small firms. Prerequisite: business core except MGT 463.
MGT 445 Business Plan Development. (3) F, S
Develops a complete strategic business plan emphasizing the planning process undertaken by successful small business owners and entrepreneurs. Lecture, experiential exercise. Prerequisite: MGT 440.

MGT 459 International Management. (3) F, S, SS
Concepts and practices of multinational and foreign firms. Objectives, strategies, policies, and organizational structures for operating in various environments. Students taking MGT 459 may not get additional credit for either IBS 494 ST: Multinational Management or IBS 494 ST: International Management. Prerequisite: IBS 300 or MGT 301.

## MGT 463 Strategic Management. (3) F, S, SS

Strategic formulation and administration of the total organization, including integrative analysis and strategic planning. To be taken last semester of senior year. Prerequisites: completion of 108 hours, including all other business administration core requirements; professional program business student. General Studies: L.
MGT 468 Management Systems. (3) F, S
Systems theory and practice applied to organization process and research. Organizations seen as open systems interacting with changing environments. Prerequisite: MGT 301.
MGT 480 Team Management Skills. (3) F, S
A cooperative education class teaching team skills in active listening, conflict resolution, decision making, effective meetings, norming, and team roles. Cooperative learning.
MGT 494 Special Topics. (3) N
Current topics in management, primarily designed for business majors. See the Schedule of Classes for current offerings. Some of the following may be offered:
(a) Applied International Management
(b) Cultural Factors in International Business

Prerequisite: IBS 300 or MGT 301 or IBS 494 or MGT 459.
(c) Small Business Planning
(d) Quality and Human Resource Management

Note that students may not get credit for both Small Business Planning and MGT 445 Business Plan Development.
MGT 502 Organization Theory and Behavior. (3) A
Important concepts and applications in management, including communication, decision making, group dynamics, leadership, motivation, organization change, and organization design. Prerequisites: computer literacy; graduate degree program student.
MGT 522 Human Resource Activity and the Management of Diversity. (3) A
Managerial approach to HR/diversity.
MGT 570 Management Consulting. (3) A
Developing an understanding of how internal and external consultants add value. Prerequisites: ability to use common business software, including Microsoft Office; familiarity with spreadsheets.
MGT 589 Strategic Management. (3) F, S
Formulation of strategy and policy in the organization, emphasizing the integration of decisions in the functional areas. Prerequisite: completion or concurrent enrollment in all other core courses in the M.B.A. program.
MGT 591 Seminar. (3) N
Topics such as the following are offered:
(a) Business Plan Competition
(b) Entrepreneurship
(c) Human Resource Activity and the Management of Diversity
(d) Human Resource Management and Service Delivery
(e) Human Resources and High-Technology Management
(f) International Management
(g) Management Consulting
(h) Organizational Change and Business Process Consulting

MGT 593 Applied Projects. (3) A
Cross-functional teams initiate (possibly implement) organizational
change within a local firm. Lecture, discussion, experiential learning.
Prerequisite: completion or concurrent enrollment in all core courses in the M.B.A. program.
MGT 598 Special Topics. (3) N
Graduate special topics chosen from human resources, strategic management, and international management including special topics in international management in Asia or Europe. Prerequisite: instructor approval.

NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

MGT 791 Seminar: Doctoral Seminar in Management. (1) A
Short module seminars such as:
(a) Causal Modeling
(b) Change and Coping
(c) Cognition: Micro and Macro Perspectives
(d) Dysfunction in Workplace
(e) Economic Theories of the Firm
(f) Levels of Analysis
(g) Motivation and Attitudes
(h) Organizational Identity and Identification
(i) Organizational Learning and Organizational Identity
(j) Organizational Performance and Reward Systems
(k) Organizational Strategy and Culture
(I) Organizational Structure, Technology, and Information Systems
(m) Organizational Withdrawal
(n) Performance Appraisal
(o) Power and Organizational Change
(p) Selection
(q) Strategy Overview
(r) Teams, Groups, and Leadership
(s) The Craft of Research

