# COLLEGE OF BUSINESS ADMINISTRATION

Ronald W. Eaves, *Dean*Lynn H. Turner, *Associate Dean*Kathleen Harcharik, *Director for Academic Programs and Services*Rochelle A. Kellner, *Director, Student Services*Rhonda Rhodes, *Director, Graduate Programs*Marilyn Mehaffie Ray, *Director of Development and External Relations* 

The undergraduate and graduate programs of the College of Business Administration are accredited by the American Assembly of Collegiate Schools of Business (AACSB). AACSB accreditation assures quality and promotes excellence and continuous improvement in undergraduate and graduate education for business administration.

The College of Business Administration provides seven curricula leading to the Bachelor of Science degree in Business Administration. It also provides curricula leading to the Master of Business Administration and the Master of Science in Business Administration. The Master of Science degree offers one option, EDP Auditing. Information concerning the masters curricula may be found in the graduate listings.

The undergraduate programs of study give the student an understanding of the social and economic environment in which we live and provide a common body of knowledge for all students who major in any business field. In addition, each major emphasizes, with additional course-work, specific areas of knowledge useful for the occupational fields served by that major. All students are encouraged to experiment and broaden their interests by selection of electives. It is the purpose of the College of Business Administration to develop in our students the people, technical, and managerial competence necessary for successful performance in business, industry, government, and education.

The student selects a major upon entering and immediately assumes primary responsibility for meeting the educational requirements of the program. Through early studies in the courses common to all majors (the core), the student has an opportunity to evaluate a career decision and to adjust goals, if necessary. Undergraduate courses in business fundamentals and skills equip the student with sellable entry skills. The student may augment oncampus education through job experiences in business workstudy, cooperative education, and internship programs for which the student will receive academic credit. General education courses are integrated throughout each major program. Co-curricular opportunities related to the course of study include the Cal Poly Society of Accountants; American Marketing Association: American Production & Inventory Control Society: Black Business Student Association; Delta Sigma Pi, a professional business fraternity; Finance Society; Latino Business Students Association; Law Society; M.B.A. Association; Management Information Systems Student Association; Personnel and Industrial Relations Association: Pi Sigma Epsilon: Real Estate and Development Network; Society for Advancement of Management; Society for Contracts Administration; United Shareholders Association Research Group; World Traders; Alpha Iota Delta, and Mu Kappa Tau, business honorary societies.

### MISSION OF THE COLLEGE OF BUSINESS ADMINISTRATION

The mission of the College of Business Administration is to provide quality undergraduate and graduate management education for a diverse student population. The major responsibility of the College is undergraduate education. The College also supports a quality graduate program designed primarily for working professionals. The faculty, which has both professional experience and appropriate advanced degrees, provides practical, career-oriented education.

The College seeks to instill in students the values of life-long learning, pursuing excellence, and making ethical choices. The College also seeks to cultivate in its students the capacity for critical thinking, willingness to accept challenges, skills for working with people, commitment to social responsibility, understanding of technology, and ability to respond creatively to changes in the domestic and international business environments.

The primary emphasis of the College is teaching. To promote quality teaching and the intellectual growth of the faculty, the College encourages and supports faculty involvement in research and other scholarly activities. These activities include basic or discovery research, applied research, and instructional development, with the primary focus on applied research and instructional development.

The College of Business Administration prepares its graduates for personal and professional development in business careers. Its graduates can approach business problems from a global perspective, and can apply the theories and concepts learned in their educational experiences to design practical and innovative solutions.

The College recognizes its responsibilities to develop communications with and to provide professional services to the constituencies in the region it serves. The College will work with its constituencies to provide opportunities for its students, graduates, and faculty to enhance the educational environment.

#### INDUSTRIAL RESEARCH INSTITUTE FOR PACIFIC NATIONS (IRIPAC)

The Industrial Research Institute for Pacific Nations is a non-profit organization engaged in industrial and trade development research with a focus on Pacific Rim nations. The Institute is administered as the international research division of the College of Business Administration. Designed to support the advanced study of international business and to provide specialized educational opportunities for management personnel involved in the Pacific marketplace, the program offers the generation and coordination of research projects for university faculty and students, management and economic development seminars directed at better understanding of those doing business in the Pacific Rim, establishment of a reference and resource center, and publication of research papers.

#### THE REAL ESTATE RESEARCH COUNCIL

The Real Estate Research Council of Southern California is the oldest non-profit real estate data organization in the United States. Founded in 1939, the RERC produces a quarterly publication, The Real Estate and Construction Report, which includes data on the economy and real estate markets in the seven urban Southern California counties and presents the report at a quarterly luncheon. The senior real estate faculty direct students who participate in the data gathering and analyses for the preparation of the quarterly report. Members of the RERC include major development companies, financial institutions, appraisers, investors, mortgage bankers, and other firms and individuals interested in Southern California Real Estate. RERC is coordinated by faculty in the Finance, Real Estate and Law Department.

#### **DEPARTMENTS AND MAJORS/OPTIONS**

#### MASTER OF BUSINESS ADMINISTRATION (MBA)

Rhonda Rhodes, Graduate Director

Options in:
Accounting
Agribusiness
Contract Management
Entrepreneurship
Finance, Real Estate and Law
Information Management
International Marketing
Management and Human Resources
Marketing
Operations Management
Real Estate

#### MASTER OF SCIENCE IN BUSINESS ADMINISTRATION

With option in Information Systems Audit

#### BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

with majors offered by the following departments:

Minor in Business

Minor in International Business

#### **ACCOUNTING**

Donald F. Putnam, Acting Chair, Accounting Major

Minor in Accounting

Minor in Financial Analysis

#### COMPUTER INFORMATION SYSTEMS

Michael J. Klosky, Chair, Computer Information Systems Major

Minor in Business Computer Programming

Minor in Managerial Computing

#### FINANCE, REAL ESTATE, & LAW

Javad Kashefi, Chair, FinanceReal Estate, and Law Major

Minor in Business Law

Minor in Financial Analysis

Minor in Financial Management of Public and Private Contracts

Minor in Real Estate

#### MANAGEMENT & HUMAN RESOURCES

Peggy J. Snyder, Chair, Management and Human Resources Major

Minor in General Management

Minor in Human Resources Management

Minor in Entrepreneurship and Small Business Management

#### INTERNATIONAL BUSINESS AND MARKETING

Vernon R. Stauble, Chair, Marketing Management Major Helena Czepiec, Coordinator, International Business Major

Minor in Fashion Merchandising

Minor in International Business

Minor in Marketing Management

Minor in Logistics

#### OPERATIONS MANAGEMENT

Hassan Halati, Chair, Operations Management Major

Minor in Operations Management

Minor in Interdisciplinary Quantitative Research

Minor in Total Quality Management

#### COURSES REQUIRED OF ALL BUSINESS ADMINISTRATION MAJORS

Each student who enrolls for a Bachelor of Science Degree in Business Administration is required to select one of the seven majors listed above. For all business majors, each student will be required to take the following courses:

# CORE COURSES FOR MAJOR

# REQUIRED OF ALL BUSINESS MAJORS

Legal Environment of Business Trans	.FRL	201	(4)
Acc for Decision Making I	.ACC	204	(4)
Acc for Decision Making II	.ACC	205	(4)
Acc for Decision Making III	.ACC	206*	(2)
or Elements for Decision Making	.ACC	214*	(4)
Principles of Management	.MHR	301	(4)
Principles of Marketing Mgmt	.MKT	301	(4)
Managerial Finance I	.FRL	306	(2)
Managerial Finance II	.FRL	307	(4)
Management Info Systems		310	(4)

<sup>\*</sup> If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

Managerial Statistics	314	(4)
Production & Operations Mgmt I	331	(4)
Strategic Management	410	(4)
or Strategic ManagementOM	411	

#### MICROCOMPUTER PROFICIENCY

All students in any College of Business Administration major, and all other students taking certain business courses, must demonstrate proficiency with specific microcomputer software packages. The proficiency must be demonstrated prior to taking any business course with the term "microcomputer proficiency" in the prerequisite list. Some business courses identify specific microcomputer packages in their prerequisite lists. In these cases, proficiency in the noted packages must be demonstrated prior to taking the course.

Microcomputer proficiency must be demonstrated by satisfying one of the following three alternatives: 1) CIS 101; 2) microcomputer proficiency skills tests in word processing and spreadsheet; or 3) an approved college course.

#### **COLLEGE-WIDE COURSES**

Course Descriptions

# BUS 112 Success Strategies for Business Majors (4)

Learning techniques for freshmen and new transfer students in business majors to achieve academic and professional success. Emphasizes interaction with faculty advisors, the business community, and student organizations, career planning, and campus resources. 4 lecture/problem-solving.

# BUS 299/299A/299L Special Topics for Lower Division Students (1-4)

Individual or group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisites: permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

# BUS 461, 462 Senior Project (2) (2)

Selection and completion of a project under faculty supervision. Projects are designed to be individual or group efforts toward solving real-life problems in the community, such as Small Business Institute cases. Formal report is required. Prerequisite: Senior standing. Required minimum of 120 hours.

#### BUS 499/499A/499L Special Topics for Upper Division Students (1-4)

Individual or group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisites: Consent of instructor. Instruction is by lecture, laboratory, or a combination of both.

#### **BUSINESS MINOR**

Many non-business students have expressed an interest in business courses that will better prepare them to enhance their non-business education in a business or government environment. The College of Business Administration has designed, in addition to the minors available within majors, a broad-based schoolwide minor to meet these needs. The minor in Business provides a solid foundation in accounting and finance, and complements these with coverage of management, marketing, production, and business computer information systems. Non-business students desiring more information should contact the Student Advising Center of the College of Business Administration. The student should formally enroll in the Minor before taking courses. A Minor Advisor is available to assist students.

The student must demonstrate microcomputer proficiency and complete the following required courses to fulfill the requirements for a minor in Business: Prerequisite: Microcomputer proficiency

Acc for Decision Making I	204	(4)
Acc for Decision Making II	205	(4)
Acc for Decision Making III		(2)
or Elements for Decision Making	214*	(4)

Principles of Management	301	(4)
Principles of Marketing Mgmt	301	(4)
Managerial Finance I	306	(2)
Managerial Finance IIFRL	307	(4)
Management Info Systems	310	(4)
Multicultural Org Behavior	318	(4)
Production & Operations Mgmt I	331	(4)

#### MINOR IN INTERNATIONAL BUSINESS

The College of Business Administration offers a Minor in International Business for students majoring in other fields within the College of Business and students from other Colleges of the University who have an interest in pursuing careers that are related to international business. The purpose of the minor is to provide sufficient knowledge and expertise in International Business for students to successfully apply the specialties of their fields to international careers.

More specific information regarding the Minor in International Business is found in the section on the International Business major.

#### INTERNATIONAL STUDY OPPORTUNITIES

#### China Summer Study Tour

Every summer Cal Poly provides an opportunity for students to live and study in China for six weeks. Students study in English the cultural, economic and political systems of China and have an opportunity to visit business, technical, cultural and scenic locations in the various regions of China. Students earn 12 units of credit from the following courses: BUS 362 China as a Cultural Entity (4 units); BUS 432 The Use and Role of Technology in China (4 units); BUS 452 Political Economy and Business Practices in China (4 units); BUS 482 China and the U.S.: Cross Cultural Analysis (4 units). Units may be used to satisfy major course requirements or to satisfy the General Education Area 5 requirement.

#### BUS 362 China As a Cultural Entity (4)

Direct field investigation of China as a cultural entity with attention to the central issues confronting this complex society. These issues include relationship and influence of China's history on the present dynamics of contemporary Chinese culture. Instructional materials, activities, and facilities charges. 4 lecture/problem-solving. Prerequisite: Consent of instructor. (Also listed as SA 362.)

#### BUS 432 The Use and Role of Technology in China (4)

Direct field investigation and academic study of productive processes and application of technology within China. Barriers and incentives for new technology; decision making; industry specific technology; and role of foreign countries as providers. Technology tradeoffs: environment, employment, and currency reserves. Instructional materials, activities, and facilities charges. 4 lecture/problem-solving. Prerequisite: Consent of instructor. (Also listed as SA 432.)

# BUS 452 Political Economy and Business Practices in China (4)

Direct field investigation and academic study of historical and current productive/political organization of China. State ownership and the mixed economy; economic objectives and planning. Business organization; incentives and decision making; and management. Cross cultural comparison with Western enterprise. International trade. 4 lecture/problem-solving. Instructional materials, activities and facilities charges. Prerequisite: Consent of instructor. (Also listed as SA 452.)

#### BUS 482 China and the United States: Cross Cultural Analysis (4)

Examination of critical areas of U.S. and Chinese cultures that provide insights and understanding of the comparative differences of these two civilizations; historical and contemporary differences. 4 lecture/ problem-solving. Instructional materials, activities and facilities charges. Prerequisite: Consent of instructor. (Also listed as SA 482.)

#### Semester or Year Abroad

The College of Business Administration supports the concept of international education and encourages students to investigate opportunities for overseas study. Certain courses taken at CSU International Program study centers in foreign countries are equivalent to courses in the College of Business Administration and may be used to fulfill some of the degree requirements offered by the College and/or certain general education requirements. Students should consult the International Programs Bulletin, available at the International Center, a departmental advisor, or the campus International Programs Coordinator for more information.

# CONTINUING EDUCATION IN BUSINESS

Many individual courses offered in the College of Business Administration provide practical learning opportunities to persons now employed in various career fields. By selecting courses that apply directly to a specific career, a person can enhance his or her professional capabilities, even though he or she may not be seeking a degree. Often, experience on-the-job is an adequate substitute for prerequisite courses so the student can enter upper division courses without completing preliminary courses. Courses that include in the description the prerequisite: "...or with the consent of the instructor" normally fall in this category. Many such courses are available in the evening. Information about the Open University and Continuing Education courses in business can be obtained by contacting the office of the Dean of Continuing Education at Kellogg West on campus. The College of Business Administration also provides credit or non-credit programs for business organizations on-site. Further information can be obtained by contacting the dean of the College of Business Administration.

To be eligible to take undergraduate courses in the College of Business Administration for degree credit, a person must be formally admitted to the University. Admission requirements are found in the front section of this catalog. Graduate courses and entrance requirements are listed in the graduate section of this catalog.

<sup>\*</sup> If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

# **ACCOUNTING**

Donald F. Putnam, Acting Chair Bill Adamson Glenda C. Brock Keith B. Ehrenreich Frank Ewing-Chow Richard D. Hulme Antoine G. Jabbour Rochelle A. Kellner Hong S. Pak Amy J. Putnam

Nasrollah Ahadiat John K. Cheever Anwar Y. Salimi Vinay K. Gupta Robert L. Hurt John E. Karayan Vicki S. Peden Donald F. Putnam

#### MISSION STATEMENT

The mission of the Accounting Department is to prepare accounting majors for successful, life-long careers as management professionals, with an expertise in accounting. For students in other majors, the Department provides them with a solid foundation in the uses of accounting information in the other functional areas of organizations.

The Accounting Department is committed to serving both the undergraduate program and the graduate program. The Department's primary emphasis is teaching and development of an interactive, student-centered learning environment with an emphasis on developing solutions to practical business problems. The Department's primary intellectual contributions (i.e., research) are instructional development and applied research, but also include basic scholarship. The Department's service commitment is to provide support to and to be involved in the College, the University, and the broader community.

# ACCOUNTING EDUCATION PROGRAM

The Accounting Department provides an education for students who wish to be management professionals with a thorough knowledge of the essential concepts of accounting and a strong background for students desiring professional careers in public, private, government, and not-for-profit accounting. The students majoring in accounting may select courses which will prepare them specifically for one or more of these career fields.

The accounting courses are taught in the framework of modern business complexity so that the students develop their decision-making skills in realistic environments and learn the wide-range of ways in which the accountant's skills are used to effectively manage an enterprise.

# PREREQUISITE CORE FOR UPPER DIVISION ACCOUNTING PROGRAM

Before enrolling in the upper-division courses in the Accounting Program, accounting majors are expected to have completed college-level courses in English, mathematics/statistics, economics, computers, business law, and introduction to accounting.

Students must have earned a grade of "C" (2.0) or better in each of the twelve identified lower-division courses before registering for any upper-division accounting course. The identified courses are as follows:

ENG 104 and 105; CIS 101 or microcomputer proficiency\*\*
MAT 125 and STA 120; FRL 201
EC 201 and 202
ACC 204, 205, 206, or ACC 214\*\*\* and 298

Nonaccounting majors are expected to have met the above requirements to the extent that the cited courses or their equivalents are included in the requirements of their major.

#### DEPARTMENT POLICY ON ACADEMIC DISQUALIFICATION

The Accounting Department may disqualify students at the end of any quarter if either: (1) their overall GPA, Cal Poly GPA, or their major GPA is below a 2.0 by 7 grade points or more, or (2) more than one-third of the units taken during the past twelve-month period do not satisfy the degree requirements.

Determination of the GPA in the major and proportion of courses taken to satisfy the degree requirements are the responsibility of the department.

Further, the department has an additional policy on satisfactory progress. Specifically, if a student fails to complete any 300- or 400-level accounting course on the second try, with a grade of C or better, he/she will have an advising hold placed on his/her records. For this purpose, a "W" does not count as a try, but a "U" does. To release the hold, students must see the Department's Chair (i.e., Probationary Student Advisor). In most cases these students will be strongly counseled to seek a more suitable major.

