DEPARTMENT CHAIR

Barry A. Pasternack

DEPARTMENT OFFICE

Langsdorf Hall 540

DEPARTMENT WEBSITE

http://business.fullerton.edu/isds/

PROGRAMS OFFERED

Bachelor of Arts in Business Administration
- Concentration in Information Systems
- Concentration in Management Science

Minor in Information Systems

Master of Business Administration
- Concentration in Information Systems
- Concentration in Management Science

Master of Science in Information Systems
- Concentration in E-Commerce
- Concentration in Decision Sciences

INTRODUCTION

The Information Systems and Decision Sciences Department offers courses in Informatiton Systems, Management Science, Statistics and Logistics.

Information systems are computer based systems that aid management in making decisions and assist in implementing and controlling management policies. Information systems are used in business, industry and government operations. Applications include airline reservations, banking transactions, crime prevention networks, election returns, real estate assessment, tax records, newspaper databases, sports statistics, and computer assisted learning.

Information systems incorporate the use of data processing equipment, such as computers and their peripherals. Computer software is used to create, maintain and retrieve information. Techniques include mathematical modeling and statistics, integrated with modern computer technology. These methods are applied to systems management, programming design, analysis of information flow, decision support, database organization, small business problems, data communication networking, and distributed processing.

Management Science (also known as Operations Research) is the application of the scientific method to decision-making in business and government. In practice, nearly all management science problems involve solutions using computers. Operations research uses mathematical and simulation models to provide decision-makers with quantitative information pertaining to complex business situations. Statistics assists decision-makers by using techniques designed to draw inferences from experimental and sampling data.

Situations that require operations research techniques arise in all areas of business: accounting, finance, production, marketing, and research and development. Among the problems addressed by operations research techniques are the determination of inventory strategies, the allocation of scarce resources and the design of service systems. Others include bidding in competitive environments, selection of equipment replacement strategies and scheduling the completion of large projects.

The statistician is often involved in activities such as sales forecasting, quality control and financial analysis. Statistics is also concerned with model building and the design of experiments dealing with product testing, surveys and sampling.

Logistics is concerned with the movement of materials and finished goods. It encompasses such areas as inventory control, transportation, purchasing, warehouse management, and information support systems. Logistical control is an important component of the success of most manufacturing and service enterprises. It is also used extensively in complex organizations such as airline companies and the military.

FACULTY

Rahul Bhaskar, Shu-Jen Chen, Zvi Drezner, Nicholas Farnum, Zvi Goldstein, S. Hanizavareh, James Hightower, Bhushan Kapoor, Mabel Kung, Bharat Lakhanpal, William Lau, John Lawrence, George Marcoulides, Do Le Minh, Yong-Tae Park, Barry Pasternack, Sorel Reisman, Joseph Sherif, Sohan Sihota, Ram Singhania, Ronald Suich, Samuel Yang

ADVISERS

The Business Advising Center, Langsdorf Hall 731, provides information on admissions, curriculum and graduation requirements; registration and grading procedures; residence and similar academic matters.

In addition, the Information Systems and Decision Sciences Department provides advising about curriculum content and career opportunities:

Graduate Program: Barry Pasternack

Information Systems: Rahul Bhaskar, Bhushan Kapoor, Mabel Kung, Bharat Lakhanpal, Yong-Tae Park, Sorel Reisman, Joseph Sherif, Ram Singhania, Samuel Yang

Operations Research: Shu-Jen Chen, Zvi Drezner, Zvi Goldstein, Seyed Hanizavareh, William Lau, John Lawrence, Do Le Minh, Barry Pasternack, Joseph Sherif

Statistics: Nicholas Farnum, James Hightower, George Marcoulides, Sohan Sihota, Ronald Suich,

Logistics Management: Zvi Drezner, Zvi Goldstein, Barry Pasternack, Joseph Sherif

CREDENTIAL INFORMATION

For students interested in a teaching credential, the Department of Information Systems and Decision Sciences offers courses which may be included in the Subject Matter Preparation Program for the Single Subject Teaching Credential.

Further information on the requirements for teaching credentials is found in the Teaching Credential Programs section of this catalog and is also available from the Department of Secondary Education. Students interested in exploring careers in teaching at the elementary or secondary school levels should contact the Office of Admission to Teacher Education, Education Classroom 207.

AWARDS IN MANAGEMENT SCIENCE/INFORMATION SYSTEMS

David S. Stoller Outstanding Management Science Undergraduate Award
Dr. Wen Chow Outstanding ISDS Undergraduate Award
Klein Family Excellence Award for ISDS 361B
Outstanding Management Information Systems Undergraduate Award
Outstanding Management Science Graduate Student Award
Russell Utterberg Memorial Scholarship

BACHELOR OF ARTS IN BUSINESS ADMINISTRATION
MINOR IN INFORMATION SYSTEMS
MASTER OF BUSINESS ADMINISTRATION

For information on the minor in Information Systems, as well as the Information Systems and Management Science concentrations within the B.A. and MBA, please refer to the "Business Administration" programs section of this catalog.