## OPERATIONS AND PRODUCTION MANAGEMENT (OPM)

OPM 301 Operations and Logistics Management. (3) F, S, SS Identification and integration of major components of operations and logistics management and their impact on organizational productivity and performance. Lecture, lab. Prerequisite: QBA 221.
OPM 394 Special Topics. (3) N
Current topics in operations and production management, primarily designed for nonbusiness majors. See the Schedule of Classes for current offerings, which may, for example, include Operations and Logistics Management for nonmajors.
OPM 502 Operations Management. (3) A
Contemporary management issues, including environmental, project, and supply chain management; new product development; quality control; TQM. Prerequisites: computer literacy; graduate degree program student.
OPM 540 Quality and Productivity Management. (3) N
Organizational factors influencing quality and productivity in the production of goods and services. Quality and productivity strategies, improvement programs, and measurement systems. Prerequisite: OPM 502 or instructor approval.
OPM 585 Facilities Design and Management of Technology. (3) A Decisions regarding management of facilities and technology for manufacturing and service firms. Facilities location, layout, process design, and selection.
OPM 587 Project Management. (3) A
Planning, scheduling and controlling of projects in R \& D, manufacturing, construction and services. Project selection, financial considerations, and resource management. Prerequisite: QBA 502.
OPM 591 Seminar. (3) A
Topics such as the following offered:
(a) High-Performance Management Processes
(b) Management of Technology
(c) Manufacturing Management in High Technology
(d) Manufacturing Strategy
(e) New Product and Process Development
(f) Technology/Project Management

OPM 593 Applied Projects. (3) A
Cross-functional teams initiate (possibly implement) organizational change within a local firm. Lecture, discussion, experiential learning. Prerequisite: completion or concurrent enrollment in all core courses in the M.B.A. program.
OPM 791 Doctoral Seminars in Operations and Production Management. (1) N
Short module seminars such as:
(a) Management of Technology
(b) Manufacturing Strategy
(c) Operations Management
(d) Project Management

## QUANTITATIVE BUSINESS ANALYSIS (QBA)

For additional QBA courses, see "Department of Economics."
QBA 450 Operations and Process Analysis. (3) A
Implementation of quantitative techniques for the analysis of quality problems related to operations and process analysis. Prerequisites: OPM 301; QBA 221. General Studies: L.
QBA 502 Managerial Decision Analysis. (3) F, S
Fundamentals of quantitative analysis to aid management decision making under uncertainty. Prerequisites: MAT 210; computer literacy; graduate degree program student.
QBA 505 Management Science. (3) N
Quantitative approaches to decision making, including linear programming and simulation, with an emphasis on business applications. Prerequisites: MAT 210; QBA 502.
QBA 508 Product and Service Innovation. (3) F, S
Developing strategies for innovation in products and services. Prerequisites: basic algebra; basic probability concepts; elementary knowledge of Windows.
QBA 550 Intermediate Decision Analysis. (3) N
Quantitative decision analysis methods for business decision making under uncertainty, including decision diagrams, subjective probabilities, and preference assessment. Prerequisites: MAT 210; QBA 502.
QBA 591 Seminar. (3) F, S
Current topics in Quantitative Business Analysis primarily designed for technology, evening, and executive M.B.A. students. Elective courses for these programs may include:
(a) Decision Models
(b) Decision Models for Consulting
(c) Management Problem Solving
(d) Strategic Decision Analysis

QBA 593 Applied Project. (1-12) N
QBA 599 Thesis. (1-12) N
QBA 791 Doctoral Seminars in Quantitative Business Analysis.
(1) N

The Department of Management has adopted a modular approach to
Ph.D. education. Topics such as the following may be offered:
(a) Chaos Theory
(b) Risk Analysis
(c) Strategic Decision Making
(d) Systems Dynamics

# Department of Marketing 

Michael P. Mokwa<br>Chair<br>(BAC 460) 480/965-3621<br>Fax 480/965-8000<br>www.cob.asu.edu/mkt

## PROFESSORS <br> BITNER, BROWN, HUTT, JACKSON, KUMAR, LASTOVICKA, MOKWA, L. OSTROM, REINGEN, SCHLACTER, WARD <br> ASSOCIATE PROFESSORS <br> BLASKO, SINHA, STEPHENS, WALKER <br> ASSISTANT PROFESSORS <br> NOWLIS, A. OSTROM, ROUNDTREE <br> SENIOR LECTURER SPIERS

Study in the field of marketing involves analysis of how organizations plan, organize, deploy, and control their resources to achieve market objectives. Focus is placed on market forces, growth, and the deployment of firms in competitive markets and on the marketing strategy and tactics of the firm. Through the proper selection of courses, a student may prepare for a career in

1. selling and sales management;
2. services and retail marketing;
3. promotion and advertising management;
4. business to business marketing;
5. international marketing;
6. market research and planning;
7. general marketing management; or
8. retail management.