#### CORE COURSES FOR MAJOR \*

COKE COOKSES FOR WASOK		
(Microcomoputer Proficiency)**		
REQUIRED OF ALL BUSINESS MAJORS	001	(4)
Legal Environment of Business Trans	201 204	(4)
Acc for Decision Making IACC Acc for Decision Making IIACC	204	(4) (4)
Acc for Decision Making III	205	(2)
or Elements for Decision-Making	214***	(4)
Principles of Management	301	(4)
Principles of Marketing Mgmt	301	(4)
Managerial Finance I	306	(2)
Managerial Finance IIFRL	307	(4)
Management Info Systems	310	(4)
Managerial StatisticsOM	314	(4)
Production & Operations Mgmt I	331	(4)
Strategic Management	410	(4)
or Strategic ManagementOM	411	
ACC REQUIRED COURSES		
Orientation to Prof Acctg	298	(2)
Cost Accounting	300	(4)
Intermediate Acctg IACC	301	(4)
Intermediate Acctg IIACC	302	(4)
Intermediate Acctg IIIACC	303	(4)
Acctg Info SystemsACC	305	(4)
Auditing Theory	419	(4)
Federal Tax I	431	(4)
Senior Project I	461	(2)
Acctg Theory & Research	465	(4)
OTHER COURSES TO COMPLETE MAJOR		
Law for Accountants	408	(4)
Career Tracks (See Department for List of Career Tracks and El	ectives)	(12)
SUPPORT COURSES		
Principles of Economics****	201	(4)
Principles of Economics****	202	(4)
Money and Banking	308	(4)
Freshman English, II****ENG	105	(4)
Writing for the Professions	301	(4)
Intro to Calculus for Bus****	125	(4)
Statistics With Applications****	120	(4)
Restricted Electives: (cannot include courses in Business, Econ	nomics,	10
Public Administration (e.g., PLS 315, PLS 318), or Statistics)*	(2	(0.4)
Unrestricted Electives****	(	(U-4)

#### GENERAL EDUCATION COURSES

(Required of all students)

A total of 72 quarter units of General Education courses, Track B, are required for all majors in the College of Business Administration. See the list of approved courses under *General Education Requirements* in this catalog.

<sup>\*\*\*</sup> If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

 $<sup>^{\</sup>star}$  A 2.0 cumulative GPA is required in core courses including option courses for the major in order to receive a degree in the major.

<sup>\*\*</sup>See Microcomputer Proficiency" in the College of Business Administration section of this catalog.

\*\*\*\*\* frany of these specific courses are used for General Education, then the Restricted Electives or Unrestricted Electives will be increased by four units per course under General Education Requirements in this catalog.

#### Areas 1 through 4

#### Area 5

#### MINOR IN ACCOUNTING

The Accounting Department provides non-Accounting, undergraduate majors with the opportunity to acquire accounting knowledge and skills by completing the requirements for the Minor in Accounting as outlined below. The purpose of the minor is (1) to develop marketable skills for persons with majors other than Accounting, (2) for those students majoring in technical fields that involve the direct or indirect use of the knowledge and skills of accounting, and (3) for those students who wish to gain a better understanding of accounting for personal use.

It is possible for students majoring in most non-Accounting fields to complete the minor within the normal requirements of their degrees through careful planning and scheduling of their required and elective courses.

No courses in the minor program may be waived or substituted. The student is responsible for meeting the requirements of the minor program that are in effect at the date of signing the formal contract for the Minor in Accounting. It is recommended that the contract be signed by the student before beginning the minor program.

For more information or to enroll in the minor, contact the Minor Coordinator of the Accounting Department.

#### **COURSES IN MINOR**

#### CORE (28 Units):

Acc for Decision Making I	204	(4)
Acc for Decision Making II	205	(4)
Acc for Decision Making IIIACC	206*	(2)
or Elements of Decision-MakingACC	214*	(4)
Orientation to Prof Accounting	298	(2)
Cost Accounting	300	(4)
Intermed AccountingACC	301	(4)
Intermed AccountingACC	302	(4)
Intermed AccountingACC	303	(4)

#### **DIRECTED ELECTIVES (8 Units):**

Select one of the following 8-unit combinations (each course 4 units):

Financial: ACC 401, ACC 403, ACC 404 or ACC 465

Managerial: ACC 412 and ACC 413

Auditing: ACC 419 and ACC 420, ACC 424, or CIS 433

Taxation: ACC 431 and ACC 432

Auditing/Taxation: ACC 419 and ACC 431 Not-For-Profit: ACC 426 and ACC 428

(Other combinations require special approval by the Minor Coordinator and the Chair of the Accounting Department, depending upon the student's completion of the required course prerequisites.)

#### MINOR IN FINANCIAL ANALYSIS

The Accounting Department provides non-Accounting undergraduate majors with the opportunity to acquire skills to qualify for positions such as cost/budget analyst and project control analyst. The program will greatly benefit Finance majors interested in careers as bankers and financial planners. Operations Management majors will be able to combine their skills in quantitative methods, especially forecasting, with the ability to work with accounting records.

It is possible for students majoring in most non-accounting fields to complete the minor within the normal requirements of their degrees through careful planning and scheduling of required and elective courses.

No courses in the minor program may be waived or substituted. The student is responsible for meeting the requirements of the minor program that are in effect at the date of signing the formal contract for the minor in Financial Analysis. It is recommended that the contract be signed by the student before beginning the minor program. For more information or to enroll in the minor, contact the Minor Coordinator of the Accounting Department.

#### **COURSES IN MINOR**

#### CORE (24 units):

Acc for Decision Making I	204	(4)
Acc for Decision Making II	205	(4)
Acc for Decision Making III	206***	(2)
or Elements for Decision-Making	214***	(4)
Financial Statement Analysis	226	(4)
Managerial Finance I	306	(2)
Managerial Finance IIFRL	307	(4)
Management ScienceOM	315	(4)
DIRECTED ELECTIVES (12 units):		
Business Forecasting and Financial Planning FRL	363	(4)
or Forecasting Methods for ManagementOM	415	. ,
Financial Simulation	467	(4)
or Decision Support Systems	350	( )
Upper-Division Accounting (4 units):		
Accounting Information Systems	305	(4)
or Controllership	413	( ' '
or Management Control in	110	
Not-For-Profit Organizations	428	
Not For Front Organizations	720	

(Other upper-division accounting courses may be selected with the concurrence of the Minor Coordinator and Chair of the Accounting Department, depending upon the student's completion of the required prerequisite courses.)

#### **Course Descriptions**

#### ACC 200 Special Problems for Lower Division Students (1-2)

Individual or group investigation research, or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter.

#### ACC 204 Accounting for Decision Making I (4)

Introduction to financial and managerial accounting. Emphasis is on the basic concepts and limitations of accounting information systems (AIS) and the use of AIS-generated internal management reports and financial statements in decision making and in meeting various reporting requirements. 4 lecture/problem-solving. Prerequisites: EC 201 and Microcomputer Proficiency. Recommended grade of C (2.0) or better in MAT 012 or equivalent.

# ACC 205 Accounting for Decision Making II (4)

Second course in introduction to financial and managerial accounting. 4 lecture/problem-solving. Prerequisites: ACC 204. For accounting majors a minimum grade of "C" (2.0) in ACC 204 is required.

#### ACC 206 Accounting for Decision Making III (2)

Third course in introduction to financial and managerial accounting. 2 lecture/problem-solving. Prerequisites: ACC 205 and EC 202. Recommended concurrent enrollment in ACC 298; recommended concurrent enrollment in FRL 306. For accounting majors a minimum grade of "C" (2.0) in ACC 205 is

<sup>\*\*\*</sup> If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

required. **Transfer Students**: Take ACC 214 instead of ACC 206 if your community-college accounting was preparer-based (See Accounting Department for current list of user-based colleges.).

### ACC 214 Elements of Decision Making (4)

Introduction to financial and managerial accounting information systems, including basic concepts, limitations, tools and methods. Uses of accounting information, including financial statements and internal reports, in decision making and in meeting various reporting requirements. 4 lecture/problemsolving. Prerequisites: Level 1 Microcomputer Proficiency, EC 201, EC 202, and one year of community college preparer-based accounting. Satisfies ACC 206 requirement for transfer students.

#### ACC 226 Financial Statement Analysis (4)

Analysis and use of financial reports. Emphasis on interpretation of end result to prepare student to better understand and analyze actual financial reports. Statements used extensively in illustrations, problems, cases, and analysis. 4 lecture/problem-solving. Not open to accounting majors. Prerequisites: ACC 205, and Math 125 or OM 315.

#### ACC 231 Personal Taxation and Planning (4)

Basic principles of taxation and their application to personal financial planning, including tax return preparation. Not open to accounting majors. Credit will not be granted for both ACC 231 and ACC 431. 4 lecture/problem-solving.

#### ACC 298 Orientation to Professional Accounting (2)

Accounting cycle. How transactions are presented in the financial process, including preparation of financial statements. Exposure to breadth of accounting profession, career choices available and what accountants actually do at work. Required skills in accounting profession. 2 lecture/problemsolving. Prerequisites: ACC 205 and ENG 104. For accounting majors a minimum grade of "C" (2.0) in ACC 205 is required.

# ACC 299/299A/299L Special Topics for Lower Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

#### ACC 300 Cost Accounting (4)

Cost accounting fundamentals; cost allocation; budget and standards; cost information for decision and control; decision models; cost information; cost behavior and analysis. 4 lecture/problem-solving. Prerequisites: For accounting majors, a minimum grade of "C" (2.0) in ACC 204, ACC 205, ACC 206 or ACC 214\*, and ACC 298; ENG 104 and ENG 105; STA 120 and MAT 125; FRL 201; EC 201 and EC 202; and CIS 101 or Microcomputer Proficiency. For non-accounting majors, a minimum grade of "C" (2.0) in ACC 204, ACC 205, ACC 206 or ACC 214\*; ENG 104; STA 120 or MAT 125; and CIS 101 or Microcomputer Proficiency.

# ACC 301, 302, 303 Intermediate Accounting (4) (4) (4)

Analytical study and application of accounting theories and techniques including current literature of authoritative accounting organizations. 4 lecture/problem-solving. Prerequisites for ACC 301: For accounting majors, minimum grade of "C" (2.0) in ACC 300. For non-accounting majors, minimum grade of "C" (2.0) in ACC 204, ACC 205, ACC 206 or ACC 214\*, and ACC 298; ENG 104; STA 120 or MAT 125; and CIS 101 or Microcomputer Proficiency. Prerequisites for ACC 302: Minimum grade of "C" (2.0) in ACC 301. Prerequisite for ACC 303: A minimum grade of "C" (2.0) is required in ACC 302 to advance to ACC 303. NOTE: ACC 301, ACC 302, and ACC 303 must be taken in sequence.

#### ACC 305 Accounting Information Systems (4)

Role, design, implementation, and management of the accounting information system as a subset of the management information system. Interface between accountants and computer specialists. Short case studies. 4 lecture/problem-solving. Prerequisites: ACC 205 and CIS 310. For Accounting Majors, minimum grade of "C" (2.0) in ACC 205.

#### ACC 400 Special Problems for Upper-Division Students (1-2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter.

#### ACC 401 Advanced Accounting (4)

Miscellaneous advanced financial accounting topics, including leases, interim reporting, discontinued operations, segmental reporting, partnerships, and accounting for effects of changing prices. Heavy reliance upon official pronouncements to determine proper footnote disclosures. 4 lecture/problemsolving. Prerequisite: Minimum grade of "C" (2.0) in ACC 303.

# ACC 403 Consolidation and Foreign Currency Accounting (4)

Analytical study and application of principles of consolidation and foreign currency translation. 4 lecture/problem-solving. Prerequisite: Minimum grade of "C" (2.0) in ACC 302.

# ACC 404 International Accounting (4)

Examination and discussion of accounting theories, techniques, procedures, accounting standards and regulations used in other nations. Examination of contemporary practices prevailing in different parts of the world. Emphasis on multinational corporations, and their needs and practices. 4 lecture/problem-solving. Prerequisite: For accounting majors, minimum grade of "C" (2.0) in ACC 302. (Also listed as IB 404.)

#### ACC 412 Advanced Cost Accounting (4)

Advanced cost accounting techniques focusing on mathematical models and contemporary technology in cost accounting, including decision making under uncertainty, use of linear regression in cost estimates, service department cost allocations using simultaneous equations, and stochastic CVP. 4 lecture/problem-solving. Prerequisite: Minimum grade of "C" (2.0) in ACC 300.

#### ACC 413 Controllership (4)

Analysis of controllership function in a business organization, and general problems of accounting controls. Cases and/or problems. 4 lecture/problemsolving. Prerequisite: Minimum grade of "C" (2.0) in ACC 300..

#### ACC 414 Accounting for Government Contracts (4)

Federal Acquisition Regulations Systems as related to government procurement, types of government contracts and roles of contracting officers and contract auditors in contract administration, cost accounting standards and related regulation, and termination of government contracts. 4 lecture/problem-solving. Prerequisites: Minimum grade of "C" (2.0) in ACC 300.

# ACC 419 Auditing Theory (4)

Theory of auditing and its objectives; procedures and techniques to attain objectives; types of reports issued by auditors; professional responsibilities and ethics of auditors. 4 lecture/problem-solving. Prerequisites: Minimum grade of "C" (2.0) in ACC 303 (Substitute ACC 305 for nonaccounting majors), and OM 314.

#### ACC 420 Advanced Auditing (4)

Extensive procedures and techniques in carrying out audit objectives; working paper development and preparation; preparation of opinion and report rendered by auditors; application of EDP to auditing. Current literature. Major project. 4 lecture/problem-solving. Prerequisite: Minimum grade of "C" (2.0) in ACC 419.

<sup>\*\*\*</sup> If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 204: attenuise take ACC 214

#### ACC 424 Internal Auditing (4)

Objectives, principles and methods of internal and operational auditing with special emphasis on examination and appraisal of internal controls in the various reporting systems. Problems of communication, delegation of authority, or organization. 4 lecture/problem-solving. Prerequisite: Minimum grade of "C" (2.0) in ACC 419.

#### ACC 426 Government and Not-For-Profit Accounting (4)

Governmental and institutional accounting and accounting for fiduciaries. 4 lecture/problem-solving. Prerequisite: Minimum grade of "C" (2.0) in ACC 302.

# ACC 428 Management Control in Not-For-Profit Organizations (4)

In-depth study of processes of budgeting, planning, and controlling in governmental, hospital, and educational institutions. 4 lecture/problem-solving. Prerequisites: Minimum grade of "C" (2.0) in ACC 300.

# ACC 431 Federal Tax I (4)

Incomes, expenses, exclusions, deductions, and credits for individual tax returns. 4 lecture/problem-solving. Prerequisite: Minimum grade of "C" (2.0) in ACC 301 (ACC 305 for nonaccounting majors).

# ACC 432 Federal Tax II (4)

Federal taxes on partnerships, corporations, estates, trusts, reorganizations and tax planning. 4 lecture/problem-solving. Prerequisite: Minimum grade of "C" (2.0) in ACC 431.

# ACC 434 Practice of Income Tax Preparation (2)

Federal and state income tax laws as related to individuals; tax return preparation, under faculty supervision, for the elderly and low-income taxpayers. One 4-hour activity.

# ACC 435 Tax Research and Planning (4)

Development of tax research capabilities; interpreting statutes, cases, and rulings; and communicating research results within an environment of individual and business tax planning and analysis. Administrative judicial procedures governing tax controversies. 4 seminar discussion. Prerequisites: Minimum grade of "C" (2.0) in ACC 431.

# ACC 436 Taxation of Real Estate Transactions (4)

Taxation of gains and losses and other items related to sales, exchanges and other transactions involving real estate. 4 lecture/ problem-solving. Prerequisite: FRL 305.

#### ACC 441, 442 Internship in Accounting (1-8) (1-8)

On-the-job training in accounting involving <a href="new-university-level">new-university-level</a> learning experiences. Experiences may be useful as a basis for senior projects. Total credit limited to eight units each. Maximum of four units of Speciality Options may be satisfied by internship. Prerequisite: Permission of the Director of the Internship Program, Accounting Department.

#### ACC 443 Internship in Public Accounting (4)

On-the-job training with a CPA firm in phases of auditing or public accounting. The experience must be <u>new</u> to the student. Analytical reports of work accomplished by each student are made periodically to the faculty coordinator. Units of college credit granted are dependent on departmental approval. Maximum of four units of Speciality Options may be satisfied by internship. Prerequisite: Minimum grade of "C" (2.0) in ACC 419, and consent of the Director of the Internship Program, Accounting Department.

#### ACC 461 Senior Project (2)

Familiarization with probable sources of data and information for researchoriented projects. Problem identification and analysis. Research methodology. Application of report writing tools and techniques. Project(s) must involve research <u>and</u> writing. Prerequisites: Minimum grade of "C" (2.0) in ACC 302 and ENG 301.

# ACC 462 Senior Project (2)

Selection and completion in formal report form of one or more project(s) under faculty supervision. Project(s) are research oriented and typical of problems which graduates may be required to solve in future occupations. Project(s) must involve library research and/or field study <u>and</u> writing. Prerequisite: Minimum grade of "C" (2.0) in ACC 461.

# ACC 465 Accounting Theory and Research (4)

Study of the general frame of reference for the evaluation and development of sound managerial and financial accounting practices. Emphasis on the normative rather than the descriptive approach-not a review of accounting professional pronouncements. Enhances analytical, research, judgmental, and communication skills of students. Four seminar discussions. Prerequisite: Minimum grade of "C" (2.0) in ACC 303 and ACC 419.

# ACC 499/499A/499L Special Topics for Upper Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

# COMPUTER INFORMATION SYSTEMS

Michael J. Klosky, *Chair* Thomas H. Athey Donald L. Bell John B. Crawford Steven S. Curl Vijay D. Deokar Ronald W. Eaves Chi Hwang Koichiro R. Isshiki Daniel P. Manson

Ida W. Mason Larisa Preiser-Houy Steven R. Powell Louise L. Soe Robert V. Stumpf Lavette C. Teague Ward D. Testerman Susan J. Wilkins

#### MISSION

The Computer Information Systems Department views its mission as complimentary to that of the College of Business Administration and University missions. The Department is committed to provide opportunities to a diverse and multicultural student body for quality education in Computer Information Systems at the undergraduate and graduate levels, with particular emphasis on undergraduate preparation. This commitment also extends to the provision of supportive courses for other departments of the College of Business Administration so as to enhance their understanding of the increasingly critical role of information systems and information technology in organizations.