MASTER OF SCIENCE IN INFORMATION SYSTEMS

The Master of Science in Information Systems program provides the conceptual understanding and technical competence for careers in information systems, E-commerce, statistics, operations research and logistics. Emphasis is placed on the use of scientific method to allocate resources so as to maximize profit or minimize cost. Concentrations include E-commerce and decision sciences. These techniques are widely used in both private business and public enterprise. Employment opportunities include positions such as management analyst, data processing manager, statistician, forecaster, and logistical support manager.

The M.S. in Information Systems program is scheduled especially for students who are employed full time. Courses are offered during the late afternoon and evening. The program may also be taken on a full-time basis, as some courses are also offered during the daytime.

The curriculum should appeal to students with undergraduate degrees in business administration, computer science, mathematics, engineering or science. For students with an undergraduate degree in business administration, the 10-course (30-unit) curriculum may be completed in 1 1/2 years (full-time) or 2 1/2 years (part time). The curriculum includes information systems and management science applications, electives, and a capstone course, which includes a terminal project. Students with a bachelor's degree in a field other than business administration must first complete the M.B.A. Foundation Courses (30 units) or equivalent undergraduate courses.

Cal State Fullerton is the only university in Orange County accredited by the American Assembly of Collegiate Schools of Business at both the undergraduate and graduate level. This assures a rigorous program, a well-qualified faculty, high standards for students, and access to an extensive library system. The qualifications of the M.S. in Information Systems faculty include advanced degrees in information systems, operations research, statistics and applied mathematics; extensive computer experience; and practical experience in business, industry and government.

Most graduate courses in the College of Business Administration and Economics require "classified CBE status" and are open only to students with classified standing in the M.S. in Information Systems, M.S. in Taxation, M.A. in Economics, M.B.A. or M.S. in Accountancy programs.

ADMISSION REQUIREMENTS

Students meeting the following requirements will be admitted to post-baccalaureate-unclassified standing:

1. Acceptable bachelor's degree from an institution accredited by a regional accrediting association, or equivalent.
2. Grade-point average of at least 2.5 in the last 60 semester units attempted and in good standing at last college attended.

Postbaccalaureate-unclassified students may enroll in undergraduate courses (100 through 400 level) but are generally ineligible for graduate business courses (500 level). Such students may wish to take undergraduate courses which are necessary to meet the requirements for classified standing (see below). Upon completing the requirements, the student may file an "Application for Postbaccalaureate/Graduate Change of Academic Objective" requesting admission to the M.S. in Information Systems program. Admission to the university as a postbaccalaureate-unclassified student does not constitute admission to the M.S. in Information Systems program, does not confer priority, nor does it guarantee future admission. Students planning to apply for admission to the M.S. in Information Systems program should confer with the graduate adviser in the College of Business Administration and Economics.

Students meeting the following departmental requirements will be admitted to the M.S. in Information Systems program with conditionally classified standing:

3. Combination of grade-point average and score on the Graduate Management Admission Test (GMAT) sufficient to yield a score of

at least 1000 according to one of the following formulas. Due to limited facilities and resources in the College of Business Administration and Economics, a higher score may be required of all applicants.

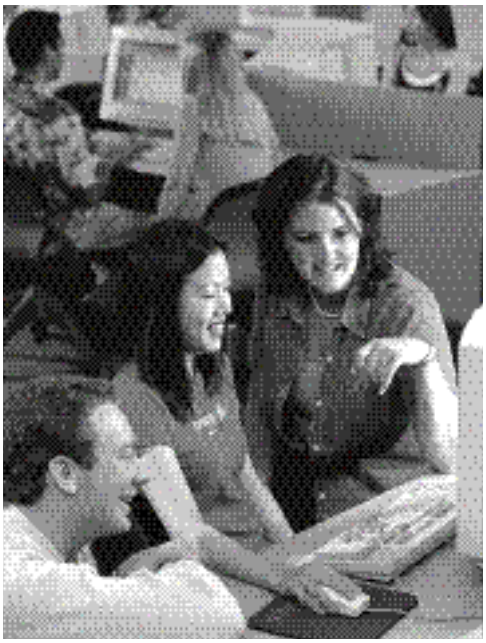
A. If overall undergraduate GPA is at least 2.7 and GMAT is at least 450, then score = (GPA x 200) + GMAT.

B. If overall undergraduate GPA is below 2.7 or GMAT is below 450, then score = (GPA x 200) + GMAT -50.

4. A score in the top 50 percent on the verbal, analytical and quantitative areas of the GMAT. Students who do not reach this level are required to complete a department approved course(s).

5. For international students a TOEFL score of 570. A student scoring between 550 and 570 may be admitted conditionally depending upon an evaluation of the entire application file. The student may be required to complete a department approved course(s).

Conditionally classified students may take a limited number of graduate courses (500 level) subject to the approval of the graduate adviser of the College of Business Administration and Economics. Students may take whatever courses are necessary to fulfill requirement 6 (below) while enrolled as conditionally classified students.



In addition, a maximum of nine units (three courses) from the M.S. in Information Systems curriculum may be taken while in conditionally classified standing.

Students meeting the following additional requirements will be advanced to classified standing. Such students are eligible to take graduate courses for which they are qualified.