## MARKETING—B.S.

The major in Marketing consists of 18 semester hours. The following courses must be included:

MKT 302 Fundamentals of Marketing Management ....................... 3
MKT 304 Consumer Behavior ....................................................... 3
MKT 451 Marketing Research ........................................................ 3
MKT 460 Strategic Marketing $L$..................................................... 3
Total .............................................................................................. 12
To complete the major, students, in consultation with their faculty advisors, select six additional hours from among the following list of courses:
MKT 301 Principles of Advertising. .....  3
MKT 310 Principles of Selling .....  3
MKT 311 Creative Strategy in Marketing .....  3
MKT 411 Sales Management ..... 3
MKT 412 Promotion Management .....  3
MKT 424 Retail Management .....  3

MKT 430 Marketing for Service Industries ..................................... 3
MKT 434 Industrial Marketing....................................................... 3
MKT 435 International Marketing .................................................. 3
MKT 484 Internship ....................................................................... 3

## Major Proficiency Requirements

Students must receive grades of "C" or higher in upperdivision courses for the major. If a student receives a grade below " C " in any course in the major, this course must be repeated. If a second grade below " C " is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in the major.

## GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and college requirements. See "University Graduation Requirements," page 83, and "College Degree Requirements," page 151.

## GRADUATE PROGRAMS

The department offers a distinctive M.B.A. curriculum in services marketing and management. For more information, see the Graduate Catalog.

## MARKETING (MKT)

MKT 300 Principles of Marketing. (3) F, S, SS
Role and process of marketing within the society, economy, and business organization. Prerequisite: ECN 112.
MKT 301 Principles of Advertising. (3) F, S, SS
Advertising as a communications tool in marketing and business management. Survey of market segmentation, creative strategy, media, and effectiveness measures. Prerequisite: MKT 300.
MKT 302 Fundamentals of Marketing Management. (3) F, S, SS Marketing planning, implementation, and control by organizations, with special emphasis on identifying market opportunities and developing marketing programs. Prerequisite: MKT 300.
MKT 304 Consumer Behavior. (3) F, S, SS
Application of behavioral concepts in the analysis of consumer behavior and the use of behavioral analysis in marketing strategy formulation. Prerequisite: MKT 300.
MKT 310 Principles of Selling. (3) A
Basic principles underlying the selling process and their practical application in the sale of industrial goods, consumer goods, and intangibles. Prerequisite: MKT 300.
MKT 311 Creative Strategy in Marketing. (3) A
Discussion, application and evaluation of creative concepts and strategies. Creation of a portfolio addressing distinctive advertising/marketing problems and opportunities. Prerequisites: MKT 301; nonbusiness majors must obtain department approval.
MKT 382 Advertising and Marketing Communication. (3) F, S Introduction for nonbusiness majors to the communication process within marketing and advertising. Creation and presentation of an ad campaign. Not open to business majors. Prerequisites: junior or senior standing; 2.00 ASU GPA.
MKT 394 Special Topics. (3) F
(a) Global Markets
(b) Marketing and Selling

MKT 411 Sales Management. (3) N, F, S
Application of management concepts to the administration of the sales operation. Prerequisite: MKT 302.
MKT 412 Promotion Management. (3) A
Integration of the promotional activities of the firm including advertising, personal selling, public relations, and sales promotion. Prerequisite: MKT 302.

NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

MKT 424 Retail Management. (3) A
Role of retailing in marketing. Problems and functions of retail managers within various retail institutions. Prerequisite: MKT 300.