The academic programs of the Department enable students to obtain an indepth specialization in one of several critical areas of the Information Systems field, and also to achieve a broad understanding of the general knowledge necessary to become an effective practitioner in this field. Both the areas of specialization and general information systems knowledge are oriented towards the cutting edge of technology as practiced by and being implemented in industry. The commitment of the department to master's level education provides quality support in both general and specialized areas of the field. At both the graduate and undergraduate levels, our programs seek to emphasize the effective and practical application of the principles of Computer Information Systems to support the operational, tactical, and strategic objectives of the organizations with which our students will be associated and to emphasize the quality professional communication skills which permit our students to attain a mastery of group dynamics in professional settings.

In support of the essential aspects of the Department's Mission, the Department strives for a strong practical orientation for our faculty and students which is based upon and promoted by access to state of the art hardware and software for use by students and faculty in the classroom and for research. The Department also strives to retain the technical currency of faculty through links with industry and continued research and consulting. To ensure that faculty have strong skills at working with industry, all our new faculty are required to have substantial business experience in the profession prior to employment with the Department. The student body also is afforded this technical currency through aggressive and continuous monitoring and upgrading of our course offerings to reflect the dynamics of the Information Systems field.

The Cal Poly approach to computer information systems is unique in the field of computer education in several ways. First, the computer information systems courses are integrated with a fundamental core of business administration courses to meet the needs of the major job markets, business and government. Second, the program concentrates on the practical application of how to use the computer to help solve management problems, rather than the engineering aspects of how to design the internal workings of a computer. Third, the program is designed with the student in mind—he or she is prepared not only for well paid employment but also a lifetime of learning and professional growth.

A student majoring in computer information systems will become prepared to seek employment in a variety of computer related positions such as programmer, systems analyst, data base administrator, telecommunications analyst, project leader, data processing manager, and information center manager, consultant, or product specialist.

The Computer Information Systems Department offers two minors: Business Computer Programming and Managerial Computing. The purpose of these minors is to develop marketable skills for a person not able to find immediate employment in his or her chosen field. Also those students majoring in technical fields that involve the use of the computer may wish to develop adjunct skills that may prove to be complementary to their major course of study. Please see the Department Chair, Building 98, Room C4-11, 869-3235 if you are interested in enrolling in either of these minors.

#### CORE COURSES FOR MAJOR\*

Required of all Business Majors

required of all business iviajors		
(Microcomputer Proficiency) ** Legal Environment of Business Transactions .FRL Accounting for Decision Making I .ACC Accounting for Decision Making II .ACC Accounting for Decision Making III .ACC or Elements for Decision Making .ACC or Elements for Decision Making .ACC Principles of Management .MHR Principles of Marketing Mgmt .MKT Managerial Finance I .FRL Managerial Finance II .FRL Management Info Systems .CIS Managerial Statistics .OM Production & Operations Mgmt I .OM Strategic Management .MHR or Strategic Management .OM CIS REQUIRED COURSES	201 204 205 206*** 214*** 301 306 307 310 314 331 410 411	(4) (4) (2) (4) (4) (2) (4) (4) (4) (4) (4)
	004	(4)
Object Oriented ProgrammingCISSystems Analysis and DesignCISPersonal Computer ComponentsCISObject-based ProgrammingCISBusiness TelecommunicationsCISExecutive Support SystemsCISInformation Systems CareersCISSystems Development ProjectCIS	234 235 251 254 267 311 328 466	(4) (2) (2) (4) (4) (2) (4)
EACH CIS MAJOR WILL SELECT 28 UNITS FROM THE FOLLO SELECTION DEPENDS ON CAREER TRACK SELECTED AND A CONSULTATION.	DVISOR	(28)
Structured COBOL Programming	264	(4)
Programming with c++	284	(4)
Structured Systems Analysis	335	(4)
Client/Server App Development	338	(4)
Data Modeling	345	(4)
Local/Metro Area Networks	347	(4)
Object COBOL Programming	364	(4)
Geographic Information Systems	381	(4)
Rapid Application Development	406	(4)
Object Analysis and Design	415	(4)
Wide Area and Voice Networks	417	(4)
Multimedia & Image Processing	421	(4)
Workgroup Support Systems	431	(4)
EDP Auditing	433	(4)
Managing Business Networks	437	(4)
Executive Information Systems	451	(4)
Advanced c++ Programming	454	(4)
Network Analysis & Design	457	(4)

<sup>\*</sup> A 2.0 cumulative GPA is required in core courses including option courses for the major in order to receive a decree in the major.

<sup>\*\*</sup>See "Microcomputer Proficiency" in the College of Business Administration section of this catalog

<sup>\*\*\*</sup>If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

#### SUPPORT AND ELECTIVE COURSES

#### CAREER TRACK SUPPORT COURSES

4 units from Business or Economics, with Career Track advisor approval.

4 units from other than Business, Economics, Public Administration, and Statistics with Career Track advisor approval.

#### BUSINESS AND ECONOMICS SUPPORT COURSES

These courses are required of all CIS majors.

Principles of Economics	201****	(4)
Principles of Economics	202****	(4)
Statistics with Applications	120****	(4)

Restricted Electives (cannot include courses in Business, Economics, Public Administration (e.g., PLS 315, PLS 318) or Statistics]\*\*\* (4-12)

#### NON-BUSINESS/ECONOMICS SUPPORT COURSES

Soloct A units from the following which have not already

Select 4 units from the following which have not alre	eauy		
been used for General Education			. (4)
Acting	.THR	151/151L	(4)
Public Speaking	.COM	100	(4)
Interpersonal Communication	.COM	103	(4)
Debate Theory and Practice	.COM	155	(2)
Advocacy and Argument	.COM	204	(4)
Forensics Practices	.COM	255	(2)
Forensics Practices	.COM	355	(2)
Forensics Practices		455	(2)
Group Discussion	.COM	337	(4)
Small Group Communication	.COM	339	(4)
Freshman English II	.ENG	105	(4)
Writing for the Professions	.ENG	301	(4)

#### GENERAL EDUCATION COURSES

(Required of all students)

A total of 72 quarter units of General Education courses, are required for all majors in the College of Business Administration. See the list of approved courses under General Education Requirements in this catalog.

#### Areas 1 through 4

Select courses from approved list			(64)
Area 5			
Multicultural Organizational Behavior			(4)
Select one course from approved list [cannot includ	e courses	in	
Business, Economics, Public Administration (e.g	., PLS 315	, PLS 318),	
or Statistics]			. (4)

#### CAREER TRACKS IN CIS

The Computer Information Systems Department has established four career tracks in the major. These are: 1) Applications Software Development, 2) Business Systems Analysis, 3) Executive Support Systems, and 4) Telecommunications Analysis. Every CIS major must select one of these career tracks after taking CIS 328, and after having consulted with a CIS faculty advisor. The career track selected will dictate which upper division CIS electives the student will take, with the courses specified in a written contract with the CIS faculty advisor. The contract terms must be met in order for the student to graduate with a major in CIS.

Also, as noted above in the list of support courses, a total of two support courses (8 units) must be selected during consultation with a CIS career track faculty advisor. These two courses will also be itemized in the career track contract and must be taken in order to graduate with a major in CIS.

#### MICROCOMPUTER PROFICIENCY

The College of Business Administration has established a requirement that all students with a major in any CBA department demonstrate microcomputer proficiency. In particular, the student must prove this proficiency before registering for any course with either an explicit or hidden microcomputer proficiency prerequisite. Microcomputer proficiency must be demonstrated by satisfying one of the following three alternatives: 1) CIS 101, 2) microcomputer proficiency skills tests in word processing and spreadsheet, or 3) an approved college course.

#### MINOR IN BUSINESS COMPUTER PROGRAMMING

The Computer Information Systems Department provides non-CIS majors with the opportunity to acquire programming expertise in the area of business applications program development by completing the requirements for Minor in Business Computer Programming as outlined below. The purpose of this minor is (1) to develop marketable skills for people with majors other than Computer Information Systems, (2) for those students majoring in technical fields that involve the use of the computer, and (3) for those students who wish to gain a much better understanding of the computer for personal use.

For more information or to enroll in the minor, please contact the CIS department Secretary in Building 98, Room C4-11, (909) 869-3235.

# **COURSES FOR MINOR (24 units)**

Microcomputer proficiency. Object Oriented Programming .CIS Systems Analysis and Design .CIS Personal Computer Components .CIS Object-based Programming .CIS Business Telecommunications .CIS	234 235 251 254 267	(4) (4) (2) (2) (4)
Pick 1 pair from:		
Structured COBOL Programming	264 364	(4) (4)
Programming with c++	284 454	(4) (4)
or	101	(1)
Client/Server Appl Development	338 406	(4) (4)
Rapid Application Development	400	(4)

# MINOR IN MANAGERIAL COMPUTING

The Computer Information Systems Department provides non-CIS majors with the opportunity to acquire the background to effectively use and train others in the use of computing resources. These resources include those used for word processing, spreadsheets, database inquiry and decision support. The purposes of this minor are to provide students with the knowledge and skills necessary (1) to effectively use the computing resources found in modern organizations, (2) to train and aid others to use managerial computing resources, (3) to manage the use of computing resources by organizational staff members, (4) to evaluate, select and install managerial computing resources, and (5) to perform information requirements planning.

For more information or to enroll in the minor, please contact the CIS department Secretary in Building 98-Room C4-11, Extension 3235.

#### **COURSES FOR MINOR (24 units)**

Microcomputer proficiency.

Object Oriented Programming	234	(4)
Systems Analysis and Design	235	(4)
Personal Computer Components	251	(2)
Object-based Programming	254	(2)
Executive Support Systems	311	(4)

<sup>\*\*\*\*</sup>If any of these specific courses are used for General Education, then the Restricted Electives or Unrestricted Electives will be increased by four units per course up to the unit maximum identified in each elective category.

Choose one course from the following:

Geographic Information Systems	381	(4)
Multimedia & Image Processing	421	(4)
Workgroup Support Systems		(4)

#### COURSE DESCRIPTIONS

# CIS 101 Introduction to Microcomputing (4)

Covers (1) introduction to microcomputers and Windows; (2) word processing; (3) spreadsheet; and (4) microcomputer database. Problem solving using software packages adopted by the College of Business Administration. Meets Level 2 microcomputer proficiency. Not open to those having passed CIS 102, CIS 103, CIS 104, CIS 105, CIS 110, or CIS 111. Credit/No Credit. 4 lecture/problem-solving.

# CIS 200 Special Problems for Lower Division Students (1-2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter. May be graded on CR/NC basis.

#### CIS 234 Object Oriented Programming (4)

Introduction to computer programming of business information systems using an object oriented development tool. Event driven and graphical interface programming projects. 4 lecture/problem solving.

Prerequisites: Microcomputer proficiency.

#### CIS 299/229A/229L Special Topics for Lower Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

#### CIS 235 Systems Analysis and Design (4)

Introduction to traditional and object oriented systems analysis and design approaches. Determination of user system requirements. User/computer interface design. Normalization and Entity/Relationship Diagrams. Implementation of system using tools from prerequisite courses. Class hierarchies, structures, and collaborations of objects. 4 lecture/ problem solving. Prerequisite: CIS 234.

#### CIS 251 Personal Computer Components (2)

Understanding and comparing personal computer hardware components. Configuring PC's for use in business and home. Emphasis on what components do rather than how they work. Tips for estimating cost, making purchases, and dealing with vendors. 2 lecture/ problem solving. Prerequisite: none (CIS 101 or equivalent recommended).

#### CIS 254 Object-based Programming (2)

Introduction to computer programming using an object-based language. Projects in business application software development in a graphical user interface and event-driven environment requiring relational database accessing and updating. 2 lecture/ problem solving. Prerequisite: CIS 235.

# CIS 264 Structured COBOL Programming (4)

Application of structured programming techniques to the development of information systems software. Emphasis on program logic design, COBOL syntax, as well as relational database accessing and updating with embedded SQL. 4 lecture/ problem solving. Prerequisite: CIS 328.

#### CIS 267 Business Telecommunications (4)

Telecommunications link components and functions, concentrators, multiplexors, telecom protocols, OSI model, telecom regulations, integrated traffic on WAN's and LAN's, network applications. 4 lecture/ problem solving. Prerequisites: CIS 234 and 251.

#### CIS 284 Programming with c++ (4)

Foundations of c and c++. Operators, functions, arrays, structures, files, and classes. Introduction to Windows programming. 4 lecture/ problem solving. Prerequisite: CIS 328.

#### 310 Management Information Systems (4)

Introduction to the application of information technology in organizations. The role of business managers and staff professionals in using and developing MIS systems. Case projects. 4 lecture/problem-solving. Prerequisites: ACC 204, MHR 301, and microcomputer proficiency level 1.

# CIS 311 Executive Support Systems (4)

Application of object oriented computing techniques for the development of information systems in support of executives. Use of multiple forms of information. 4 lecture/ problem solving. Prerequisites: CIS 235 and CIS 310.

# CIS 328 Information Systems Careers (2)

Career opportunities and specialties within Computer Information Systems. Job search preparation, strategies and techniques. Making good impressions during interviews and on the job. Career planning and enhancement. Individual or group investigation, research, studies, or surveys of selected problems. 2 units. Prerequisites CIS 267 and CIS 311.

# CIS 335 Structured Systems Analysis (4)

Application of structured analysis and design methods and tools to the development of information systems. Systems development using nonprocedural tools. 4 lecture/problem-solving. Prerequisites: Microcomputer proficiency, CIS 328.

#### CIS 338 Client/Server App Development (4)

Distributed Database Architectures, design and implementation. Transaction processing, two-phase, time-stamp, optimistic concurrency control mechanisms. Client/Server architectures, applications development using GUI front ends. Distributed Database management. 4 lecture/ problem solving. Prerequisite: CIS 254 and CIS 267

#### CIS 345 Data Modeling (4)

Advanced data modeling concepts. Relation of data modeling to event modeling. Data modeling for object-oriented and expert systems. Enterprise level modeling. 4 lecture/problem-solving. Prerequisites: CIS 335.

#### CIS 347 Local Area Networks (4)

Analysis of hardware and software used in the design of local area networks. Analysis of transmission media, systems architectures, and cost/benefit tradeoffs. Analysis of specific vendor LAN's. Interconnectivity issues. 4 lecture/problem-solving. Prerequisite: CIS 328.

# CIS 364 Object COBOL Programming (4)

Object oriented computer programming of complex business applications software using Object COBOL. Programming projects requiring graphical user interfaces and database updating. 4 lecture/ problem solving. Prerequisite: CIS 264.

#### CIS 381 Geographic Information Systems in Business (4)

Application of information technology and processing techniques to business problem solving. Use of computer-based mapping software. 4 lecture/ problem solving. Prerequisite: CIS 328.

# +CIS 400 Special Problems for Upper Division Students (1-2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter. May be graded on CR/NC basis.

#### CIS 406 Rapid Systems Development (4)

Rapid systems development methods and tools. Emphasis on the prototyping approach to systems development and human/ergonomic factors in designing user interfaces. Use of 4GLs, front/back-end CASE tools, code generators and similar rapid development tools. 4 lecture/problem-solving. Prerequisites: CIS 254 and 311.

#### CIS 415 Advanced System Analysis and Design (4)

Comparison and evaluation of alternative methods for systems analysis and design. Automated tools and techniques for analysis and design of computer information systems. Tailoring system life cycle to project needs. Written reports and case studies. 4 lecture/problem-solving. Prerequisites: CIS 328.

# CIS 417 Wide Area/Voice Networks in Business (4)

Hardware and software concepts regarding wide area and voice networks. Analog and digital systems and their interconnection. 4 lecture/problem-solving. Prerequisite: CIS 347.

# CIS 421 Image-Based Systems (4)

Application of image processing for providing business solutions. Image acquisition, management, and workflow design. Multimedia computing on multiple platforms. Image-based cases and software projects. 4 lecture/problem-solving. Prerequisite: CIS 328.

#### CIS 431 WorkGroup Computing (4)

Support of workgroups through the use of computing technology. Shared communication systems, multimedia information systems, design and management concerns for effective workgroup computing. 4 lecture/problemsolving. Prerequisites: CIS 328.

# CIS 433 EDP Auditing (4)

Fundamentals of EDP auditing. Understanding EDP controls, types of EDP audits, risk assessment and concepts, and techniques used in EDP audits. Includes case studies. 4 lectures. Prerequisite: ACC 419 or (CIS 328 and CIS 406).

#### CIS 437 Network Management (4)

Administering and tuning telecommunications networks. Analysis of network components, traffic, security, and failures in the network. An examination of regulatory and legal issues in the field. Analyzing and directing a telecommunications project. 4 lecture/problem-solving. Prerequisites: CIS 347 and CIS 417.

#### CIS 441, 442 Internship in Data Processing (1-8) (1-8)

Faculty supervised on-the-job educational experiences in a real world data processing environment. Allocation of credit is dependent on the nature of the work done and the number of hours worked. Students usually receive pay for participation. Total credit limited to eight units each. Prerequisite: permission of the internship coordinator.

#### CIS 451 Executive Information Systems (4)

Application of computer-based information systems executives individually and as part of a workgroup of other managers and staff professionals, to discover business problems, develop solutions, and communicate action plans. 4 lecture/ problem solving. Prerequisites: CIS 406 and (CIS 421 or CIS 431).

# CIS 454 Advanced c++ Programming (4)

Using c++ to solve complex business problems that interact with relational databases. Use of c++ workbench to build a complete Windows application. 4 lecture/ problem solving. Prerequisite: CIS 284.