6. A bachelor's degree with a major in business administration equivalent to the degree as offered at CSUF with at least an overall cumulative grade-point average of 3.00 (B). Applicants with a bachelor's degree in a field other than Business Administration may meet this requirement by passing the courses in calculus and computer programming (below) with grades of at least C, and also the Foundation Courses within the curriculum of the Master of Business Administration (30 units, including Accounting 510; Business Admin 590; Economics 515; Finance 517; Management 515, 516, 518; ISDS 513, 514, and Marketing 519). The MBA Foundation Courses must have at least a 3.0 GPA; Foundation Courses with grades lower than a C must be repeated with at least a C grade.

   The degree must include calculus and computer programming equivalent to passing Mathematics 135, Business Calculus (3 units), and ISDS 265 Introduction to Computing and Application Software (3 units), with grades of at least C. Courses in the major which are more than seven years old must be evaluated by the respective Department Chair in consultation with the Department Chair of Information Systems/Decision Science. Courses with grades lower than C must be repeated.

7. Approval of study plan.

APPLICATION DEADLINES

Applications need to be postmarked no later than March 1st for the fall semester and October 1st for the spring semester. However, deadlines may be changed based upon enrollment projections. Check the university graduate studies website for current information at http://www.fullerton.edu/graduate/.

CURRICULUM

The M.S. in Information Systems curriculum requires 30 semester units of course work beyond the baccalaureate degree. At least 21 of the 30 units required for the degree must be at the graduate level. In lieu of the information systems study plan, students may choose a concentration in either E-commerce or Decision Sciences.

A 3.0 (B) GPA is required in study plan courses and all applicable course work. Any study plan course with a grade lower than C must be repeated with at least a C grade.

INFORMATION SYSTEMS STUDY PLAN

It is recommended that students selecting the Information Systems curriculum take ISDS 309 prior to beginning the program.

Required Core Courses (12 units)

ISDS 550 Business Data Communications (3)

ISDS 551 Information Resources Management (3)

ISDS 552 Information Systems Analysis, Design and Development (3)

ISDS 555 Business Databases: Design and Processing (3)

Electives (15 units)

Five courses (15 units) to be selected in consultation with and approved by the student's adviser. Additional electives to those below may be available. Students should contact the department office for a current listing. Note that students who do not have an undergraduate degree in Information Systems must take ISDS 411 as an elective. No more than nine units of electives may be at the 400-level.

ISDS 411 Microcomputer Business Application Design (3)

ISDS 413 Business Programming Applications for Enterprise Resource Planning Systems (3)

ISDS 415 Decision Support and Expert Systems (3)

ISDS 418 Privacy and Security (3)

ISDS 435 Integrated Enterprise Information Systems (3)

ISDS 474 Data Mining (3)

ISDS 553 Electronic Commerce: Analysis and Evaluation (3)

ISDS 554 E-Commerce: Technological Perspective (3)

ISDS 556 Data Warehousing & Data Management (3)

ISDS 557 Issues in Business Information Systems and Global Telecommunications (3)

ISDS 558 Advanced Software Development with Web Applications (3)

ISDS 563 Geographic Information Systems for Business (3)

ISDS 576 Business Modeling and Simulation (3)

Students may use one applied management science course and one applied business course as electives. The applied management course may be selected from the following:

ISDS 526 Forecasting, Decision Analysis and Experimental Design (3)

ISDS 560 Advanced Deterministic Models (3)

ISDS 561 Advanced Probabilistic Models (3)

The applied business course elected may be selected from the following:

Accounting 511 Seminar in Managerial Accounting (3)

Economics 502 Advanced Microeconomic Analysis (3)

Finance 523 Seminar in Corporate Financial Management (3)

Management 444 Project Management (3)

Marketing 525 Seminar in Marketing Problems (3)

Terminal Evaluation (3 units)

ISDS 577 Seminar in Information Systems Implementation (3)

Students must complete the individual project in ISDS 577 with a grade of B or better. In exceptional cases, a thesis (Business Admin 598) may serve as an option to the individual written project. See the departmental graduate adviser for details.

E-COMMERCE CONCENTRATION

The E-Commerce concentration is designed to provide students with the technical skills in information technology as applied to the Internet and E-Commerce. Additionally, the program includes courses in small business management/entrepreneurship, marketing, and logistics, as this knowledge base is essential for an individual who would like to create an E-commerce operation. Background prerequisites for this concentration are the following courses or equivalent: ISDS 309 and 371. Students pursuing this concentration take the 12-unit required information systems core courses substituting ISDS 516 for ISDS 551, the ISDS 577 capstone course and the following 15 units of required electives:

ISDS 553 Electronic Commerce: Analysis and Evaluation (3)

ISDS 554 E-Commerce: Technological Perspective (3)

ISDS 558 Advanced Software Development with Web Applications (3)

Management 581 Entrepreneurship and New Ventures (3)

Marketing 455 Strategic Internet Marketing (3)

DECISION SCIENCES CONCENTRATION

Required Courses (9 units)

ISDS 415 Decision Support and Expert Systems (3)

ISDS 526 Forecasting, Decision Analysis and Experimental Design (3)

ISDS 560 Advanced Deterministic Models (3)

OR ISDS 561 Advanced Probabilistic Models (3)

Statistics Course (3 units minimum)

One or more of the following:

ISDS 422 Surveys and Sampling Design and Applications (3)

ISDS 461 Statistical Theory for Management Science (3)

ISDS 467 Statistical Quality Control (3)

ISDS 472 Design of Experiments (3)