## MKT 430 Marketing For Service Industries. (3) A

Concepts and strategies for addressing distinctive marketing problems and opportunities in service industries. Current issues and trends in the service sector. Prerequisites: MKT 300, professional program business student.

MKT 434 Industrial Marketing. (3) A
Strategies for marketing products and services to industrial, commercial, and governmental markets. Changing industry and market structures. Prerequisite: MKT 302 or instructor approval.

## MKT 435 International Marketing. (3) A

Analysis of marketing strategies developed by international firms to enter foreign markets and to adapt to changing international environments. Prerequisites: MKT 302 or instructor approval; professional program business student.
MKT 451 Marketing Research. (3) F, S
Integrated treatment of methods of market research and analysis of market factors affecting decisions in the organization. Prerequisites with a grade of "C" or higher: MKT 302 and QBA 221.

## MKT 460 Strategic Marketing. (3) F, S

Policy formulation and decision making by the marketing executive. Integration of marketing programs and consideration of contemporary marketing issues. Prerequisite: professional program business student. Prerequisites with a grade of "C" or higher: MKT 302, 304, 451. General Studies: L.
MKT 484 Internship. (3) F, S, SS
Prerequisite with a grade of "B" or higher: MKT 302.
MKT 494 Special Topics. (1-4) F, S, SS
Chosen from topics in the marketing and international marketing arenas to include seminars in international marketing in Europe and Asia.
(a) Applied International Marketing

MKT 499 Individualized Instruction. (1-3) F, S, SS
Topics of special interest chosen by students and agreed to by the departments to do independent studies with a professor acting as a guide.
MKT 502 Marketing Management. (3) F, S, SS
Managing the marketing function; market and environmental analysis; marketing planning, strategy, and control concepts. Development and management of marketing programs. Prerequisite: ECN 502.
MKT 524 Services Marketing. (3) A
Strategies for marketing services emphasizing the distinctive challenges and approaches that make marketing of services different from marketing manufactured goods. Prerequisite: MKT 502 or equivalent.
MKT 563 Marketing Strategy. (3) N
Planning and control concepts and methods for developing and evaluating strategic policy from a marketing perspective. Prerequisite: MKT 502.

MKT 584 Internship. (3) F, S, SS
MKT 591 Seminar. (3) A
Topics such as the following are offered in conjunction with the M.B.A. concentration in services marketing and management (see M.B.A. program section):
(a) Business-to-Business Marketing
(b) Competitive Strategy for Services
(c) Consumer Behavior and Market Strategy
(d) Customer Satisfaction/Service Quality Measurement
(e) International Marketing
(f) Marketing in the Information Age
(g) New Product and Service Development

# Small Business Programs 

Emma J. Watson<br>Academic Director<br>(BAC 111) 480/965-3962<br>Fax 480/727-6185<br>www.cob.asu.edu/up/smallbusiness.html

The aim of Small Business Programs is to become the 21st-century leader in business education, practice, and research by providing high-quality, relevant programs and information services that enable students and small and growth businesses to participate, contribute, and compete in the global economy.

## Mission

The ASU College of Business, in collaboration with the Center for the Advancement of Small Business, creates and sustains leading edge, preeminent quality programs in small business for undergraduate students in all disciplines to prepare them for leadership in small and growth businesses.

The programs are learning centered, helping students learn business skills that will position them for success in their careers. The programs are designed to help complement and supplement students' major area of expertise, providing them business tools to work effectively in the fastmoving world of a small or growth company or to start or acquire a company. The programs are a joint venture between the College of Business and the small business community, a partnership that ensures the academic content and proven successful practices.

## Minor in Small Business

The minor in Small Business consists of 18 hours, with five courses required and one elective. Courses in the program are held with both day and evening sessions. Attendance at a minimum of three Ca\$hing In ${ }^{\text {TM }}$ Seminars with local and national experts is also required. Ca\$hing $I^{\mathrm{TM}}$ Seminars are held in the late afternoon with on-campus, distance, and asynchronous access options available.