#### CIS 457 Network Analysis and Design (4)

Analysis of telecommunications networks by building network models, simulating the models, analyzing the results of the simulation, evaluating model costs, and selecting the best model within given constraints. 4 lecture/ problem solving. Prerequisites: CIS 347 and CIS 417.

#### CIS 466 Systems Development Project (4)

Application of computer programming and implementation concepts to a comprehensive group project. Management planning, scheduling and reporting required. Documentation to include programming, testing and users' manuals. Oral and written presentations required for all team members. 4 lecture/problem-solving. Prerequisites: Three track courses.

# CIS 499 Special Topics for Upper Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units with a maximum of 4 units per quarter. Prerequisite: permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

# FINANCE, REAL ESTATE, AND LAW

Djavad Kashefi, *Chair* Gilbert J. McKee Eric J. McLaughlin Jeanne L. Morrison Majed Muhtaseb David L. Parry Paul Sermas Ahmad Sohrabian John B. Wyatt III N. Gregory Young

The FRL Department seeks to prepare undergraduate students in Finance, Real Estate, and Law and MBA students for careers in finance, real estate, and contract management with up-to-date curricula and instructional methods. In addition, the FRL Department provides all other students within the College of Business Administration and throughout the university with a variety of introductory and specialized courses in finance, real estate, business law, and contract management. The department is also committed to enhance the intellectual capital of its faculty and maintain strong links with business/government through research, writing, consulting, and participation in academic and professional meetings and other development activities.

Students select one of the three specialties which best meets their career objectives: Finance, Real Estate or Business Law and Contract Management.

The Finance specialty offers courses on corporate financial analysis, the management of financial institutions, securities analysis and multinational finance.

The Real Estate specialty emphasizes real estate brokerage, mortgage lending, real property and commercial appraising, property management and real property investment/development.

The Business Law and Contract Management specialty helps prepare students for law school, and for careers as contract administrators and contract cost/price analysts.

The department offers three minors: real estate, business law, and financial management of public and private contracts to both non-FRL majors and FRL majors. FRL majors may not count courses taken in group A of the major toward the minor.

The real estate minor is formulated to qualify the student with the requisite courses to sit for the real estate broker's examination.

The minor in business law encompasses the study of the legal environment of business.

The minor in financial management of public and private contracts provides sufficient skills and understanding of the principles to enable students to successfully manage commercial contracts, apply contract cost/price techniques, undertake contract negotiations.

Please contact the Department Chair in Building 66, Room 211 (909) 869-2350 or an FRL faculty advisor if you wish to explore any of the course offerings.

# PREREQUISITE CORE FOR UPPER DIVISION FINANCE, REAL ESTATE AND LAW PROGRAM

Before registering for any upper division FRL courses, FRL majors must have earned a grade of "C" (2.0) or better in each of the following lower division courses:

ENG 104 EC 201 and 202 ACC 204, 205, and 206 or ACC 214\*\*\*, STA 120 FRL 201, 306, and 307

<sup>\*\*</sup>Microcomputer proficiency must be demonstrated by satisfying one of the following three alternatives: 1) CIS 101, 2) microcomputer proficiency skills tests in word processing and spreadsheet, or 3) an approved college course.

CORE COURSES FOR MAJOR*			
Required of all Business Majors			
(Microcomputer Proficiency)**	EDI	004	(4)
Legal Environment of Business Tran Accounting for Decision Making I Accounting for Decision Making II Accounting for Decision Making III or Elements for Decision-Making Principles of Management Principles of Marketing Mgmt Managerial Finance I Management Information Systems Managerial Statistics Production & Operations Mgmt I Strategic Management or Strategic Management	. ACC . ACC . ACC . ACC . MHR . MKT . FRL . FRL . CIS . OM . OM	201 204 205 206*** 214*** 301 306 307 310 314 331 410 411	(4) (4) (2) (4) (4) (4) (4) (4) (4) (4)
FRL REQUIRED COURSES			
R. E. Principles Fin. Institutions Invest. Analysis Bus. For. & Fin. Pln. Eval. of Fin. Pol. Undergrad Seminar  REQUIRED SPECIALTY (Choose one)	FRL FRL FRL FRL	106 315 330 363 440 463	(4) (4) (4) (4) (4) (2)
· · · · · · · · · · · · · · · · · · ·			
Finance Specialty  Legal Env Bus Org  Corp. Fin. Theory  Multin'tl Fin. Mgmt	FRL	302 367 453	(4) (4) (4)
Real Estate Specialty			
R.E. Appr. Theory R.E. Finance R.E. Law	FRL	380 383 384	(4) (4) (4)
Bus Law and Contract Management			
Legal Env. Bus. Org. Contract Admin. Govt. Reg. of Bus.	FRL	302 325 401	(4) (4) (4)
Other Courses to Complete Major			
Select 16 units from GROUP A			
GROUP A: (16 units)  Asset Protection and Insurance Legal Env. Bus. Org. Financial Spreadsheet Analysis Contract Admin. Con. Asp. Unif. Com. Code Con. Case Study Con. Cost/Price Int'l Financial Mkts Corp. Finance Theory R.E. Appr. Theory R.E. Econ. & Inst. R.E. Finance R.E. Law R.E. Practices R.E. Prop. Mgmt Gov. Reg. of Bus. Leg. Impl. of Fin. Trans.	FRL FRL FRL FRL FRL FRL FRL FRL FRL FRL FRL FRL FRL	270 302 308 325 326 327 328 353 367 380 381 383 384 385 386 401 403	(4) (4) (4) (4) (4) (4) (4) (4) (4) (4)

<sup>\*\*\*</sup>If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

<sup>\*</sup> A 2.0 cumulative GPA is required in core courses including option courses for the major in order to receive a degree in the major.

Leg. Env. of Lab. Rel	406	(4)	MINOR IN
Entrepreneurial Law	407 408	(4) (4)	This mir
Leg. Env. Mktg	419	(4)	estate br
Fin. Sml. Bus	420	(4)	(seven co
Leg. Asp. of Intl. Bus	426	(4)	Required
Security Options	431	(4)	R. E. Prir
Sem. in Port Mgmt. & Cap. Mkts	432 433	(4) (4)	Principle
Intern in Fin	441-442	. ,	Accounti
Multi Nat'l Fin Mgmt	453	(4)	Accounti Accounti
Commercial Banking	460	(4)	or Elem
Sen. ProjectFRL	461-462	(2)(2)	Leg. Env.
Risk Mgt. & Insurance	470 483	(4)	Manager
R.E. Mkt. Anal	403 486	(4) (4)	Manager
Urban Land Dev	490	(4)	R. E. App
GROUP B: (4 units)		( )	R. E. Fina R. E. Law
• • •	011	(4)	R.E. Prac
Intermed Micro Theory	311 313	(4) (4)	
Intl Trade TheoryEC	404	(4)	Select 8
Intl Finance	405	(4)	R. E. Eco
Intro to Math EconEC	406	(4)	Real Prop
Public FinanceEC	410	(4)	R. E. Mk
Comp Econ System	412	(4)	R. E. Inv.
Econ History EuropeEC Labor EconEC	413 414	(4) (4)	Urban La
Land Econ	419	(4)	MINOR IN
Managerial EconEC	424	(4)	This min
Urban Econ	432	(4)	Required
SUPPORT AND ELECTIVE COURSES			Legal En
(Required of all students)			Legal En
Freshman English II	105*	(4)	Select 12
Statistics with Applications	120* 125*	(4) (4)	Law for I
Principles of Economics	201*	(4)	Governm
Principles of Economics	202*	(4)	Legal En
Restricted Electives: [cannot include courses in Business, Ed			Entrepre
Public Administration (e.g., PLS 315, PLS 318), or Statistics]		(8-20)	Legal As
GENERAL EDUCATION COURSES			Select or
(Required of all students)			Labor Ec
A total of 72 quarter units of General Education courses, Tracl	k D aro ro	nuirod	Real Esta
for all majors in the College of Business Administration.	See the	list of	Legal En
approved courses under General Education Requirements in			Legal Im Contract
		0	***Cours
Areas 1 through 4 Select courses from approved list		(64)	
		. (04)	MINOR IN
Area 5  Multicultural Organizational Pohavior  MUD	318	(4)	This min
Multicultural Organizational BehaviorMHR Select one course from approved list [cannot include course		(4) ess	Contract
Economics, Public Administration (e.g., PLS 315, PLS 316		0331	Contract
or Statistics]		(4)	Contract

### Minors

The following three minors are offered to both non-FRL majors and to FRL majors. FRL majors may not count courses taken in group A for the major toward the minor. Please contact the minor coordinator for more information.

# IN REAL ESTATE

inor prepares the student for a real estate career and for the real brokers examination course requirements. The minor requires 28 units courses) for non-FRL Business majors.

R. E. Prin. & Prac	FRL	106	(4)
Principles of Econ	EC	201	(4)
Accounting for Decision Making I	ACC	204	(4)
Accounting for Decision Making II	ACC	205	(4)
Accounting for Decision Making III	ACC	206*	(2)
or Elements for Decision-Making	ACC	214**	(4)
Leg. Env. of Bus. Transactions	FRL	201	(4)
Managerial Finance I	FRL	306	(2)
Managerial Finance II	FRL	307	(4)
R. E. Appraisal	FRL	380	(4)
R. E. Finance	FRL	383	(4)
R. E. Law	FRL	384	(4)
R.E. Practices	FRL	385	(4)

#### 8 units from the following:

g		
R. E. Economics and Institutions	381	(4)
Real Prop. Mgmt	386	(4)
R. E. Mkt. Analysis	483	(4)
R. E. Inv. Analysis	486	(4)
Urban Land Development	490	(4)

#### IN BUSINESS LAW

nor provides the student with an orientation of business and the law.

#### 12 units from the following:

Law for Everyday Living	401	(4) (4) (4)
Entrepreneurial Law		(4) (4)

# one of the following with approval of a business law advisor:

Labor Economics (EC 202)***EC	414	(4)
Real Estate Law (FRL 106)***	384	(4)
Legal Environment of Marketing (MKT 301)** FRL	419	(4)
Legal Implications of Financial Transactions FRL	403	(4)
Contract Administration	325	(4)
***Course prerequisite		

# IN FINANCIAL MANAGEMENT OF PUBLIC AND PRIVATE CONTRACTS\*\*\*\*

nor provides the student with a concept of Contract Administration.

Contract Admin	325	(4)
Contract Aspects of UCC	326	(4)
Contract Case StudyFRL	327	(4)
Contract Cost Price	328	(4)
Leg. Env. of Mkt	419	(4)
Purchasing	434	(4)
**** Prerequisite: FRI 307 OM 314 331 STA 120		

<sup>\*\*</sup>If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

<sup>#</sup>Only 4 units of internship can be applied to Group A

<sup>\*</sup>If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

<sup>\*\*\*</sup>If any of these specific courses are used for General Education, then the Restricted Electives or Unrestricted Electives will be increased by four units per course up to the unit maximum identified in each elective category.

#### **Department Grading Policy**

FRL majors must earn a grade of "C" (2.0) or better in each of the following courses before taking any upper division courses: ENG 104, STA 120, FRL 201, EC 201, EC 202, ACC 204, ACC 205, ACC 206 or ACC 214\*\*, FRL 306, FRL 307.

#### **Course Descriptions**

# FRL 100 Personal Money Management (4)

Examines the major financial problems of the household in allocating resources and planning expenditures. Topics include budgeting, housing, consumer protection, insurance, the use of credit, savings, and investments. Not open to finance majors. 4 lecture/discussions.

# FRL 101 Law for Everyday Living (4)

Legal principles which underlie ordinary transactions such as buying a house, a television, writing a check, getting married, taking out an insurance policy, joining a union, lending a car to a friend, signing a lease, and hundreds of everyday activities. 4 lecture/discussions.

#### FRL 106 Real Estate Principles (4)

This course satisfies educational requirement for Real Estate Broker's License. Introduction to real estate brokerage and investments; the nature and classification of real property, and fundamental theories of urban growth, land utilization and property valuation. An overview of real estate finance, property management and the development process is also presented. 4 lecture/discussions. Prerequisite: ENG 104.

#### FRL 200 Special Problems for Lower Division Students (1-2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter.

#### FRL 201 Legal Environment of Business Transactions (4)

Study of the adversary system, principles of American law, coverage of business related torts and contracts, product liability, and real and personal property. Case analysis. 4 lecture/presentations. Prerequisite: ENG 104.

#### FRL 270 Asset Protection and Insurance (4)

Introduction to corporate risk management and insurance. Institutional framework and analytical techniques for managing property and personnel loss exposures. Use of risk control and risk financing methods, including insurance, from viewpoint of business and family risk managers. 4 lecture/problem-solving.

# FRL 299/299A/299L Special Topics for Lower Division Students (4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

#### FRL 302 Legal Environment of Business Organizations (4)

An analysis of the legal requirements of formation, operation and financing of partnerships, corporations and other business organizations. Consideration of the agency relationships and responsibilities of involved parties. Discussion of the economic, political and regulatory environment. Case analysis. 4 lecture/problem-solving. Prerequisite: FRL 201.

#### FRL 306 Managerial Finance I (2)

This is the first of a two-course sequence for College of Business Administration majors. Principles of managerial finance focusing on financial markets; financial statement analysis; planning and control; working capital management; and international finance. 2 lecture/problem-solving. Prerequisites: ACC 205, EC 201, EC 202, and microcomputer proficiency. Recommended concurrent enrollment in ACC 206 or ACC 214\*.

#### FRL 307 Managerial Finance II (4)

This is the second of the two-course sequence following Managerial Finance I. Topics include time value of money; valuation models; capital budgeting; leverage and capital structure; dividend policy; and mergers and acquisitions. 4 lecture/problem-solving. Prerequisites: ACC 206, FRL 306, and STA 120.

# FRL 308 Financial Spreadsheet Analysis (4)

Financial modeling techniques and analysis using electronic spreadsheets. Emphasis on corporate financial management: capital budgeting, debt capacity, financial planning, credit management. Case discussion. Individual projects. 4 lecture/problem-solving. Prerequisite: FRL 307.

#### FRL 315 Financial Institutions and Markets (4)

Focus of financial markets and institutional management from a microeconomics perspective. Study of the relationship between financial institutions and financial markets and impact of government regulation and monetary policy. 4 lecture/problem-solving. Prerequisites: FRL 307 and EC 202.

# FRL 325 Contract Administration (4)

Organization, procedures and areas of application in contract administration. Designed to provide the student with knowledge and skills essential to accomplish the responsibility of contract administration. Provides a comprehensive approach to the interrelationship between contract administration and various functional disciplines. 4 lecture/problem-solving. Prerequisites: FRL 201 and FRL 307.

#### FRL 326 Contract Aspects of the Uniform Commercial Code (4)

Provide transition from common law background to statutory contract law. Formation of sales contract under the UCC. Insight regarding policy considerations, legal remedies and the mechanical requirements. 4 lecture/problem-solving. Prerequisite: FRL 201.

### FRL 327 Contract Case Study/Practical Application (4)

Review of current and past cases in government and private contracting, using the case study method. Combined class textbook and library assignments. Cases, selected by areas briefed, discussed and reviewed. 4 lecture/problem-solving. Prerequisites: FRL 201 and FRL 307.

# FRL 328 Contract Cost/Price Techniques-Negotiation (4)

Provide understanding of cost/price techniques applicable to public and private prime/sub contracts including RFQ-RFP-IFB analysis, proposal preparation, estimating methodology, and pricing strategies. Familiarize with analytical and econometric techniques in preparing contracts. 4 lecture/problemsolving. Prerequisites: FRL 201 and FRL 307.

#### FRL 330 Investment Analysis (4)

Introduction to the behavior of security markets and individual investment policy. Quantitative and qualitative aspects of risk and return associated with investment decisions. Fundamental, technical and random-walk approaches to valuation. 4 lectures/problems. Prerequisites: FRL 307 and EC 202.

#### FRL 353 International Financial Markets (4)

Institutional overview of structure, and application function of international financial markets and their applications. International financial systems, capital flows, foreign exchange risk measurement and management, Eurocurrency markets, Asian currency markets, international capital markets,

international banking, international debt crisis, and export-import financing. 4 lecture/problem-solving. Prerequisite: FRL 307.

#### FRL 363 Business Forecasting and Financial Planning (4)

Use of different forecasting techniques as they relate to finance and real estate issues. Smoothing methods, decomposition methods, correlation analysis, regression analysis, seasonal models, Box-Jenkins methodology, and managing the forecasting process. Use of microcomputer to aid calculations. Individual projects. 4 lecture/ problem-solving. Prerequisites: FRL 307, OM 314, and MAT 125.

# FRL 367 Corporate Finance Theory (4)

Capital budgeting under uncertainty, capital structure, cost of capital, and specialized financial decision tools. Emphasis on operational techniques through cases, problems and computer applications. 4 lecture/problem-solving. Prerequisites: FRL 307 and FRL 363.

#### FRL 380 Real Estate Appraisal Theory (4)

An analysis of various approaches to value as applied to all real property, emphasizing urban properties. A survey of value theory related to practical applications, using specific problem-solving via the preparation of reports concerning residential and investment properties. 4 lecture/discussion. Prerequisites: FRL 106, FRL 201, EC 201, and ACC 206.

# FRL 381 Real Estate Economics and Institutions \* (4)

An analysis of the economies of real estate markets, developments and operations. Investigation of the foundations of private institutions that operate within and government institutions that oversee and control the real estate marketing, financing, development and research. 4 lecture/discussions. Prerequisites: FRL 106, FRL 307.

# FRL 383 Real Estate Finance \* (4)

Instruments of real estate financing and their use; analytic factors in financing and investment decision-making; and analysis of the various institutions which are sources of real estate financing. Case analysis. 4 lecture/problemsolving. Prerequisites: FRL 106 and FRL 307.