ISDS 473 Applied Business Forecasting (3)

ISDS 474 Data Mining (3)

ISDS 475 Multivariate Analysis (3)

ISDS Electives (15 units maximum)

ISDS Electives

ISDS 465 Linear Programming in Management Science (3)

ISDS 490 Queing and Stochastic Models in Management Science (3)

ISDS 516 Introduction to Logistics Analysis Techniques (3)

ISDS 551 Information Resources Management (3)

ISDS 552 Systems Analysis, Design and Development (3)

ISDS 553 Electronic Commerce: Analysis and Evaluation (3)

ISDS 555 Business Databases: Design and Processing (3)

ISDS 560 Advanced Deterministic Models (3)

OR ISDS 561 Advanced Probabilistic Models (3)

ISDS 563 Geographic Information Systems for Business (3)

Electives Outside ISDS (6 units maximum)

Accounting 511 Seminar in Managerial Accounting (3)

Economics 502 Advanced Microeconomic Analysis (3)

Finance 523 Seminar in Corporate Financial Management (3)

Management 524 Seminar in Organizational Behavior and Administration (3)

Management 535 Production and Operations Management (3)

Marketing 525 Seminar in Marketing Problems (3)

Terminal Evaluation (3 units)

ISDS 576 Business Modeling and Simulation (3)

Students must complete the individual project in ISDS 576 with a grade of B or better. In exceptional cases, a thesis (Business Admin 598) may serve as an option to the individual written project. See department graduate adviser for details.

INFORMATION SYSTEMS AND DECISION SCIENCES COURSES

Courses are designated as ISDS in the class schedule.

102 Introduction to Information and Multimedia Technology (2)

This hands-on course covers information resources and multimedia tools available to students at CSUF. Topics include: e-mail, the World Wide Web, Internet search engines, computerized library resources, and developing electronic presentations using software such as Power Point.

161 Discovering Business through Decision Science (1)

The students will investigate how businesses operate through tours of a number of manufacturing and service facilities. The emphasis will be on how businesses use quantitative analysis to improve operations.

162 Introduction to Excel Spreadsheets (1)

Introduction to the Excel spreadsheet with emphasis on business applications. Topics include how to enter data, formulas, functions, and enhancing the worksheet to create graphs and databases. Students who take ISDS 265 can not receive credit for ISDS 162.

163 Electronic Research of Business Enterprises (1)

Students will learn how to utilize electronic and non-electronic resources to research the history of a business. The resulting history will be published on the World Wide Web.

165 Navigating the Information Superhighway (1)

This hands-on course is a survey of information resources available through the Internet. Students will cover topics such as e-mail, the World Wide Web, Internet search engines, and computerized library resources.

166 Developing Computer Based Presentations (1)

This course introduces the concepts, principles and techniques for developing computer based presentations. Students will learn to create presentation outlines, use masters and templates, work with graphs and organization charts, and develop electronic slides and transparencies.

167 Practical Approach to Database Systems (1)

This course presents hands-on methods to plan, create, and maintain databases. Students also learn to create customized forms and queries, as well as to develop professional looking reports. Students who take ISDS 265 cannot receive credit for ISDS 167.

168 Mastering the World Wide Web (1)

This course covers how the World Wide Web works and how one can set up a website and author web pages. Topics include: web browsers, design of a website, HTML, multimedia, interactive techniques, CGI, security, and site promotion.

262 Visual Basic for Excel (1)

Prerequisite: ISDS 162 or equivalent. Introduction to the Visual Basic programming language that is a subset of the Excel spreadsheet. Students who take ISDS 265 cannot receive credit for ISDS 262.

265 Introduction to Computing and Application Software (3)

Introduction to computer concepts, computer organization, operation, hardware, systems and application software; business problem-solving and computer programming; applications to business. Microcomputer applications and hands-on exercises in the business arena.

309 Introduction to Operating Systems and Programming (3)

Prerequisite: ISDS 265. Structured programming principles; operating systems; shell commands and scripts; preparing and maintaining disks; managing files and processes; fundamental programming constructs; conditional processing; arrays; subroutines; parameter passing; file processing.

310 Systems Analysis and Design (3)

Prerequisite: ISDS 309 (may be taken concurrently). Systems analysis and design for business information systems; systems development methodologies; managing changes to system parameters; systems process and data models; case tool types and their use; structured vs. object oriented analysis and design.

352 Advanced Data and Information Analysis in Business (3)

Prerequisites: Finance 320 and Marketing 351. Advanced spreadsheet topics for professional business, downloading of databases into spreadsheets and database packages and statistical analyses for decision support; database concepts and design; querying and report writing; applications to financial/ marketing forecasting models.

361A Quantitative Business Analysis: Probability and Statistics (3)

Prerequisites: Math 135 and ISDS 265 or equivalents. Corequisite: Business Admin 301. Probability concepts; expectations; descriptive statistics; discrete and continuous random variables; sampling; estimation; hypothesis testing; simple and multiple regression; nonparametric statistics.

361B Quantitative Business Analysis: Statistics and Management Science (3)

Prerequisite: ISDS 361A. Quantitative methods and their application to business and economic problems. Forecasting, ANOVA, quality control, decision analysis, mathematical modeling, optimization, PERT/CPM, inventory.