## Requirements

COB 380 Small Business Leadership ......................................... 3
COB 381 Small Business Accounting and Finance ...................... 3
COB 382 Small Business Sales and Market Development............ 3
COB 383 Small Business Working Relationships ........................ 3
COB 384 Small Business Operations and Planning ...................... 3
Elective..................................................................................... 3
Total .. 18

## Bachelor of Interdisciplinary Studies (B.I.S.) Area

 of Emphasis in Small Business (B.I.S. Majors Only)The requirements for the small business concentration are identical to those for the minor in Small Business listed above. For B.I.S. degree requirements, see "Bachelor Of Interdisciplinary Studies," page 115.

## Certificate in Small Business and Entrepreneurship

A certificate in Small Business and Entrepreneurship is available to only business majors at ASU. The certificate
requires 15 semester hours of classes of which the following six semester hours must be included:

MGT 440 Small Business and Entrepreneurship............................... 3
MGT 445 Business Plan Development............................................. 3
The remaining nine semester hours consist of three additional upper-division courses relevant to small business. A copy of the approved electives for business majors pursuing the Certificate in Small Business and Entrepreneurship is available in the Undergraduate Programs Office. To receive the certificate, students must complete the specified business courses with a grade of "C" or higher.

Small Business and Entrepreneurship Track (Management Majors Only). See "Small Business and Entrepreneurship Track," page 165, for the requirements of this program.

## Department of Supply Chain Management

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PROFESSORS<br>J. CARTER, P. CARTER, GUNTERMANN, HENDRICK, JENNINGS, PEARSON, SMELTZER

ASSOCIATE PROFESSORS
ARANDA, BOHLMAN, BUTLER, CHOI, DAVIS, DUNDAS, ELLRAM, LEONARD, LOCK, LYNCH, MURRANKA, SIFERD

ASSISTANT PROFESSORS
AMUNDSON, CLINTON, MALTZ
lecturer
PATTERSON
ADJUNCT PROFESSOR CAVINATO

The faculty in the Department of Supply Chain Management offer courses in four separate areas: legal and ethical studies, management communication, real estate, and supply chain management.

## Legal and Ethical Studies

The legal and ethical studies faculty offer the undergraduate and the Master of Business Administration (M.B.A.) core requirements in legal and ethical studies. In addition, the faculty offer specialized courses in law and ethics relating to health care, insurance, real estate, and professional sports.

## Management Communication

The management communication faculty serve the College of Business by teaching the B.S. core requirement BUS 301 Fundamentals of Management Communication.

## SUPPLY CHAIN MANAGEMENT—B.S.

Supply chain management is the management of resources to design, procure, fabricate, produce, assemble, store, distribute, deliver, use, maintain, recycle, and dispose of goods and services.

A "supply chain" consists of interconnected companies required to transform ideas into delivered products and services.

Supply chain management is a business approach that focuses on integration and partnerships in order to meet customers' needs on a timely basis, with relevant and high quality products, produced and delivered in a cost-effective manner.

Current interest in supply chain management stems from the need of world-class organizations to purchase, produce, move, and market goods and services on a global basis. Relentless focus on time, cost, and quality have sharpened the need to coordinate and cooperate with business partners around the world in order to meet and exceed customers' needs and wants.

The major in Supply Chain Management consists of the following courses:
SCM 345 Logistics Management .....  3
SCM 355 Supply Management ..... 3
SCM 432 Materials Management. .....  .3
SCM 440 Productivity and Quality Management .....  3
SCM 455 Research and Negotiation $L$ ..... $\ldots .$.
SCM 479 Supply Chain Strategy .....  3
Total ..... 18

## REAL ESTATE—B.S.

The Real Estate faculty offer a unique one-year program designed for the students' last year of college. This innovative program emphasizes student involvement with real estate executives on projects in the Phoenix metropolitan area. Students are organized in teams to develop their analytical, communication, and team skills.

The program is organized around five aspects of real estate: brokerage/management, development, financing, investments, and market analysis. With the broad interdisciplinary perspective, emphasis on team work, and involvement in projects, students may pursue careers in land development, investment analysis, appraisal, property management, brokerage, and finance.