#### FRL 384 Real Estate Law \* (4)

Rights and liabilities surrounding the acquisition, possession and transfer of real property: easements, deeds, zoning, mortgages, foreclosure, landlord and tenant relationships. 4 lecture/discussion. Prerequisites: FRL 106 and 201.

#### FRL 385 Real Estate Practices \* (4)

Ethical and legal responsibilities of the real estate broker: listing agreements, structuring of transaction and escrow requirements. Analysis of common agreements, documents and disclosure statements. 4 lecture/discussion. Prerequisites: FRL 380 and FRL 384.

#### FRL 386 Real Property Management (4)

General practices and legal aspects of property management. Establishing rental schedules, tenant billing, rent collection, lease clauses, lease negotiations, purchasing procedures related to repairs and maintenance, and property management accounts for apartments, office buildings, industrial properties and shopping centers. 4 lecture/discussion. Prerequisites: FRL 106, FRL 307, and FRL 380.

# FRL 400 Special Problems for Upper Division Students (1-2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter. May be taken on a CR/NC basis.

# FRL 401 Government Regulation of Business (4)

The study of the regulation of business, government. Antitrust, trade regulation, labor and employment law, privacy, safety, environmental and consumer legislation. 4 lecture/problem-solving. Prerequisite: FRL 201.

#### FRL 403 Legal Implications of Financial Transactions (4)

An analysis of the legal structure, rationale and implication of commercial transactions involving secured transactions, negotiable instruments and credit. 4 lectures. Prerequisite: FRL 201.

# FRL 406 Legal Environment of Labor Relations (4)

A study of the application of labor and employment law in the United States. Topics include legal rights and remedies available to labor unions, employees and management. 4 lectures. Prerequisite: FRL 201.

# FRL 407 Entrepreneurial Law (4)

A practical preventive law course emphasizing the legal consideration involved in small business planning, operation, and dissolution. Particular attention will be given to liability of small business owners and managers, and the legal alternatives available to a financially distressed business. 4 lectures. Prerequisite: FRL 302.

#### FRL 408 Law for Accountants (4)

This course will review the legal responsibilities of accountants and analyze fundamental business law principles as applied in commercial transactions. The law of commercial paper, secured transactions, bankruptcy, agency, partnerships, corporations and securities will be emphasized. 4 lecture/problemsolving. Prerequisites: ACC 206 and FRL 201.

# FRL 419 Legal Environment of Marketing (4)

Application of the laws relevant to the marketing process and assessment of the legal problems growing out of marketing strategies. Hypothetical case analyses. 4 lecture/discussions. Prerequisite: FRL 201 or MKT 301.

#### FRL 420 Financing Small Business (4)

Financial problems and strategies paramount to small firms. Examination of various financing sources including venture capitals. Discussion of funding techniques and financial package evaluation. 4 lecture/problem-solving. Prerequisite: FRL 307.

### FRL 426 Legal Aspects of International Business (4)

A study of the legal factors affecting organizations involved in international business transactions. Topics include: sales, bills of exchange, patents, obligations and liabilities of cargo carriers, political risks and credit insurance. 4 lecture/discussions. Prerequisite: FRL 201.

# FRL 431 Security Options (4)

Options market and the mechanics of options investing. Valuation models, conservative and aggressive strategies for different market environments, and their risk-reward characteristics, portfolio management, and computer simulation. 4 lecture/problem-solving. Prerequisite: FRL 330 and FRL 363.

#### FRL 432 Futures Markets (4)

Futures contracts on financial instruments such as government bonds, commercial paper, GNMA, foreign currencies and market index futures contracts. Trading aspects and future markets of agricultural and industrial commodities. 4 lecture/problem-solving. Prerequisites: FRL 330 and FRL 363.

#### FRL 433 Seminar in Portfolio Management and Capital Markets (4)

Developing and valuating alternative portfolio selection models for individual and institutional use. Examination of non-traditional investments. 4 seminar-discussion. Prerequisites: FRL 330, FRL 363, FRL 431, and FRL 432.

#### FRL 440 Evaluation of Financial Policy (4)

A seminar course in finance utilizing comprehensive cases to simulate the role of the financial manager. 4 seminar/discussion. Prerequisite: FRL 307.

#### FRL 441, 442 Internship in Finance (1-4) (1-4)

On-the-job training or internship with a business to gain new learning experience. Student submits periodic reports to faculty coordinator and receives one unit of credit for 120 hours of training. Four units of Internship in Finance can be applied to Group A. Total credit limited to eight units in both classes. Prerequisite: permission of the FRL coordinator of internships.

#### FRL 453 Multinational Financial Management (4)

Foreign exchange markets, foreign exchange risk management, multinational working capital management, foreign investment analysis and multinational capital budgeting, international diversification, cost of capital and capital structure of the multinational firm, political risk management, and international taxation. 4 lecture/problem-solving. Prerequisite: FRL 307.

# FRL 460 Commercial Banking (4)

Examines the functional and operational aspects of commercial banks. Emphasis will be placed on the principles and practices used in asset management, liability management, and liquidity management. Group analysis using case problems and/or computer simulations. 4 lecture/discussions. Prerequisite: FRL 315.

# FRL 461, 462 Senior Project (2) (2)

Selection and completion of a project under faculty supervision. Projects typical of problems which graduates must solve in their fields of employment. Formal report is required. Prerequisite: senior standing Required minimum of 120 hours.

# FRL 463 Undergraduate Seminar (2)

Study and discussion by students of recent developments in the student's major field. 2 lectures. Prerequisites: FRL 106, 315, 330, and senior standing.

#### FRL 470 Risk Management and Insurance (4)

Insurance and risk management for corporations, government and individuals. Application of risk retention, loss control and insurance methods to life, health, liability and property risks. Social insurance, auto and workers compensation, employment benefits and pensions. 4 lecture/problem-solving.

# FRL 483 Real Estate Market Analysis \* (4)

Analyze and collect urban economic and real estate data to prepare market demand studies for use in real estate investment analysis and feasibility studies for development projects. 4 lecture/problem-solving. Prerequisites: EC 201, EC 202, and FRL 380.

# FRL 486 Real Estate Investment Analysis \* (4)

Review of various techniques for analyzing real estate investments in postdevelopment phase projects. Integration of market analyses, appraisal methods, real estate tax law and traditional financial analysis techniques to evaluate the risk-return characteristics of investment positions in real properties. 4 lecture/problem-solving. Prerequisites: FRL 106 and FRL 383.

# FRL 490 Urban Land Development \* (4)

A review of the processes for developing real properties, emphasizing site selection techniques, land purchasing procedures, methods of conducting feasibility studies, including market studies, financial analysis and building design. 4 lecture/problem-solving. Prerequisites: FRL 381, FRL 386, and FRL 483 or 486.

#### FRL 499/499A/499L Special Topics for Upper Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

<sup>\*</sup>Satisfies educational requirement for Real Estate Broker's License.

# INTERNATIONAL BUSINESS

One of two majors offered in the International Business and Marketing Department is International Business. For other programs in the department, see Marketing Management.

Vernon R. Stauble, Chair, International Business and Marketing

Helena Czepiec, Coordinator

Juanita P. Roxas Dolores A. Barsellotti James R. Hill Robert W. Schaffer Patricia M. Hopkins Donna Tillman Jerry L. Kirkpatrick

#### MISSION

The mission of the International Business and Marketing Department is to prepare students for specialized careers in either international business or marketing management. This preparation gives both undergraduate and graduate students practical learning experiences in such courses as international marketing, marketing management, professional selling, advertising, buyer behavior, market research, retailing, industrial marketing, brand management, and transportation and distribution management. In addition, the mission of the Department is to give non-majors a solid foundation in the application of business principles to the marketing of goods and services in international and domestic markets. To achieve excellence in both teaching and course content for an increasingly diverse and multinational student body, the Department's faculty undertakes programs of basic research, applied scholarship, and instructional development; it also forges and maintains strong links with the business community, both local and global.

This International Business major provides students a solid grounding in the principles of business management as well as interdisciplinary specialization in areas required to understand and react to today's globalized markets. The objectives of the major are twofold: to provide students with the business knowledge and skills essential for careers in international business, and to provide them with an understanding and appreciation of the culture, language, economics, politics, and history of other parts of the world, with particular emphasis on a geographic area in which the student has a special career interest. The curriculum requires completion of the business core which provides to all business majors a foundation in the theory and practice of modern business management. In addition, the International Business major requires completion of a minor in a functional area of business (e.g. accounting, finance, management, etc.) or, as an alternative to a minor in business, a concentration in International Studies directed electives or a foreign language. Each student completes a specialization in a geographic area of the world, and must demonstrate proficiency in a related foreign language. Each student is expected to complete at least one quarter of practical experience in international business through the internship program.

Each student should work closely with the program advisor in identifying career goals and selecting course work most appropriate for goal attainment. The International Business major involves the completion of requirements in each of the following seven areas:

- 1. Core Courses in Major required of all Business majors
- 2. International Business required courses
- 3. Support and Elective courses
- 4. Functional Specialization
- 5. Regional Area of Emphasis directed electives
- General Education
- 7. Foreign Language

# CORE COURSES FOR MAJOR'

Required of All Business Majors (Microcomputer Proficiency) \*\*

Legal Environ of Business Transactions FRL Accounting for Decision Making I ACC Accounting for Decision Making II ACC Accounting for Decision Making III ACC or Elements for Decision Making III ACC or Elements for Decision Making III ACC Principles of Management MHR Principles of Marketing Management MKT Managerial Finance I FRL Managerial Finance II FRL Management Information Systems CIS Managerial Statistics OM Production and Operations Management OM Strategic Management MHR OR Strategic Management OM	201 204 205 2061 214* 301 306 307 310 314 331 410 411	(4) (4) (4) (2) (4) (4) (2) (4) (4) (4) (4)
Required for International Business		
Spec Probs Lower Div Students IB Global Business Perspectives IB Introduction to International Business IB/MHR Principles of Economics EC Economic Geography GEO International Marketing IB/MKT International Financial Markets FRL Legal Aspects of International Business FRL +Internship in International Business MKT	200 210 322 202 312 414 353 426 441	(2) (4) (4) (4) (4) (4) (4) (4)
SUPPORT AND ELECTIVE COURSES		
(Required of all Students)		
Principles of Economics	201** 202** 120** nomics,	(4) (4) (4) Public (0-4)
Select 8 units not used in Functional Specialization:  Market Analysis and Control .MKT International Accounting .IB/ACC Assessing International Business Environments .IB/MHR Strategy in International Marketing .IB/MKT International Exporting .IB/MKT Policy for International Management .IB/MHR International Business Cases: Operations .IB/OM Money and Banking .EC International Trade Theory and Policy .EC Economic Development .EC	320 404 332 415 416	(4) (4) (4) (4) (4) (4) (4) (4) (4)

#### FUNCTIONAL SPECIALIZATION

Students may complete any minor or at least 20 units within an approved minor in the College of Business Administration or in a foreign language, international agricultural business management, economics, geography, anthropology, history, Latin American Studies, political science, or public administration. If a minor in a particular language is not available, students may complete 20 units in one foreign language, at least 16 of which must be at or above the 200 level. To specialize in finance, students may take 20 units from a list of courses approved by the FRL department.

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(4)

Comparative Economic Systems ......EC

<sup>\*</sup> A 2.0 cumulative GPA is required in core courses including option courses for the major in order to receive a degree in the major.

<sup>\*\*</sup>See "Microcomputer Proficiency" in the College of Business Administration section of this catalog

<sup>\*</sup>If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose city, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

<sup>\*\*</sup>If any of these specific courses are used for General Education, then the Restricted Electives or Unrestricted Electives will be increased by four units per course up to the unit maximum identified in each elective category

#### REGIONAL AREA OF EMPHASIS

Students must take 12 units of courses outside of the College of Business in International Studies, with advisor approval.

#### **GENERAL EDUCATION COURSES**

(Required of all students)

A total of 72 quarter units of General Education courses, Track B, are required for all majors in the College of Business Administration. See the list of approved courses under General Education Requirements in this catalog.

#### Areas 1 through 4

Select courses from approved list			(64)
Area 5			
Multicultural Organizational Behavior	MHR	318	(4)
Select one course from approved list ([cannot inclu	ude cours	ses in Bus	siness,
Economics, Public Administration (e.g., PLS 315	, PLS 318	3),	
or Statistics]			(4)

#### FOREIGN LANGUAGE (Proficiency)

The student must demonstrate proficiency in reading, writing, and speaking a foreign language. The required level of proficiency is Intermediate Level. Ordinarily this level of proficiency is obtained in one year of language study beyond the CSU entry level requirements (Elementary Level proficiency). Four (4) units of course work in a foreign language can be used to fulfill the General Education, Category Illc requirement.

#### MINOR IN INTERNATIONAL BUSINESS

Students from both business and non-business majors who have an interest in pursuing careers related to international business may complete the Minor in International Business. The purpose of the minor is to provide sufficient knowledge and expertise in International Business for students to successfully apply the specialties of their fields to international careers.

To enroll in the minor or for more information about it, see the International Business Minor Advisor. Students are responsible for meeting the requirements of the minor program in effect when the formal Contract for the Minor in International Business is signed. The contract should be signed before coursework in the Minor is begun.

The minor is comprised of required and directed elective courses. Most students already in the College of Business Administration will be able to take the required courses with at most one additional prerequisite course in addition to those required in their fields. Students from outside the College of Business Administration must complete a number of courses in Business and Economics before courses required in the International Business Minor can be taken, but may have satisfied the directed elective requirements through their degree major coursework.

#### Required courses:

Introduction to International BusinessIB/MHR	322	(4)
Assessing International Business Environments IB/MHR	332	(4)
International Financial Markets	353	(4)
International Trade Theory and PolicyEC	404	(4)
International Marketing Management IB/MKT	414	(4)
Legal Aspects of International BusinessFRL	426	(4)

### **Directed Electives:**

Select 12 units from the approved list in one of the following groups, or develop an individualized program with the approval of the International Business Minor Advisor.

(Group A) Language Skills (French, German, Russian, Spanish or other modern language)

(Group B) Regional Area of Emphasis (Area studies in Africa, Asia, Europe, Latin America, or the Middle East)

(Group C) Appropriate Theme or Depth Group (Note: Some of these also satisfy General Education Category VII requirements)

(Group D) Survey of International Development (wide range of courses in development studies, anthropology, international agriculture, economic development, international relations, law and international management)

# **Course Descriptions**

#### IB 200 Special Problems for Lower Division Students (1-2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per guarter.

# IB 210 Global Business Perspectives (4)

Overview of global business decision-making with an emphasis on cultural differences. Analyzes social, cultural, environmental, and technological trends in international business and the effects of geography, history, language, and education on the performance of foreign operations. Case studies. 4 lecture/discussions.

#### IB 299/299A/299L Special Topics for Lower Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

# IB/MHR 322 Intro to International Business (4)

Introduction to international business, trade and foreign investment. Survey of cultural, political, social, and economic aspects of doing business abroad. Theories of international trade and economic development. 4 lecture/discussions. (Also listed as MHR 322.)

# IB/MHR 332 Assessing Int'l Bus Environment (4)

Analysis of cultural, political, social and economic aspects of doing business abroad. Study and application of methods in conducting risk vs. opportunity analysis of countries, investments, projects and trade. Case studies, student research projects and presentations. 4 lecture/problem-solving. Prerequisite: IB 322 (MHR 322) (Also listed as MHR 332.)

#### IB 400 Special Problems for Upper Division Students (1-2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per guarter.

#### IB/ACC 404 International Accounting (4)

Examination and discussion of accounting theories, techniques, procedures, accounting standards and regulations used in other nations. Examination of contemporary practices prevailing in different parts of the world. Emphasis on multinational corporations, and their needs and practices. 4 lecture/problem-solving. Prerequisite: ACC 302. (Also listed as ACC 404.)

#### IB/MKT 414 Int'l Marketing Management (4)

Planning and organizing for international marketing operations. Distinctive characteristics, environmental influences and emerging trends in overseas markets are examined. Analysis of management practices and problems of adapting American marketing concepts and methods. 4 lecture/discussions. Prerequisite: MKT 301. (Also listed as MKT 414).

# IB/MKT 415 Strategy in Int'l Marketing (4)

Development of alternative methods and strategies in the decision areas of product development, promotional programs, distribution channel determination and pricing. Opportunities, key issues and applications to ensure a firm's survival and success in the international arena are explored. 4 lecture/problem-solving. Prerequisite: IB 414 (MKT 414). (Also listed as MKT 415.)

# IB/MKT 416 International Exporting (4)

Principles, strategies and mechanics of exporting to foreign nations. Political, legal, cultural and economic environments affecting export operations. Corporate programs and policies, involvement levels, financing, pricing promotion and distribution strategies. Latin America, European Community, Pacific Rim specifics. Import trade mechanics. 4 lecture/discussion. Prerequisite: IB 414 (MKT 414.) (Also listed as MKT 416.)

#### IB/MHR 422 Policy for International Mgmt (4)

Seminar in the application and development of policy for international business management. Analysis of international management practices and problems utilizing the case study approach. 4 seminar/discussions. Prerequisite: IB 322 (MHR 322) or consent of instructor. (Also listed as MHR 422.)

#### IB/OM 437 Int'l Bus Cases: Operations (4)

Case studies in international operations management; manpower and work flow, production planning and control, operations management strategy, cultural considerations and ethics. Use of computer software. 4 lecture/problem-solving. Prerequisites: OM 331, or consent of instructor. (Also listed as OM 437.)

# IB/OM 455 Just-In-Time Production (4)

Comparison of different production environments. Detailed coverage of successful techniques used in world class manufacturing: Just-in-time, total quality management, total preventive maintenance, group technology, plant layout, and time and motion study. 4 lecture/problem-solving. Prerequisite: OM 331. (Also listed as OM 455.)

#### IB 499/499A/499L Special Topics for Upper Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

For a complete list of remaining courses in this major, please refer to the catalog listings under the appropriate departments.