370 COBOL Programming for Information Systems (3)

Prerequisites: ISDS 309 and ISDS 310 (ISDS 310 can be taken concurrently). Structured and object-oriented COBOL; multiple-level table handling; sequential, indexed, and direct file processing; sort and merge functions; subprograms; abstract data types; objects; inheritance and dynamic binding.

371 C++ For Business Applications (3)

Prerequisite: ISDS 310. C++ syntax, structured programming, table handling, design standards, object oriented programming. Junior or senior CBE standing required.

372 Java Programming for Business Applications (3)

Prerequisites: classified CBE Status, ISDS 309 junior or senior CBE standing. Corequisite: ISDS 310. Java syntax and structure. Object oriented programming: Class, association, inheritance, polymorphism. Business applications of Java. Use of Java packages. Web application: applets and threads.

408 Database Management Systems (3)

Prerequisites: Business Admin 301 and ISDS 309, 310 and either ISDS 371, 372, or 411 (ISDS 371, 372 or 411 may be taken concurrently). Provides essential concepts, principles and methods for analysis, design and implementation of database management systems; covers theory and practice; emphasis is on the relational model; examines issues and problems associated with developing single and multiple user applications both today and in the future; project required.

409 Business Telecommunications for Information System Design (3)

Prerequisites: Business Admin 301, ISDS 309 and 310 (ISDS 309 and 310 may be taken concurrently). This course examines the essential concepts for developing a data communication architecture to support Information Systems for a business enterprise. The course will require students to undertake a group project to design a LAN.

411 Microcomputer Business Application Design (3)

Prerequisites: Business Admin 301 and ISDS 309 and 310. This course focuses on contemporary issues in the design and development of integrated, graphical user interface-based business applications.

413 Business Programming Applications for Enterprise Resource Planning Systems (3)

Prerequisites: ISDS 309 and 310 or graduate equivalent. Application programming fundamentals for ERP systems; accessing and management of ERP database tables and external files; layout design and data extraction for advanced output; testing, debugging and analysis tools; security issues in an ERP system.

414 Internet Technologies and Applications (3)

Corequisites: ISDS and one of: 371 or 372, or 411 Contemporary Internet technologies and Web applications: Internet infrastructures, development of Web sites and dynamic Web pages, Web databases, business applications.

415 Decision Support and Expert Systems (3)

Prerequisites: Business Admin 301, ISDS 309. Principles and procedures related to the design and use of expert systems and decision support systems principles in management decision making; development of expert systems using shells.

418 Privacy and Security (3)

Corequisites: Business Admin 301, ISDS 309. Security and privacy problems associated with the use of computer systems; ways to minimize risks and losses.

422 Surveys and Sampling Design and Applications (3)

Prerequisites: Business Admin 301, ISDS 361A. Principles for designing business and economic surveys. Applications in accounting, marketing research, economic statistics and the social sciences. Sampling; simple random, stratified and multistage design; construction of sampling frames; detecting and controlling non-sampling errors.

433 Enterprise Systems Administration (3)

Prerequisite: ISDS 310 or ISDS 552. Students will explore the technical administration practices required to manage the day-to-day operations of an Enterprise Resource Planning (ERP) system. Topics covered will include system architecture, security, system performance, and installation of upgrades.

435 Integrated Enterprise Information Systems (3)

Prerequisites: ISDS 309 and Management 339. Application programming fundamentals for ERP systems; accessing and management of ERP database tables and external files; layout design and data extraction for advanced output; testing, debugging and analysis tools; security issues in an ERP system.

437 Enterprise Networks for Information Systems (3)

Prerequisite: ISDS 409 or ISDS 550. Networks in the enterprise concentrates on placing the network in perspective within the overall enterprise that it serves. The issues involved in constructing, updating, and managing the networks, which make up the infrastructure of those information systems.

440 Integrative Decision Tools for Business Operations (3)

Prerequisites: Business Admin 301, ISDS 361B. Intermediate management science modeling and solution techniques, including topics in linear and non-linear programming, integer programming, dynamic programming, Markov processes, queuing theory, and inventory models.

454 Seminar in Information Systems Development (3)

Prerequisites: Business Admin 301, ISDS 408, 409, and either ISDS 371, 372, or 411. Integrates information systems development concepts of analysis, design and implementation. Students will develop an information system from concept to completion. Individual and team effort.

461 Statistical Theory for Management Science (3)

Prerequisites: Business Admin 301, ISDS 361A. Review of mathematical topics needed for statistical theory. Distribution, theory, moment generating functions, central limit theorem. Estimation theory, maximum likelihood. Hypothesis testing, Neyman-Pearson Lemma likelihood ratio tests. Use of statistical software packages.

465 Linear Programming in Management Science (3)

Prerequisite: Business Admin 301, ISDS 361B or Mathematics 250B. Mathematical and theoretical foundations for linear programming; geometric and linear algebraic approaches and proofs; simplex method, duality, sensitivity and parametric analyses, extensions to specialized algorithms, and large scale models; practical and computer based applications will be discussed.

467 Statistical Quality Control (3)

Prerequisites: Business Admin 301 and ISDS 361A. Control charts for variables, percent defective and defects. Tolerances, process capacity; special control charts, acceptance sampling and batch processing problems. Bayesian aspects of process control.