Successful completion of the program satisfies the requirements of the major based on the following courses:

LES 411 Real Estate Law .............................................................. 3

REA 331 Real Estate Finance......................................................... 3
REA 401 Real Estate Appraisal ....................................................... 3
REA 441 Real Estate Land Development....................................... 3
REA 456 Real Estate Investments .................................................. 3
Total

[^3]In addition to the courses listed for the major, students in the program also satisfy the requirement for BUS 301 Fundamentals of Management Communication (listed in the business core) and BUS 451 Business Research Methods (listed as a major support course). Because of the emphasis on teamwork, interaction with business professionals, and completion of all requirements within a year, students may enter the program only in the fall semester.

## MAJOR PROFICIENCY REQUIREMENTS

Students must receive grades of "C" or higher in upperdivision courses for the major. If a student receives a grade below "C" in any course in the major, this course must be repeated. If a second grade below " C " is received in either an upper-division course in the major already taken or in a different upper-division course in the major, the student is no longer eligible to take additional upper-division courses in that major.

## GRADUATION REQUIREMENTS

In addition to fulfilling major requirements, students seeking a degree must meet all university and college requirements. See "University Graduation Requirements," page 83, and "College Degree Requirements," page 151.

## BUSINESS ADMINISTRATION (BUS)

BUS 301 Fundamentals of Management Communication. (3) F, S, SS
Written and oral communication in a management context. Prerequisite: CIS 200. Prerequisite with a grade of "C" or higher: ENG 102. General Studies: L.
BUS 451 Business Research Methods. (3) N
Methods of collecting information pertinent to business problem solving, including design, collection, analysis, interpretation, and presentation of primary and secondary data. General Studies: L.

## BUS 502 Managerial Communication. (1-3) F, S

Analysis of various business problems, situations, and development of appropriate communication strategies. Prerequisite: MGT 502.
BUS 504 Professional Report Writing. (3) A
Preparation and presentation of professional reports.
BUS 507 Business Research Methods. (3) N
Techniques for gathering information for business decision making. Selection, design, and completion of a business-oriented research project.

## BUS 591 Seminar. (3) N

Selected managerial communication topics.
BUS 594 Study Conference or Workshop. (3) N
BUS 700 Research Methods. (3) N

## LEGAL AND ETHICAL STUDIES (LES)

LES 305 Legal, Ethical, and Regulatory Issues in Business. (3) F, S
Legal theories, ethical issues, and regulatory climate affecting business policies and decisions.
For students in the College of Business, LES 306 or its equivalent is not acceptable in lieu of LES 305.
LES 306 Business Law. (3) A
Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letters of credit, and bank deposits and collections.
LES 308 Business and Legal Issues in Professional Sports. (3) N The economic structure of professional sports and application of contract, antitrust, arbitration, and labor laws in the industry. Prerequisites: 2.00 GPA; junior standing.
LES 380 Consumer Perspective of Business Law. (3) F, S
Role of law as it affects society. Case studies are used to present principles that govern business and consumers. Lecture, television. Prerequisites: 2.00 GPA; junior standing.

LES 411 Real Estate Law. (3) A
Legal and ethical aspects of land ownerships, interests, transfer, finance development and regulations of the real estate industry.

## LES 532 Negotiation Agreements. (3) F, S

Course develops negotiation competencies to build partnerships and create lasting agreements with internal/external customers, suppliers, work teams, and external constituencies. Lecture and substantial student interaction through team exercises.
LES 579 Legal and Ethical Issues for Business. (3) F, S
Study of legal and ethical components of business decisions; self-regulation and social responsibility as strategies. Prerequisites: ACC 503; FIN 502; MGT 502; MKT 502.

## REAL ESTATE (REA)

REA 300 Real Estate Analysis. (3) A
Application of economic theory and analytical techniques to real estate markets. Topics include law, finance, appraisal, market analysis, investments, development. Prerequisite: professional program business student.
REA 331 Real Estate Finance. (3) A
Legal, market, and institutional factors related to financing proposed and existing properties. Emphasis on current financing techniques and quantitative methods. Prerequisites: FIN 300; professional program business student.
REA 380 Real Estate Fundamentals. (3) F, S
Real estate for the student/consumer with an emphasis on the applied aspects of each area of real estate specialization. Prerequisites: 2.00 ASU GPA; junior standing; not open to Real Estate majors.
REA 401 Real Estate Appraisal. (3) A
Factors affecting the value of real estate. Theory and practice of appraising and preparation of the appraisal report. Appraisal techniques. Prerequisites: REA 300; professional program business student.
REA 441 Real Estate Land Development. (3) A
Neighborhood and city growth. Municipal planning and zoning. Development of residential, commercial, industrial, and special purpose properties. Prerequisites: REA 300; professional program business student.
REA 456 Real Estate Investments. (3) A
Analysis of investment decisions for various property types. Cash flow and rate of return analysis. Prerequisites: FIN 300; professional program business student.
REA 461 Current Real Estate Topics. (3) N
Current real estate topics of interest are discussed and analyzed. Prerequisites: REA 300; professional program business student.