# MANAGEMENT AND HUMAN RESOURCES

Peggy J. Snyder, Chair	
Stanley C. Abraham	Christian F. Poulson, II
Robert W. Allen	William B. Relf
James C. Bassett	Percy G. "Jerry" Rogers
Deborah V. Brazeal	R. Richard Sabo
Lady A. Hanson	Shiori Sakamoto
Kathleen Harcharik	Nirmal K. Sethia
Stephen C. Iman	Mansour Sharifzadeh
Carol L. Jones	Mark Spitzfaden
Shanthi Srinivas	Lynn H. Turner
LianLian Lin	Gail Waters
Thomas H. Patten, Jr.	Cheryl Wyrick
Warren C. Weber	, ,

#### **Department Mission Statement**

Our department mission is consonant with and supportive of the College of Business Administration mission statement. The special emphases in the College mission on teaching undergraduates and focusing on applied research and instructional development are in agreement with our mission. The MHR Department also seeks prominence within domestic and international communities in teaching and life-long learning.

Our teaching strengths, which are embedded in our courses, include the capacity for critical thinking, skills for working with people, ability to respond creatively to changes, making ethical choices, managing diversity, strategic management, and applying the theories and concepts learned to design practical and innovative solutions. These strengths address the portion of our mission which refers to leading-edge knowledge and education.

This major provides students with a sound background in general management and the opportunity for emphasis in one of several areas: general management, entrepreneurship and small business management, human resources management, and business education.

Department advisors strive to provide programs that meet the educational needs of students who have the following career goals:

- 1. General manager in a private or public organization of any size.
- 2. Manager of a small or medium-sized business. (This program is designed specifically for people who plan to own and operate their own business.)
- 3. Human Resources or Personnel manager in a private or public organization.
- 4. Business teacher in a secondary or post-secondary school.

All department programs are designed to provide maximum flexibility in selecting an area of specialty. For example, a freshman can pursue the department curriculum for two years before making a career goal decision. In fact, after two years of study, the student can change to any of the business administration majors without loss of academic credits. It is important that students entering Cal Poly for the first time seek the help of an advisor to ensure that their individual programs are in their own best interest.

Students interested in fulfilling California State credential requirements for secondary school teachers of business subjects must also coordinate their curriculum with a School of Education advisor.

#### CORE COURSES FOR MAJOR\*

Required of all Business Majors

(Microcomputer Proficiency) \*\*

Legal Environment of Business Trans	.FRL	201	(4)
Accounting for Decision Making I	.ACC	204	(4)
Accounting for Decision Making II	.ACC	205	(4)
Accounting for Decision Making III	.ACC	206***	(2)
or Elem. for Decision Making	.ACC	214***	(4)
Principles of Management		301	(4)
Principles of Marketing Mgmt	.MKT	301	(4)
Managerial Finance I		306	(2)

Managerial Finance IIFRLMgmt Info SystemsCISManagerial StatisticsOMProduction & Operations Mgmt IOMStrategic ManagementMHRor Strategic ManagementOM	307 310 314 331 410 411	(4) (4) (4) (4) (4)
MHR REQUIRED COURSES		
Entrepreneurship and Intrapreneurship MHR Human Resources Management MHR Multicultural Org Behavior MHR Communication for Management MHR Emerging Issues in Mgmt MHR Select four (4) units from:	306 311 318 324 452	(4) (4) (4) (4) (4)
Internship in Bus Mgmt	441-2	(1-4)
Senior ProjectMHR	461-2	(2+2)
OTHER COURSES TO COMPLETE MAJOR  One career-goal elective program selected with approval of advisor		(32)
SUPPORT COURSES  Principles of Economics	ses in Bu	(4) (4) ogram, siness,

#### **GENERAL EDUCATION COURSES**

(Required of all students)

A total of 72 quarter units of General Education courses are required for all majors in the College of Business Administration. See the list of approved courses under General Education Requirements in this catalog.

# Areas 1 through 4

Select courses from approved list
Area 5
Select two courses from approved list [cannot include courses in Business,
Economics, Public Administration (e.g., PLS 315, PLS 318),

# MINORS IN MANAGEMENT AND HUMAN RESOURCES

The Management and Human Resources Department offers the following minors. The purpose of these minors is to develop marketable skills in one's chosen field. Also, those students majoring in fields such as engineering or science may wish to develop adjunct skills that may prove to be complementary to their major course of study. Please see the Minors Coordinator, Management and Human Resources Department, if you are interested in enrolling in one of these minors. Students should formally enroll in the minor before taking any courses in the minor. See Department Chair for details.

<sup>\*</sup> A 2.0 cumulative GPA is required in core courses including option courses for the major in order to receive a degree in the major.

<sup>\*\*</sup>See "Microcomputer Proficiency" in the College of Business Administration section of this cat-

<sup>\*\*\*</sup>If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

<sup>\*\*\*\*</sup>If any of these specific courses are used for General Education, then the Restricted Electives or Unrestricted Electives will be increased by four units per course up to the unit maximum identified in each elective category.

#### MINOR IN GENERAL MANAGEMENT

(This minor provides non-MHR majors with an orientation to management in organizations.)

Accounting for Decision Making I .ACC Principles of Management .MHR First-line Management .MHR Multicultural Org Behavior .MHR Intro to International Business .MHR Communication for MgmtMHR	204 301 313 318 322 324	(4) (4) (4) (4) (4) (4)
Electives-Select three courses from the following list:		
Management for Non-for-Profit Org.MHRAdvanced Communication for Mgmt.MHRTraining and Development.MHRStrategies for Men and Women in Management.MHRManaging Career Development.MHREmerging Issues in Management.MHR	319 325 405 406 412 452	(4) (4) (4) (4) (4) (4)

#### MINOR IN HUMAN RESOURCES MANAGEMENT

(This minor provides non-MHR students with an opportunity to develop their capability to manage other employees and provides introductory background in the human resource/personnel field.)

Human Resources Management       .MHR         Organizational Behavior       .MHR         Training and Development       .MHR         Employee Compensation Plans       .MHR         Human Resource Information Mgmt       .MHR	311 318 405 413 415	(4) (4) (4) (4) (4)
or Employee Benefits and ServicesMHR or Management Union RelationsMHR Advanced Organizational BehaviorMHR	416 421 438	(4) (4) (4)
and three courses (12 Units) from the following:  Strategies for Men and Women in Mgmt	406 412 452	(4) (4) (4)

# MINOR IN ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT

(This minor is to provide non-MHR majors with an introductory background needed to start and operate a small business.)

Accounting for Decision Making I	204	(4)
New Venture Creation	306	(4)
Entrepreneur and Business GrowthMHR		(4)
Entrepreneurial Strategies	408	(4)
Entrepreneuriship in a Changing Soc	414	(4)
Creativity and Innovation	426	(4)
and any three courses (12 Units) from the following:		

and any three courses (12 Units) from the following:		
GENERAL COURSES:		
Real Estate Principles	106 201 301 404 322	(4) (4) (4) (4) (4)
PEOPLE ORIENTED COURSES:		
Principles of Management	301 318 438 452	(4) (4) (4) (4)
FINANCE/ACCOUNTING COURSES:		
Legal Environment of Bus. Transactions FRL Accounting for Decision Making II ACC	201 205	(4) (4)

Accounting for Decision Making III ......ACC

#### **Course Descriptions**

#### MHR 200 Special Problems for Lower Division Students (1-2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter.

#### MHR 299/299A/299L Special Topics for Lower Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

# MHR 301 Principles of Management (4)

Survey of the history of management and review of significant management literature. Practical applications of management theories to problems in planning, organizing, and controlling business activity. Ethical considerations. 4 lecture/discussions.

#### MHR 306 New Venture Creation (4)

New venture creation and entrepreneurship as viable career options. Entrepreneurial management in emergent companies. Ethics and value-based corporate cultures. Learning to be entrepreneurial and start a business. Recognizing and developing business ideas and opportunities. Creating a business plan. 4 lecture/presentations.

#### MHR 308 Entrepreneur and Business Growth (4)

Managerial philosophies and capabilities needed for rapidly growing a business. Identifying the growth industries of the nineties, with special attention to the Southern California economy. Finding and developing new products and services. Managing the problems of growing companies. 4 lecture/presentations.

#### MHR 311 Human Resources Management (4)

Establishment of human resources objectives and requirements in the organization. Recruiting, testing, interviewing, screening and selection of employees. Employee counseling, training, development, promotion, recreation, insurance and retirement programs. Case studies. 4 lecture/discussions. Prerequisite: MHR 301.

#### MHR 313 First-line Management (4)

Analysis of the unique position of the supervisor in complex organizations; the application of theory and practice in solving problems and ethical considerations at the first level of management. 4 lecture/problem-solving.

# MHR 318 Multicultural Organizational Behavior (4)

Introductory experiences in the basics of organizational behavior. Organizational socialization, teamwork leadership, group dynamics, problemsolving, and ethics as they apply to the manager in a multi-cultural economic and political environment. 4 lecture/discussions.

#### MHR 319 Management of Not-for-Profit Organizations (4)

Methods, theory and institutional knowledge for managing not-for-profit organizations. Problems and issues in policy, organization, program, personnel and budget unique to not-for-profit organizations. 4 lecture/discussions. Prerequisite: MHR 318.

#### MHR 322 Introduction to International Business (4)

Introduction to international business and foreign investment. Survey of cultural, political, social, and economic aspects of doing business abroad. Theories of international trade and economic development. 4 lecture/discussions. (Also listed as IB 322.)

#### MHR 324 Communication for Management (4)

(4)

(4)

206

226

Basic communications objectives of organizations. Types of communication

used for decision making, their nature, capabilities and limitations. Using computers for communications. Practice in improving written communications, using the approved style manual. Presentations. 4 lecture/problemsolving. Prerequisite: ENG 104 and microcomputer proficiency Level 1.

# MHR 325 Advanced Communication for Management (4)

Advanced communications applications for managers. Practice in writing situational letters/reports. Conducting meetings and conferences. Interpersonal techniques: listening, interviewing. Advanced use of computers for presentations. Case studies. Employee and media interviews. Multicultural and ethical considerations. Research methods. 4 lecture/problem-solving. Prerequisite: MHR 324

#### MHR 332 Assessing International Business Environments (4)

Analysis of cultural, political, social and economic aspects of doing business abroad. Study and application of risk-versus-opportunity analysis of countries, investments, projects and trade. Case studies, student research projects and presentations. 4 lecture/problem-solving. Prerequisite: MHR 322 (Also listed as IB 332.)

#### MHR 400 Special Problems for Upper Division Students (1-2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per guarter.

#### MHR 405 Training and Development (4)

Theory and applications of employee training and development. How rapid changes in technology, market conditions, and business practices make training a growing management function. Topics include determining training needs, selecting methods, planning programs and evaluating results. 4 lecture/problem-solving.

#### MHR 406 Strategies for Men and Women in Management (4)

Attitudes regarding male/female roles in management positions will be discussed in seminar and small group format. Current literature, popular and scholarly, will be reviewed and evaluated. Three short papers will be required on current issues. 4 seminars.

#### MHR 408 Entrepreneurial Strategies (4)

Considers unique strategies of the entrepreneur in mid-sized venture companies. Topics include: structuring venture deals, spin-offs, turnaround or "starting anew," valuation, merger-acquisition criteria, the search and acquisition processes, negotiation, business consolidation, and cash-flow management. 4 lecture/problem-solving.

#### MHR 409 Business Education Management (4)

Methods and techniques for stimulating enthusiasm for learning in teaching business courses. Course and lesson design, and presentations for office education courses in keyboarding, word processing, computer applications, etc. Preparation for becoming professional business educators. 4 lecture/problem-solving.

# MHR 410 Strategic Management (4)

Seminar in strategy formulation and implementation. A capstone experience integrating all business functions and requiring evaluation of strategic outcomes from ethical as well as economic viewpoints. Consideration of Total Quality Management. Case and computer simulation analysis. 4 seminars. Prerequisite: Completion of College of Business Administration core.

#### MHR 412 Managing Career Development (4)

Career development issues such as the assessment of potential career tracks, transition from academia, career strategies and obstacles, personal and organizational value conflicts, dual career marriage and the price of success. 4 lecture/presentations. Prerequisites: MHR 318

# MHR 413 Employee Compensation Plans (4)

The goals and external/internal organizational considerations that affect planning and administering compensation in organizations. Evaluation of race and sex discrimination in pay, and comparable job worth. Job evaluation, performance appraisal systems, and gainsharing. 4 lecture/presentations. Prerequisite: MHR 311.

#### MHR 414 Entrepreneurship in a Changing Society (4)

Examines the unique position of the entrepreneur with regard to government regulation, economics, politics, the environment and other external forces. Anticipating changes in such regulations and policies and spotting the entrepreneurial opportunities and niches that are inevitably created. 4 lecture/problem solving.

#### MHR 415 Human Resource Information Management (4)

Emerging approaches to the management of human resources information in hiring, compensation/benefits, skills inventory, employee records, and training. Automated and manual systems compared. Student presentations on proposed and operational human resource information systems. Microcomputer exercises and 4 lecture/problem-solving. Prerequisite: MHR 311.

# MHR 416 Employee Benefits and Services (4)

In-depth examination of policy and design of important economic security plans for protecting employees against on-the-job accidents; prepayment, health maintenance, and preferred provider coverages; structure and implementation of pre-retirement and retirement plans administered by human resource managers. 4 lecture/presentations. Prerequisite: MHR 311.

#### MHR 417 Total Qual Mgmt Implementation

Implementing continuous improvement of processes and systems in organizations. Strategies for developing management and employee commitment to involvement. Developing and maintaining team-based improvement efforts. Case studies, small group projects and presentations. 4 lecture/problem-solving. Prerequisite: OM 401.

#### MHR 421 Management Union Relations (4)

Development of management-union relations in the United States: the continuously changing roles and relationships of labor, management, and government through collective bargaining, arbitration, and legislation. Review of trends affecting productivity and the labor force. 4 lecture/discussions. Prerequisite: Senior standing.

### MHR 422 Policy for International Management (4)

Seminar in the application and development of policy for international business management. Analysis of international management practices and problems using the case study approach. 4 seminars. Prerequisite: MHR 322 (Also listed as IB 422.)

#### MHR 424 Advanced Management Communications Seminar (4)

Skill training in adapting to the interpersonal environment of the organization. Topics include setting behavioral goals, letting oneself be known, listening and responding, challenging and participating effectively in work groups. Primary activities are student discussions and practice of the skills. 4 seminars. Prerequisites: MHR 318 or MHR 324 or PLS 316

#### MHR 426 Creativity and Innovation (4)

Exploring and increasing creativity and innovation in individuals and in groups. Managing technology and research. The role of creativity and innovation in entrepreneurial, growth, and high-tech organizations. Organizational structures/cultures as inhibitors and facilitators of innovation. 4 seminar/discussions. Prerequisite: Junior standing.

# MHR 438 Advanced Organizational Behavior (4)

Application of human processes used to achieve goals in the organization. Group experiences whereby students gain insights to their own leadership styles, integrate their styles with managerial functions and the organization. Case studies, problem-solving exercises and complex organizational simulations. 4 lecture/problem-solving. Prerequisite: MHR 318

#### MHR 441, 442 Internship in Business Management (1-8) (1-8)

On-the-job training in business management involving new, collegiate-level learning experiences. Experiences may be useful as a basis for senior projects. Prerequisite: consent of internship coordinator.

# MHR 452 Emerging Issues in Management (4)

Exploration of contemporary issues; cases and problems facing management in multicultural and international environments. Examination of the environment of business in a global economy with specific emphasis on business-

government relations, ethics, and managing for the future. 4 lecture/presentations. Prerequisite: Senior standing.

# MHR 461, 462 Senior Project (2) (2)

Selection and completion of a project under faculty supervision. Projects typical of problems which graduates must solve in their fields of employment. Formal report is required. Prerequisite: Senior standing. Required minimum of 120 hours.

# MHR 499/499A/499L Special Topics for Upper Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: consent of instructor. Instruction is by lecture, laboratory, or a combination of both.

# MARKETING MANAGEMENT

One of two majors offered in the International Business and Marketing Department is Marketing Management. For other programs in the department, see International Business.

Vernon R. Stauble, Chair,	International Business and Marketing
Dolores A. Barsellotti	Sharyne Merritt
W. R. Berdine	Juanita P. Roxas
Frederick L. Capossela	Robert W. Schaffer
Stephen C. Cosmas	James E. Swartz
Helena Czepiec	Charles L. Taylor
James R. Hill	Andrew J. Thacker
Patricia M. Hopkins	Donna Tillman
Jerry L. Kirkpatrick	Debbora T. A. Whitson
Edwin D. Klewer	

#### MISSION

The mission of the International Business and Marketing Department is to prepare students for specialized careers in either international business or marketing management. This preparation gives both undergraduate and graduate students practical learning experiences in such courses as international marketing, marketing management, professional selling, advertising, buyer behavior, market research, retailing, industrial marketing, brand management, and transportation and distribution management. In addition, the mission of the Department is to give non-majors a solid foundation in the application of business principles to the marketing of goods and services in international and domestic markets. To achieve excellence in both teaching and course content for an increasingly diverse and multinational student body, the Department's faculty undertakes programs of basic research, applied scholarship, and instructional development; it also forges and maintains strong links with the business community, both local and global.

The marketing management major is designed to give students an understanding of the factors both within the firm and in the external environment that affect the development and implementation of plans to serve the firm's markets and to attain the firm's economic goals. Emphasis is placed on determining market needs and decision-making concerning the product, pricing, promotion and distribution strategies required to meet those market needs.

Through proper selection of courses, with advisor approval, each student will develop and complete an individualized program of courses that will prepare him or her for a specialized career field within the field of marketing management. The specialized fields from which the student will choose are: (1) advertising, (2) international marketing, (3) marketing research, (4) marketing to professional buyers, (5) retail management, (6) transportation and distribution management, (7) product/brand management, and (8) industrial marketing.