472 Design of Experiments (3)

Prerequisite: Business Admin 301. Corequisite: ISDS 440. Fundamentals of experimental design. Analysis of variance, factorial experiments, nested designs, confounding and factorial replications.

473 Applied Business Forecasting (3)

Prerequisite: Business Admin 301. Corequisite: ISDS 440. Forecasting methods applied to problems in business and industry; practical multiple regression models with computer solutions; basic techniques in time-series analysis of trend, cyclical and seasonal components; correlation of time-series and forecasting with the computer.

474 Data Mining (3)

Prerequisite: ISDS 361A or equivalent. Fundamentals of working with the SAS programming language; SAS files; importing data; modifying data files; report generation; macros. Introduction to data mining using the SAS Enterprise Miner; overview of multivariate statistical methods; applications.

475 Multivariate Analysis (3)

Prerequisites: Business Admin 301 and ISDS 361A. The least squares principle; estimation and hypothesis testing in linear regression; multiple and curvilinear regression models; discriminant analysis; principle components analysis; application of multivariate analysis in business and industry.

490 Queuing and Stochastic Models in Management Science (3)

Prerequisites: Business Admin 301 and ISDS 361B or Mathematics 335. Probabilistic models in management science; theoretical foundation and model development for Poisson process models, birth-death models, Markovian and general queuing situations, and Markov chains; renewal theory and/or reliability models; practical business applications.

495 Internship (1-3)

Prerequisites: Business Admin 301; at least junior standing, 2.5 GPA, and one semester in residency at the university; and consent of internship advisor. Students in the information systems concentration must have completed ISDS 309, students in the management science concentration must have completed ISDS 361B, students in the international business concentration must have completed ISDS 309 or ISDS 361B. Planned and supervised work experience. May be repeated for credit up to a total of six units. Credit/No credit grading only.

499 Independent Study (1-3)

Prerequisites: Business Admin 301, ISDS 361B, senior standing, and approval by the Department Chair. Open to qualified students desiring to pursue directed independent inquiry. May be repeated for credit. Not open to students on academic probation.

513 Statistical Analysis (3)

Prerequisites: Math 135, ISDS 265 (or equivalents) and classified CBE status. Basic probability and descriptive statistics; sampling techniques; estimation and hypothesis testing; simple and multiple regression, correlation analysis; computer packages and other optional topics.

514 Decision Models for Business and Economics (3)

Prerequisites: ISDS 513 and classified CBE status. Linear programming; inventory; PERT-CPM; queuing; simulation, computer application, forecasting; time-series, and other optional topics.

516 Introduction to Logistics Analysis Techniques (3)

Prerequisites: ISDS 514 and classified CBE status. The scope of logistics; external and internal environment; analysis of demand, analysis of cost, commodity and transportation rates; structure of transport industry, inventory management, merchandise storage and warehousing; framework of regional analysis; methods of location analysis.

526 Forecasting, Decision Analysis and Experimental Design (3)

Prerequisites: ISDS 514 and classified CBE status. Time series analysis. Trend, cyclical and seasonal components. Statistical decision theory. Fundamental principles of experimental design; interaction. Software packages.

550 Business Data Communications (3)

Prerequisites: ISDS 514 or consent of instructor and classified CBE standing. This course examines the essential concepts for developing a data communication architecture for a business enterprise. The course examines the issues of transmission media, speed, efficiency, protocols, security in a variety of network architectures such as LAN, WAN, VPN, leading to "the state of the art" wireless networks. The course concludes with a discussion on the technical implications of doing business on the Internet.

551 Information Resources Management (3)

Prerequisite: Management 515. The expanding role of information systems in the overall strategy and management of organizations is examined. Topics include strategic value of information systems, management of information systems development and procurement process, E-commerce, and integrated enterprise systems.

552 Systems Analysis, Design and Development (3)

Prerequisite: Management 515. Systems analysis and design concepts, life cycle and prototyping; planning and managing projects; Systems evaluation and selection; System development using programming languages such as Visual Basic. Interface design with controls, object-oriented design concepts and tools, including the use of cases and UML, with applications in Visual Basic.

553 Electronic Commerce: Analysis and Evaluation (3)

Prerequisite: ISDS 550. This course studies electronic commerce. It focuses on understanding the technical infrastructure, which enable, E-commerce. Examines organizational challenge for developing an appropriate business model for emergence of electronic business. Explores social economical impact of electronic commerce.

554 E-Commerce: Technological Perspective (3)

Corequisite: ISDS 555. This course recognizes the expanding role of the Internet in the overall strategy, implementation, and management of enterprise-wide information systems. Topics include organizational utilization of electronic information resources, as well as Internet application planning, development, implementation and control.

555 Business Databases: Design & Processing (3)

Prerequisite: ISDS 550. Corequisite: ISDS 552. Internet and multiuser databases; accessing Web servers; data warehouse, structured query language, client-server database systems and programming; object-oriented databases.

556 Data Warehousing and Data Management (3)

Prerequisites: ISDS 552 and 565. This course introduces students to basic concepts, architectures, and development strategies of data warehousing, issues in managing data as organizational assets, and its potentials for competitive advantages in dynamic business environments.

557 Issues in Business Information Systems & Global Telecommunications (3)

Prerequisite: Management 515. Introduce advanced concepts of global networks, advanced communications design and management, global information security and privacy, global communications protocol and applications to industry, government and commercial sectors.