## SUPPLY CHAIN MANAGEMENT (SCM)

SCM 301 Supply Chain Management. (3) N
Examines the purchasing, materials, and logistics management areas. Techniques for acquiring, storing, processing, and moving material inventory are presented. Prerequisite: professional program business student.
SCM 345 Logistics Management. (3) F, S
Managing logistics activities with emphasis on integrating transportation needs with inventory, warehousing facility location, customer service, packaging, and materials handling. Prerequisites: OPM 301; professional program business student.
SCM 355 Supply Management. (3) F, S
Management of the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination. Prerequisite: professional program business student.
SCM 405 Urban Transportation. (3) N
Economic, social, political, and business aspects of passenger transportation. Public policy and government aid to urban transportation development. Prerequisite: upper-division standing or instructor approval.
SCM 432 Materials Management. (3) F, S
Study of managing the productive flow of materials in organizations, including MRPII, JIT, quality, facility planning, and job design. Prerequisites: OPM 301; professional program business student.


The tools of technology enhance the classroom experience for College of Business students and faculty.

SCM 440 Productivity and Quality Management. (3) F, S Productivity concepts at the national, organizational, and individual levels. Quality management and its relationship to productivity in all organizations. Prerequisite: professional program business student. SCM 455 Research and Negotiation. (3) F, S
Current philosophy, methods, and techniques used to conduct both strategic and operations supply chain management research and negotiation. Includes negotiation simulations. Prerequisites: SCM 355; professional program business student. General Studies: L.
SCM 460 Carrier Management. (3) N
Analysis of carrier economics, regulation, management, and ratemaking practice; evaluation of public policy issues related to carrier transportation. Prerequisite: upper-division standing or instructor approval.
SCM 463 Global Supply Chain Management. (3) A
Supply chain activities in international business with special emphasis on management of transportation, global sourcing, customs issues, and facility location in a global environment. Prerequisite: SCM 345 or instructor approval.
SCM 479 Supply Chain Strategy. (3) F, S
Synthesis of purchasing, production, transportation, and distribution systems to provide an integrated perspective of supply chain management. Prerequisites: SCM 345, 432; professional program business student. Prerequisite with a grade of "C" or higher: SCM 355.

SCM 532 Supply Chain Design and Development Strategies. (3) F A strategic orientation toward the design and development of the supply chain for purchasing, materials, and logistics systems.
SCM 541 Supply Chain Management and Control. (3) S Management and control of purchasing and logistics management systems. Total Quality Management to assess and assure customer satisfaction. Global strategies.
SCM 545 Supply Chain Continuous Improvement Strategies. (3) S Leading edge strategies such as reengineering high-performance teams and expert systems for continuous improvement of the supply chain. Seminar.
SCM 591 Seminar. (3) N
Topics such as the following are offered:
(a) Global Supply Chain Management
(b) New Product Development
(c) Quality and Productivity Management
(d) Services Operations Management

SCM 791 Doctoral Seminar. (3) A
Topics may be selected from the following:
(a) Logistics, Transportation, and Physical Distribution Management
(b) Purchasing and Materials Management

NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.


[^0]:    NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

[^1]:    Applications are not being accepted at this time.
    $2^{2}$ This program is administered by the Graduate College. See "Graduate College," page 304.

[^2]:    NOTE: For the General Studies requirement, courses, and codes (such as L, SQ, C, and H), see "General Studies," page 87. For graduation requirements, see "University Graduation Requirements," page 83. For an explanation of additional omnibus courses offered but not listed in this catalog, see "Classification of Courses," page 60.

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