#### **CORE COURSES FOR MAJOR\***

Required of all Business Majors

(Microcomputer Proficiency)\*\*

(4)
(4)
(4)
(2)
(4)
(4)
(4)
(2)

<sup>\*</sup> A 2.0 cumulative GPA is required in core courses including option courses for the major in order to receive a degree in the major.

Managerial Finance IIFRLMgmt Info Systems.CISManagerial Statistics.OMProduction and Operations Mgmt I.OMStrategic Management.MHRor Strategic Management.OM	307 310 314 331 410 411	(4) (4) (4) (4) (4)
MKT REQUIRED COURSES		
Career Analysis	200	(2)
Marketing Strategy	302	(4)
Marketing Analysis and Control	320	(4)
Marketing Research I	408	(4)
International MarketingMKT	414	(4)
Buyer Behavior	411	(4)
Marketing Problems	421	(4)
Undergraduate Seminar	463	(2)
Plus a minimum of 28 units of courses with advisor approval		. (28)

#### SUPPORT AND ELECTIVE COURSES

(Required of all students)

Principles of Economics	.EC	201*	(4)
Principles of Economics	.EC	202*	(4)
Elementary Stat with Appl		120*	(4)
Restricted Electives [cannot include courses in Busin	iess, Ecor	nomics,	Public
Administration (e.g., PLS 315, PLS 318), or Statistics		(	14-22)

If any of the following courses are used for General Education, then Restricted Electives or Unrestricted Electives would be increased by four units per course as indicated by the unit limitations on the curriculum sheet.

#### **GENERAL EDUCATION COURSES**

(Required of all students)

A total of 72 quarter units of General Education courses, Track B, are required for all majors in the College of Business Administration. See the list of approved courses under General Education Requirements in this catalog.

#### Areas 1 through 4

Select courses from approved list			(64)
Area 5			
Multicultural Organizational Behavior	MHR	318	(4)
Select one course from approved list [cannot incl	ude cours	es in Bus	iness,
Economics, Public Administration (e.g., PLS 315, PL	.S 318),		
or Statistics]			(4)

#### QUANTITATIVE RESEARCH MINOR

The Quantitative Research Minor is an interdisciplinary program which can be taken by students majoring in any field other than Mathematics. Its purpose is to prepare students to conduct quantitative analyses in their chosen discipline. Students acquire practical experience using statistics, principles of experimental design, survey and data analysis techniques. This minor is particularly suited for students majoring in Marketing. A full description of this minor is included in the "University Programs" section of this catalog.

#### MINOR IN MARKETING MANAGEMENT

Students enrolled in other academic programs, especially those outside of the College of Business Administration, may broaden their intellectual base and increase their opportunities for employment by completing an academic minor in marketing management. This minor is designed to supplement student studies in other major fields. Many non-business majors find opportunities for application of the knowledge and academic preparation they have

<sup>\*\*</sup>See \*Microcomputer Proficiency" in the College of Business Administration section of this catalog.

<sup>\*\*\*</sup>If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

<sup>\*</sup>If any of these specific courses are used for General Education, then the Restricted Electives or Unrestricted Electives will be increased by four units per course up to the unit maximum identified in each elective category.

obtained in their major field in the marketing of goods, services and ideas where a knowledge and understanding of marketing principles and practices is a prerequisite for success.

It is possible for students majoring in most other fields to complete the minor in marketing management within the normal requirements of their degree through careful planning and scheduling of their required courses.

The attainment of a minor in marketing management is accomplished by appropriate selection, timely scheduling and satisfactory completion of specifically designated courses and electives totaling a minimum of 32 quarter units as outlined below:

Completion of the following courses is required:

Principles of Marketing ManagementMKT	301	(4)
Marketing StrategyMKT	302	(4)
Buyer Behavior	411	(4)
Accounting for Decision Making I	204	(4)
Principles of Economics	201	(4)

#### Select 12 additional units from the following list of courses:

Professional Selling	208	(4)
Promotional StrategiesMKT	307	(4)
Retail ManagementMKT	308	(4)
Business Logistics	309	(4)
Field Sales ManagementMKT	310	(4)
Marketing of ServicesMKT	316	(4)
Transportation Systems and Traffic ManagementMKT	319	(4)
Marketing Analysis and Control	320	(4)
Direct MarketingMKT	326	(4)
Sales Promotion	327	(4)
Special Problems for Upper Division Students MKT	400	(2)
Product and Brand Management	402	(4)
Marketing for Small Business Organizations MKT	404	(4)
Advertising Management	405	(4)
Ethical Issues in MarketingMKT	406	(4)
Industrial Marketing	407	(4)
Marketing Research I	408	(4)
Marketing Research IIMKT	409	(4)
International MarketingMKT	414	(4)
Strategy in Int'l MktgMKT	415	(4)
Int'l ExportingMKT	416	(4)
Legal Environment of MarketingFRL	419	(4)
Marketing Problems	421	(4)
Management of Marketing Channels	431	(4)
Evaluating Adv Effectiveness	433	(4)
Advanced Prof SellingMKT	435	(4)
Competitive Mktg SimulationMKT	437	(4)
Logistics Strategy Planning, Decisions and ControlMKT	439	(4)
Advertising Media Analysis and PlanningMKT	443	(4)
Retailing Problems	447	(4)
Industrial Mktg Problems	449	(4)
MINOR IN FACHION MERCHANDICING		

#### MINOR IN FASHION MERCHANDISING

This interdisciplinary minor is designed for students who seek careers in the fashion industry. The minor provides students with a background in both fashion as well as business to better prepare them to seek employment in manufacturing or retailing. The minor in Fashion Merchandising is administered jointly by the Department of International Business and Marketing and College of Agriculture.

The attainment of a minor in fashion merchandising is accomplished by appropriate selection, timely scheduling and satisfactory completion of specifically designated courses and electives totaling a minimum of 36 guarter units as outlined below:

Completion of the following courses is required:
--

1 5 1		
Art of Dress HE Fashion Industry HE Apparel Importing and Exporting ABM Principles of Marketing Mgmt MKT Marketing Internship MKT Select two courses from Group A Select two courses from Group B or C.		(4) (4) (4) (4) (4) (8) (8)
GROUP A		
Intro to Cloth ConstructionHEPeople, Culture, and DressHEFashion PromotionHE	130 138 179	(4) (4) (4)
GROUP B		
Professional SellingMKT Retail ManagementMKT Retailing ProblemsMKT	208 308 447	(4) (4) (4)
GROUP C		
Intro to International Bus       MHR         International Marketing Mgmt       MKT         Intl Mktg of Food & Fiber Products       IA/ABM         Strategy in Intl Marketing       MKT	332 414 330 415	(4) (4) (4) (4)
MINOR IN LOCICTION		

#### MINOR IN LOGISTICS

The Logistics Minor, offered by the International Business and Marketing Department, is the only program of its kind in the California State University system. The Logistics Minor was developed to allow Business Administration majors or students majoring in non-business programs to gain the knowledge and skills needed to gain entry-level employment in the field of transportation, warehousing, logistics, planning, materials management, and physical distribution. In addition to the job opportunities that are available in the domestic arena, openings also exist in the international arena. Demand greatly exceeds supply both nationally and internationally for logistics managers.

Students from any major may participate in the minor in Logistics. Core courses in a student's major (Column 1 of the Degree Requirements Evaluation Worksheet) which are required in this minor must be replaced with substitute courses on the basis of individual petitions. For example, an Operations Management major would have to substitute another course for OM 332 in order to complete a Minor in Logistics because OM 332 is a required core course for all Operations Management students.

For more information, students should contact the chair of the International Business and Marketing Department (Building 94-236, Ext. 2436).

Completion of the following courses is required.

#### Prerequisites:

Elementary Statistics with Applications STA Principles of Marketing Management MKT Managerial Statistics OM Production and Operations Management I OM	120 301 314 331	(4) (4) (4) (4)
Core Requirements (16 units)		
Business LogisticsMKT	309	(4)
Transportation Systems and Traffic ManagementMKT	319	(4)
Production and Operations Management IIOM Logistics Strategy and Planning, Decisions and	332	(4)
Control	439	(4)
Select 12 additional units from the following list of courses.		

Each elective must be outside the student's major department.

Management Science IOM	315	(4)
Decision Support and Expert Systems		(4)
Advanced Managerial Statistics	380	(4)

Total Quality Management OM Forecasting Methods for Management OM Material Requirements Planning OM Materials and Inventory Management OM Purchasing Management OM Facilities Planning for Manufacturers OM Operations Management in Services OM	401 415 430 433 434 450 453	(4) (4) (4) (4) (4) (4)
Industrial Marketing       MKT         International Marketing       MKT         International Exporting       MKT         Management of Marketing Channels       MKT         Total Core and Elective units required:	407 414 416 431	(4) (4) (4) (4) 28

# **Course Descriptions**

#### MKT 200 Special Problems for Lower Division Students (1©2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter.

# MKT 201 The Consumer, Marketing and Society (4)

Critical analysis of business/economic institutions, policies and marketing practices as they affect consumer needs. Assisting individuals to become informed and effective buyers/consumers. Historical development of political and economic institutions as they impact individual consumers in multi©cultural environments. 4 lecture/discussions.

#### MKT 208 Professional Selling (4)

Persuasive personal communication on behalf of products, concepts, services. Individual counseling on oral presentations by students. 4 lecture/problem@solving.

# MKT 299/299A/299L Special Topics for Lower Division Students (1©4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

#### MKT 301 Principles of Marketing Management (4)

Principles, concepts, and institutions involved in facilitating the exchange of goods and services. Analysis of markets, the marketing environment, and the marketing variables of product, price, promotion, and distribution. Introduction to marketing strategy and international marketing. Ethical issues. Computer applications. 4 lecture/discussions.

### MKT 302 Marketing Strategy (4)

Analysis, planning, implementation and control of marketing strategy. Target market, product, distribution, promotion and pricing decisions necessary to accomplish the firm's objectives. Emphasis on application of analytical techniques to improve decision making in a dynamic marketplace. 4 lecture/discussions. Prerequisite: MKT 200, 301.

#### MKT 307 Promotional Strategies (4)

Fundamentals of marketing communication. Promotional strategy development: advertising messages and media, personal selling, sales promotion, publicity, packaging, branding and display. Promotional budgets. Development of communication strategies for new product, industrial, retail and services marketing. 4 lecture/discussions. Prerequisite: MKT 301.

#### MKT 308 Retail Management (4)

Examination and evaluation of changing concepts of retailing from a management viewpoint. Philosophy of modern management and measures of retail productivity are employed in individual student field projects. 4 lectures/problem©solving. Prerequisite: MKT 301.

#### MKT 309 Business Logistics (4)

Coordination and administration of materials management and physical distribution activities for optimum logistical performance relative to cost and customer service. Integration of transportation, warehousing, inventory, and related logistical activities. Case analysis and discussion of problems in logistical support. 4 lecture/discussions.

#### MKT 310 Field Sales Management (4)

Analysis of the Field Sales Manager as a professional marketing tactician in a marketing oriented firm. Emphasis on both theoretical and applied approaches utilized to effectively manage a field sales force. 4 lecture/discussions. Prerequisites: MKT 208.

# MKT 316 Marketing of Services (4)

Concepts, practices, and development of strategies involved in marketing of services. External environmental and internal control factors as applied to professional, financial, educational, entertainment, health care, governmental, religious, research, media, and other organizations, institutions and/or agencies. 4 lecture/discussions. Prerequisite: MKT 301.

#### MKT 319 Transportation Systems and Traffic Management (4)

Analysis of competitive alternative modes, systems, rates, services and regulations as prerequisite to transport purchase decisions. Organization, operations and management of the firm's traffic department. Impact of present and proposed transportation and environmental developments on industrial and carrier operations. 4 lecture/discussions.

#### MKT 320 Market Analysis and Control (4)

Market identification and diagnosis. Market analysis based on available data; applications for planning and control. Extensive use of computer models, with emphasis on current microcomputer software application packages. 4 lecture/problem@solving. Prerequisites: MKT 301, STA 120.

#### MKT 326 Direct Marketing (4)

Role of direct marketing in marketing strategy. Investigation of various forms and uses of direct marketing as employed by manufacturers, wholesalers, retailers, politicians, not@for@profit and service organizations. 4 lecture/discussions. Prerequisite: MKT 307.

#### MKT 327 Sales Promotion (4)

Role of sales promotion in marketing strategy. Study of numerous incentives designed to increase sales or achieve other specific marketing objectives directed toward sales force, intermediaries, and consumers. Design of sales promotion plans. 4 lecture/discussions. Prerequisite: MKT 307.

# MKT 400 Special Problems for Upper Division Students (1©2)

Individual or group investigation, research, studies or surveys of selected problems. Total credit limited to 4 units, with a maximum of 2 units per quarter.

# MKT 402 Product and Brand Management (4)

Planning, implementation and control of marketing strategy for a specific product, product line, or brand. Analysis of market needs and the macro©environment; developing marketing plans involving product, price, promotion, and distribution decisions to market a specific product or brand. 4 lecture/discussions. Prerequisite: MKT 302.

#### MKT 404 Marketing for Small Business Organizations (4)

The study of the methods by which a small business organization with limited resources can analyze the profit opportunities within its market area. Special emphasis on developing and evaluating a written marketing plan for a small business organization. 4 lecture/problem@solving. Prerequisite: MKT 301.

# MKT 405 Advertising Management (4)

Strategic aspects of planning, implementing, and controlling advertising programs from the perspectives of producers and distributors of goods, services, and nonprofit organizations. Study of socioeconomic, legal, and consumer issues affecting advertising decisions in a marketing context. 4 lecture/discussions. Prerequisite: MKT 307.

# MKT 406 Ethical Issues in Marketing (4)

The morality and immorality of modern marketing practices. Ethical theories as applied to such marketing@related issues as bribery, marketing to countries engaging in morally questionable practices, deceptive advertising, and invasion of privacy. 4 lecture/problem@solving. Prerequisites: MKT 301.

#### MKT 407 Industrial Marketing (4)

Study of the environment in which industrial products are marketed to industrial firms, governments and institutions. Emphasis on industry structure, government and industrial buying behavior as each affects product, pricing, promotion and distribution decisions. Analysis of specific case problems. 4 lecture /problem©solving. Prerequisite: MKT 301.

#### MKT 408 Marketing Research I (4)

Theoretical and analytical foundations of marketing research. Topics covered include analysis of internal and external secondary data, marketing software packages, approaches to primary research, and research applications to marketing problems. 4 lecture/problem©solving. Prerequisites: MKT 320 and OM 314.

# MKT 409 Marketing Research II (4)

Examination of the research process as an aid to decision making in marketing. Application of techniques in research design, data collection, sampling, computer@aided data analysis, and report writing to contemporary marketing research problems. 4 lecture/problem@solving. Prerequisites: MKT 408.

# MKT 411 Buyer Behavior (4)

An analysis of the various factors that affect the consumer during the pre©purchase, purchase, and post purchase decision©making process. Emphasis is upon a thorough understanding of the consumer to facilitate the development of effective marketing strategy. 4 lecture/discussions. Prerequisite: MKT 301.

# MKT 414 International Marketing Management (4)

Planning and organizing for international marketing operations. Distinctive characteristics, environmental influences and emerging trends in overseas markets are examined. Analysis of management practices and problems of adapting American marketing concepts and methods. 4 lecture/discussions. Prerequisite: MKT 301. (Also listed as IB 414.)

#### MKT 415 Strategy in International Marketing (4)

Development of alternative methods and strategies in the decision areas of product development, promotional programs, distribution channel determination and pricing. Opportunities, key issues and applications to ensure a firm's survival and success in the international arena are explored. 4 lecture/problem©solving. Prerequisite: MKT 414. (Also listed as IB 415.)

#### MKT 416 International Exporting (4)

Principles, strategies and mechanics of exporting to foreign nations. Political, legal, cultural and economic environments affecting export operations. Corporate programs and policies, involvement levels, financing, pricing, promotion and distribution strategies. Latin America, European Community, Pacific Rim specifics. Import trade mechanics. 4 lecture/discussions. Prerequisite: MKT 414. (Also listed as IB 416.)

# MKT 421 Marketing Problems (4)

Application of marketing theory to contemporary marketing problems. Emphasis on the techniques of successful marketing decision making. Problems approach utilized to develop student's ability to integrate all major areas of marketing. 4 lecture/problem©solving. Prerequisites: MKT 408.

# MKT 431 Management of Marketing Channels (4)

Development, design, selection and administration of marketing channel systems. Sources and resolution of channel conflicts. Channel relationships, communication, functional performance and strategy planning. Analysis of selected case problems. 4 lecture/discussions. Prerequisites: MKT 302.

# MKT 433 Evaluating Advertising Effectiveness (4)

Development of criteria to analyze the strategic and creative elements of advertising campaigns. Application of criteria to judge effective versus ineffective advertising in all major media: magazine, newspaper, outdoor, radio, and television. Production of a thirty©second television commercial. 4 lecture/problem©solving. Prerequisite: MKT 307, MKT 411.

# MKT 435 Advanced Professional Selling (4)

Analysis of the sales representative as a professional marketing tactician in a market orientated firm. Emphasis on applied and theoretical approaches utilized to effectively manage a sales territory. Analysis of sales representatives in different industries. 4 lecture/problem@solving. Prerequisite: MKT 208.

#### MKT 437 Competitive Marketing Simulation (4)

Interactive computer marketing simulation designed to reflect business situations and provide practice in making managerial decisions in marketing strategy. Competitive approach requires development of marketing strategy, implementation of marketing tactics, and design of an advertising program. 4 lecture/problem@solving. Prerequisite: MKT 301.