558 Advanced Software Development with Web Applications(3)

Prerequisites: ISDS 552 and 555. Advanced client/server software development techniques with specific emphasis on the Internet. Topics include file structure, managing relational databases with data control and SQL, and ActiveX components and objects.

560 Advanced Deterministic Models 3)

Prerequisites: Management 515, ISDS 514 and classified CBE standing. Advanced linear programming, dynamic programming, integer programming, non-linear programming, business applications. Software packages and computer utilization.

561 Advanced Probabilistic Models (3)

Prerequisites: ISDS 514 and classified CBE standing. Stochastic processes, Markov processes, advanced queuing and inventory models; reliability. Software packages and computer utilization.

563 Geographic Information Systems for Business (3)

Prerequisite: ISDS 555. This course covers the use of Geographic Information Systems in support of business applications such as site location, scheduling, marketing, and real estate. Students will develop GIS applications for local businesses.

568 Information Systems for Knowledge Management (3)

Prerequisite: ISDS 555. Knowledge management systems are useful for businesses to leverage their intellectual capital. The course covers how knowledge is created, captured, represented, stored and used to solve business problems. Software demonstrations and case studies will be used for illustrations.

576 Business Modeling and Simulation (3)

Prerequisite: ISDS 513 or equivalent. Theory and application of modeling and simulation methodology. Probabilistic concepts in simulation; arrival pattern and service times; simulation languages and programming techniques; analysis of output; business applications. Requires projects. The individual project will fulfill the terminal degree requirement.

577 Seminar in Information Systems Implementation (3)

Prerequisites: To be taken in the last semester, or with completion of at least seven ISDS courses in the program. This course integrates the information systems development concepts of information systems project management, analysis, design, and implementation with telecommunications, database design, programming, testing and system integration issues. Students will develop information systems from concept to completion through individual and team effort. Requires projects. The individual project will fulfill the terminal degree requirement.

578 Seminar in Logistics Models (3)

Prerequisites: ISDS 516, 526, and Marketing 519. This course integrates the concepts of logistics to systematically analyze a distribution system. Students will perform a complete analysis of an existing distribution system to investigate the value added role of logistics in distribution. Includes article analysis, case analysis, a research project, individual and group reports, and oral and written presentations. Requires projects. The individual project will fulfill the terminal degree requirement.

597 Project (3)

Prerequisite: classified CBE status. Directed independent inquiry. Not open to students on academic probation.

599 Independent Graduate Research (1-3)

Prerequisite: classified CBE status and consent of Department Chair and Associate Dean. May be repeated for credit. Not open to students on academic probation.

SCHOOL OF EDUCATION
ASSOCIATE DEAN (ACTING)
L.Y. (Mickey) Hollis

PROGRAM COORDINATOR
JoAnn Carter-Wells

PROGRAM OFFICE
Education Classroom Building 531

PROGRAM WEBSITE
http://msidt.fullerton.edu

PROGRAM OFFERED

Master of Science in Instructional Design and Technology

(On-line offering only)

PROGRAM COUNCIL

JoAnn Carter-Wells (Reading)

Grace Cho (Secondary Education)

Barbara Glaeser (Special Education)

Tim Green (Elementary and Bilingual Education)

Karen Ivers (Elementary and Bilingual Education)

Mickey Hollis (School of Education)

Ula Manzo (Reading)

INTRODUCTION

The Master of Science in Instructional Design and Technology is an interdisciplinary program housed within the School of Education and draws upon a team of outstanding faculty with expertise, training, and experience in instructional technology and its applications for teaching and learning.

Benefits of the program include:

- The degree represents a comprehensive, high quality, affordable program staffed by a team of outstanding and dedicated faculty with expertise and experience in instructional technology and educational practice, backed up with strong program and administrative support.
- The program is completed in 20 months (2 courses per term segment).
- The course work in the program is 100% online, with 2 on-campus meetings (two on-campus trips for a total of 2 days).
- The program promotes collaboration, professional networking, and team-building among peers, faculty, staff, and other professionals.
- Graduates of the program will gain valuable knowledge and skills in the development, design, evaluation, and implementation of a wide variety of instructional technologies applicable to a wide range of settings. Furthermore, graduates will obtain expertise in the enhancement of teaching and learning based on sound and current educational research, theory, and practice and will be well positioned in a competitive job market.

ADMISSION AND PROGRAM REQUIREMENTS

New students are admitted once a year for the fall term segment that begins in August. Applications need to be postmarked no later than March 1st. However, this deadline may be changed based upon enrollment projections. Please check the program website for current information at http://msidt.fullerton.edu.