# MKT 439 Logistics Strategy Planning, Decisions and Control (4)

Planning and policy development for logistics strategy to maximize efficiency in material operations and with suppliers and customers. Development of cost and performance standards, controls and measurements to enhance decision@making. Designing integrated logistical systems. 4 lecture/problem@solving. Prerequisites: MKT 309.

# MKT 441, 442 Internship in Marketing (1-8) (1-8)

Faculty©supervised on©the©job educational experience in the real©world marketing management environment. Allocation of unit credit is dependent upon the nature of the work done, the level of responsibility and the number of hours worked. Total internship credit limited to sixteen units. Prerequisite: Permission of departmental internship coordinator.

#### MTK 443 Advertising Media Analysis and Planning (4)

Principles and practices of advertising and media analysis and planning. Strengths and weaknesses of media alternatives, budgeting procedures, media©client planning and buying interaction, negotiation with media sales personnel. 4 lecture/problem©solving. Prerequisites: STA 120 and MKT 307.

#### MKT 447 Retailing Problems (4)

Application of marketing theory to contemporary retailing problems. Identification of potential markets and development of effective research techniques in retail organizations. Integration of current marketing plans and strategies with the techniques of successful retail decision making. 4 lecture/problem©solving. Prerequisite: MKT 308.

# MKT 449 Industrial Marketing Problems (4)

Application of marketing theory to contemporary industrial/ organizational marketing problems. Integration of the techniques of successful decision making. 4 lecture/problem©solving. Prerequisite: MKT 407.

# MKT 461, 462 Senior Project (2) (2)

Selection and completion of a project under faculty supervision. Projects typical of problems which graduates must solve in their fields of employment.

Formal report is required. Prerequisite: Senior standing. Required minimum of 120 hours. Non@marketing majors only.

# MKT 463 Undergraduate Seminar (2)

Development and refinement of skills and strategies necessary to obtain and enhance employment. Student presentation and discussion of problems and opportunities pertinent to career growth and success as related to personal and family life. 2 meetings. Prerequisite: Senior standing.

# MKT 499/499A/499L Special Topics for Upper Division Students (1©4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units with a maximum of 4 units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination of both.

# OPERATIONS MANAGEMENT

Abolhassan Halati, *Chair* William J. Cosgrove Mostafa El Agizy John E. Knox Joyce I. Kupsh Ralph H. Miller

Charles E. Pinkus P. Rama Ramalingam Rhonda L. Rhodes Leonard E. Ross James M. Salvate

#### MISSION

The major prepares the graduate for careers in production and general operations management of national and international business, not-for-profit institutions, and government. This major is designed to provide students with business operations training leading to operations management positions in industrial and service enterprises.

Students may follow their specialized interests in one of the academic subject areas shown below:

Production/Operations Management General Operations Management Management Science/Statistics

A department advisor will help you choose elective courses that are compatible with your career interests in the above academic subject areas.

#### CORE COURSES FOR MAJOR\*

Required of all Business Majors (Microcomputer Proficiency)\*\*

Legal Environment of Business Trans FRL Accounting for Decision Making I ACC Accounting for Decision Making II ACC Accounting for Decision Making III ACC or Elem. for Decision Making III ACC or Elem. for Decision Making MHR Principles of Management MHR Principles of Marketing Mgmt MKT Managerial Finance I FRL Management Info Systems CIS Management Info Systems OM Production & Operations Mgmt I OM Strategic Management MHR or Strategic Management OM	201 204 205 206* 214* 301 301 306 307 310 314 331 410 411	(4) (4) (2) (4) (4) (2) (4) (4) (4) (4) (4)
OM Required Courses:		
Management Science I.0MProduction & Operations Mgmt II.0MTotal Quality Management.0MUndergraduate Seminar.0MSenior Project.0Mand.0M	315 332 401 463 461 462	(4) (4) (2) (2) (2)
Other courses to complete major: Plus a minimum of 36 units of courses from the list of approve courses which may be obtained from an Operations	/ed	

<sup>\*</sup> A 2.0 cumulative GPA is required in core courses including option courses for the major in order to receive a degree in the major.

#### SUPPORT AND ELECTIVE COURSES

(Required of all OM majors)

Principles of Economics	EC	201***	(4)
Principles of Economics	EC	202	(4)
Statistics with Applications	STA	120****	(4)
Restricted electives, [cannot include courses in Bus	siness, E	conomics,	
Public Administration (e.g., PLS 315, PLS 318), or S	tatistics]	(16-24)	***
Unrestricted Electives			. (0)

#### GENERAL EDUCATION COURSES

(Required of all students)

A total of 72 quarter units of General Education courses are required for all majors in the College of Business Administration. See the list of approved courses under General Education Requirements in this catalog.

# Areas 1 through 4

Select courses from approved list	(64)
Area 5	
Multicultural Organizational BehaviorMHR 318	(4)
Select one course from approved list cannot include courses in Busine	ess,
Economics, Public Administration (e.g., PLS 315, PLS 318),	
or Statistics]	***

#### OPERATIONS MANAGEMENT MINOR

The Operations Management Minor was developed to allow other Business Administration majors or students majoring in non-business programs to gain the knowledge and skills necessary to effectively use operations management techniques in both manufacturing and service organizations. The minor in Operations Management will enable the student to help meet the need in modern organizations for people who possess the background in production and general operations management. The career possibilities include national and international businesses, not-for-profit institutions, and governments. Los Angeles County is the largest manufacturing county in the U.S. and has a large need for graduates knowledgeable in production/operations management techniques. Orange County is one of the fastest-growing high-technology manufacturing areas in the country. There is a new emphasis on manufacturing in the U.S. Therefore the demand for graduates knowledgeable in operations management techniques has significantly increased.

Students with an interest in acquiring more comprehensive operations management skills can obtain an Operations Management Minor which would be recognized as a formal educational program by prospective employers. This should enhance the students' employment opportunities, as well as improving their productivity and career growth potential.

# Requirements

Prerequisites (12 units)

Elementary Statistics With Applications STA Managerial Statistics OM Production and Operations Management I OM	120 314 331	(4) (4) (4)
Core Requirements (16 units)		
Production and Operations Management IIOM	332	(4)

430

435

453

(4)

(4)

(4)

# Directed Electives (8 units) (Select 2 Courses)

Production and Inventory Management	432	(4)
Materials and Inventory Management OM	433	(4)
Purchasing Management	434	(4)
Project Management	436	(4)
Just in Time Production Techniques	455	(4)
TOTAL CORE AND ELECTIVE UNITS REQUIRED		24

<sup>\*\*</sup>See "Microcomputer Proficiency" in the College of Business Administration section of this catalog.

<sup>\*\*\*</sup>If two semesters of accounting taken at Chaffey, Citrus, Mt. SAC, Rancho Santiago, Monterey Peninsula, San Jose City, Santa Barbara City, Fullerton College, or Cal Poly Pomona then take ACC 206; otherwise take ACC 214.

<sup>\*\*\*\*</sup>If any of these specific courses are used for general education, then the restricted electives or unrestricted electives will be increased by four units per course up to the unit maximum identified in each elective category.

#### QUANTITATIVE RESEARCH MINOR

The Quantitative Research Minor is an interdisciplinary program which can be taken by students majoring in any field other than Mathematics. Its purpose is to prepare students to conduct quantitative analyses in their chosen discipline. Students acquire practical experience using statistics, principles of experimental design, survey and data analysis techniques. This minor is particularly suited for students majoring in Operations Management. A full description of this minor is included in the "University Programs" section of this catalog.

#### TOTAL QUALITY MANAGEMENT MINOR

The Total Quality Management (TQM) Minor may be taken by students having any major in the University. It is particularly appropriate for students majoring in Operations Management. The Minor is intended to allow students to gain the knowledge and skills necessary for effective application of quality management techniques in manufacturing, service, and not-for-profit organizations. The Total Quality Management Minor will help fill the need for graduates, especially from business and engineering, who are trained in the concepts, techniques, tools and methods of analysis used for the continuous improvement of product, service, and process quality. Computer-based approaches are used wherever they are available and appropriate. A full description of this minor is included in the "University Programs" section of this catalog.

#### **Course Descriptions**

#### **OM 103 Business and Its Environment (4)**

American business system in its economic, social, political, national and international environment. Coverage of the major activities of business and the key institutions influencing its service to society. Participation in a computerized competitive business simulation. 4 lecture/problem-solving. Prerequisite: Passing score on ELM and a score on EPT to qualify for ENG 104.

#### OM 200 Special Problems for Lower Division Students (1-4)

Individual or group investigation, research, studies, or surveys of selected problems. A variable number of units, from one to four, is allowed in any quarter. Maximum total credit is limited to 4 units.

# OM 299 Special Topics for Lower Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Instruction is by lecture, laboratory, or a combination of both. Prerequisite: permission of instructor.

#### OM 310 Information Design and Presentation (4)

Design and presentation of business information used in decision making. Using current technology to develop dynamic messages for oral presentations and written reports. Planning, strategy, display diagrams, graphs, designing visuals, color, meeting environment, delivering with confidence, and conducting meetings. 4 lecture/ problem-solving. Prerequisite: microcomputer proficiency.

#### OM 314 Managerial Statistics (4)

Business application of statistical techniques for inference such as estimation, single-sample and two-sample hypothesis testing for means and proportions, one-way and two-way Chi square tests, simple and multiple regression and correlation. Use of microcomputers. 4 lecture/problem-solving. Prerequisite: STA 120 or equivalent, and microcomputer proficiency.

#### OM 315 Management Science I (4)

Introduction to deterministic quantitative decision analysis, modeling, and problem-solving. Linear programming: model formulation, applications, simplex, transportation, assignment, transshipment, and integer models; sensi-

tivity analysis, duality; application of computers. 4 lecture/problem-solving. Prerequisite: STA 120 or equivalent, and microcomputer proficiency.

#### OM 316 Management Science II (4)

Introduction to probabilistic quantitative analysis tools and techniques for modeling, solving problems, and business decision making. Decision theory, decision analysis with multiple criteria, introduction to stochastic processes; Markovian processes, and computer simulation. 4 lecture/problem-solving. Prerequisite: OM 314.

#### OM 331 Production and Operations Management I (4)

Fundamental concepts of Operations Management. Use of quantitative methods, forecasting, resource allocation, total quality management (TQM), production planning, project management, and inventory models in managing the production function. Computer applications. 4 lecture/problem-solving. Prerequisite: STA 120 or equivalent, and microcomputer proficiency Level 1.

#### OM 332 Production and Operations Management II (4)

Application of quantitative methods to problems in production and operations management, including facility location, design of operations and work systems, job simplification, queuing systems, scheduling, motion and time study. 4 lecture/problem-solving. Prerequisite: OM 331, or concurrent enrollment in OM 331

# OM 333 Practicum in Production/Operations Management (4)

Integrates OM theories and methodologies and applies these to a simulated firm. Use of computer packages. Discussion of ethical considerations. 4 lecture/problem-solving. Prerequisite: OM 332.

# OM 340 Telecommunications and Office Automation (4)

Telecommunications in automated office systems. Decision making in the operations management environment by processing text, data, image, or voice communication. Electronic mail, databases, teleconferencing, facsimile, voice message systems, intelligent copiers and related areas. Classroom applications involving communication by means of quantitative and qualitative electronic reports. 4 lecture/problem-solving. Prerequisite: OM 310.

#### OM 350 Decision Support and Expert Systems (4)

Computer-based information systems for semi-structured business problems; data-base, dialogue management, and model-base subsystems; design and implementation of decision support and expert systems; introduction to artificial intelligence and expert systems. 4 lecture/problem-solving. Prerequisite: microcomputer proficiency.

#### OM 380 Advanced Managerial Statistics (4)

Application of advanced statistical methods for business problems. Parametric analysis and inference including one- and two-way analysis of variance, post hoc comparisons, multiple regression, dummy variables. Nonparametric techniques, including one-, two- and three-way chi square. Use of computers. 4 lecture/problem-solving. Prerequisite: OM 314.

# OM 400 Special Problems for Upper Division Students (1-4)

Individual or group research, studies, or surveys of selected problems. A variable number of units from one to four is allowed in any quarter. Maximum total credit is limited to 4 units.

# **OM 401 Total Quality Management (4)**

The TQM process, its planning and implementation. Theories of leading TQM proponents. TQM tools and methods including concurrent engineering, benchmarking, quality function deployment, and statistical process control. Development and implementation of the improvement process. Use of computers. 4 lecture/problem-solving. Prerequisite: STA 120, or STA 309, or equivalent, and microcomputer proficiency.

# **OM 411 Strategic Management (4)**

Simulated experience in integration of the business functions utilizing computer-based management games; develops concepts of management strategy and policy for competitive excellence and ethical operations; total quality management. Cases in management strategy. Analytical techniques as applied to business cases. 4 seminar/discussions. Prerequisite: Completion of College of Business Administration core requirements.

#### OM 415 Forecasting Methods for Management (4)

Analysis of time series data. Forecasts for use in business decisions. Smoothing, decomposition, multiple regression, Box-Jenkins, autocorrelation, moving average, autoregression, ARMA, and ARIMA methods. Comparison and selection of suitable forecasting methods for a given application. Use of computer packages. 4 lecture/problem-solving. Prerequisite: OM 314.

#### OM 416 Multivariate Business Analysis (4)

Application of multivariate statistical methods to problems in business. Advanced techniques of analysis and inference including multiple regression, multiple discriminant analysis, multivariate analysis of variance, canonical correlation analysis, factor analysis. Use of computer packages. 4 lecture/problem-solving. Prerequisite: OM 380.

# **OM 417 Applied Resource Allocation (4)**

Resource allocation and planning models. Applications of linear and nonlinear programming models. Sensitivity analysis, goal programming, integer programming, dynamic programming, parametric programming, quadratic programming. Use of mathematical programming computer software. Applications of models to case studies. 4 lecture/problem-solving. Prerequisite: OM 315.

### OM 419 Simulation of Service Operations (4)

Computer simulation of service operations, Monte Carlo method, probabilistic simulation modeling, random number generation, model calibration and validation, output analysis, simulation software languages. 4 lecture/problem-solving. Prerequisite: OM 314.

#### OM 430 Material Requirements Planning (4)

Concepts of material requirements planning. Elements, processing logic, lot sizing and updating the system. System records and files, product definition, interfaces, implementation, and operating considerations. Case studies. 4 lecture/problem-solving. Prerequisite: OM 331.

# OM 432 Production and Inventory Management (4)

Management of production systems. Techniques of master production scheduling, short- and medium-range planning, aggregate inventory management, distribution resource planning, production activity control, scheduling and sequencing, shop floor control. Priority and input-output control. 4 lecture/problem-solving. Prerequisite: OM 331.

#### OM 433 Materials and Inventory Management (4)

Materials management in manufacturing and service organizations. Demand forecasting, deterministic and probabilistic inventory systems; Distribution Requirements Planning for multi-level inventory systems; in-process inventory management and inventory simulation. 4 lecture/problem-solving. Prerequisite: OM 314 and OM 331.

#### OM 434 Purchasing Management (4)

Examines activities directed to securing the materials, supplies, equipment and services required for the proper and efficient functioning of a business, including related planning and policy issues. 4 lecture/problem-solving. Prerequisite: OM 331.

#### OM 435 Quality Management (4)

Organization and economics of the quality assurance function. Analysis of

quality management and technical systems. Quantitative techniques of reliability, statistical process control and acceptance sampling for quality control. 4 lecture/problem-solving. Prerequisite: OM 314 and OM 331.

#### **OM 436 Project Management (4)**

Study of CPM (critical path method), PERT (program evaluation and review technique) and other techniques for planning sequences of responsibilities to accomplish complex projects. Monitoring allocation of resources within rigid time and cost constraints. Use of computers. 4 lecture/problem-solving. Prerequisite: OM 331.

#### OM 437 International Business Cases: Operations (4)

Case studies in multinational operations management. Manpower and work flow, production planning and control, operations management strategy, cultural considerations and ethics. Use of computer software. 4 lecture/problem-solving. Prerequisite: OM 331. (Also listed as IB 437.)

#### OM 441, 442 Internship in Operations Management (1-8)

On-the-job training in business management involving new, collegiate-level learning experiences. Experiences may be useful as a basis for senior projects. A maximum of 8 units may be applied to the 44 unit directed elective requirement. Total credit limited to eight units each course. Prerequisite: consent of internship coordinator.

# OM 450 Facilities Planning for Managers (4)

Principles and methods of facilities planning as applied to the selection and location of facilities, equipment, and work stations. Includes both industrial and service applications. 4 lecture/problem-solving. Prerequisite: OM 332.

#### OM 453 Operations Management in Services (4)

Introduction to fundamental concepts of operations management in services. Design and scheduling of personnel activities. Service location problems. Vehicle scheduling and routing. Utilization of service capacity. Quality control in service operations. Management information systems. 4 lecture/problemsolving. Prerequisite: OM 331.

#### OM 455 Just-In-Time Production (4)

Comparison of different production environments. Detailed coverage of successful techniques used in world class manufacturing: Just-in-time, total quality management, total preventive maintenance, group technology, plant layout, and time and motion study. 4 lecture/problem-solving. Prerequisite: OM 331. (Also listed as IB 455.)

#### OM 460 Research Design and Methodology (4)

Identification of problems in a research format. How to state hypotheses, define and collect data, and select analysis techniques. Examination of types of research (ex post facto, laboratory, field, or survey) and limitations for inference. 4 seminar. Prerequisite: OM 314.

#### OM 461, 462 Senior Project (2) (2)

Selection and completion of a project under faculty supervision. Projects typical of problems which graduates must solve in their fields of employment. Formal report is required. Required minimum of 120 hours. Prerequisite: senior standing.

#### OM 463 Undergraduate Seminar (2)

Study and discussion by students of recent developments in the students' major field. 2 lecture. Prerequisite: senior standing.

#### OM 499/499A/499L Special Topics for Upper Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of 4 units per quarter. Instruction is by lecture, laboratory, or a combination of both. Prerequisite: permission of instructor.