Minimum state and program requirements for admission to conditional classified standing in the program include the following:

1. Hold a baccalaureate from an accredited institution of higher education.
2. Have earned a minimum grade-point average of 3.0 in the last 60 semester units attempted as documented by two official copies of transcripts from all higher education institutions attended.
3. Good standing at the last college attended.
4. For international students from countries where English is not the official language, have a TOEFL score of 575.
5. Submission of a written self-assessment essay. Students must submit a written essay on issues such as why they would be good candidates for the program, including their experience and/or commitment to online learning environments, how they will manage their time, their level and types of technology skills, their technology access, and ability to work independently.
6. Successful passage of a phone or face-to-face interview designed to assess their level of technology knowledge, skills, and abilities to be an online learner.
7. Technology requirements as follows:

   Operating System: Windows 95 or higher, Macintosh OS 8.6 or higher; Processor: 450 MHz or higher preferred;

Memory: 256 MB of RAM or higher;
Plug-ins: Adobe PDF reader, Real Player;

Browser: Netscape 4.7 or higher, Internet Explorer 6.0 or higher (Java and Javascript must be enabled. AOL users should upgrade to AOL 5.0);
Sound Card and video card;
Modem: 56 Kbps or faster (DSL, cable, etc.);
Monitor: 15" monitor with 800 x 600 resolution capability or larger;
Printer: Graphics-capable (inkjet or laser) printer;

Software: Microsoft Office, Macromedia Director, Macromedia Dreamweaver, Macromedia Fireworks (Note: The software will be used throughout the MSIDT program and can be purchased at an educational discount through the Titan campus bookstore after admission into the program.);

CD-R: 12x (24x preferred);

E-mail Account and dependable Internet connection.

8. Knowledgeable in the use of a personal computer (PC or Macintosh) including the ability to do the following. These skills and knowledge will be ascertained through either a phone or face-to-face interview:
   a. Locate, create, move, copy, delete, name, rename, and save files and folders on hard drives and on secondary storage devices such as floppy disks;
   b. Use a word-processing program that runs on a PC or Macintosh computer to create, edit, format, store, retrieve, and print documents;
   c. Use an electronic mail system to receive, create, edit, print, save, and send an e-mail message with and without an attached file;
   d. Use an Internet browser to search the World Wide Web; and
   e. Use databases, spreadsheets and multimedia applications.

Continuation and completion of the program requires:

9. Registration, attendance, and successful completion of the on-campus "Boot-Up Camp" and the Midpoint Symposium.

If circumstances force a student to fall out of their original cohort schedule, they will be permitted to continue in the program, but will default to the next cohort cycle provided they remain in good academic standing.

Special accommodations for disabled students will be made on an individual student, as-needed basis in compliance with the CSUF Catalog (online catalog at http://www.fullerton.edu/disabledservices/handbook/SupportiveServices.htm). Please contact the instructor and Program Coordinator if this applies to you.

STUDY PLAN REQUIREMENTS

The on-line Master of Science in Instructional Design and Technology takes 5 term segments, (20 months) total to complete. The schedule runs year-round as follows:

August

On-Campus Boot-Up Camp (1 day)

Session I: September through December

IDT 505 Hardware and Authoring Environments in Instructional Contexts (3)

Elem Ed 511 Survey of Educational Research (3)

Session 2: January through April

IDT 520 Instructional Design Issues for Technology-based Instruction (3)

IDT 525 Instructional Approaches in Learning and Cognition (3)

Session 3: May through August

IDT 530 Planning, Designing and Evaluating Technology-based Instruction (3)

IDT 535 Instructional Strategies for Pre-K through Adulthood (3)

August: On-Campus Midpoint Symposium (1 day)

Session 4: September through December

IDT 540 Web-based Teaching and Learning (3)

IDT 545 Emerging Technology and Issues in Instruction (3)

Session 5: January through April

IDT 550 Practicum in Instructional Design and Technology (3)

IDT 597 Project (3)

INSTRUCTIONAL DESIGN AND TECHNOLOGY COURSES

Courses are designated as IDT in the class schedule.

505 Hardware and Authoring Environments in Instructional Contexts (3)

Prerequisite: successful completion of summer on-campus orientation (Boot-Up Camp). Provide students with necessary understanding of operating systems, hardware, and networking environments to develop instructional tools and products using a multimedia authoring tool.

520 Instructional Design Issues for Technology-based Instruction (3)

Prerequisite: IDT 505. Focuses on the systematic design of instructional courseware, including analysis, media selection, design, development, and evaluation. Topics include learning principles, learner characteristics, instructional strategies, screen design, response analysis, feedback, and interactivity.

525 Instructional Approaches in Learning and Cognition (3)

Prerequisite: Elem Ed 511 and concurrent enrollment in IDT 520. Focuses on behavioral, cognitive, constructivist learning theories, related concepts, and their implications for designing instruction. Develops students' critical thinking about desirable cognitive outcomes when designing educational experiences.

530 Planning, Designing, Developing, and Evaluating Technology-based Instruction (3)

Prerequisite: IDT 520. Focuses on application of computer-based instructional design principles to develop new methods and materials for technology-based instruction. Topics include computer-based instruction, project management, planning, assessment, design principles, and development tools. Students will design multimedia courseware.

535 Instructional Strategies for Pre-K through Adulthood (3)

Prerequisite: IDT 525 and concurrent enrollment in IDT 530. Provide students with training in instructional strategies for Pre-K through adulthood. Emphasis on current research on instructional strategies and assistive technologies in a variety of instructional contexts.

540 Web-based Teaching and Learning (3)

Prerequisites: IDT 530 and successful completion of Midpoint Symposium. Focuses on the design, development, and implementation of Web pages and sites for instructional purposes. Emphasis on issues surrounding using the World Wide Web for instruction.

545 Emerging Technologies and Issues in Instruction (3)

Prerequisites: IDT 530, IDT 535 and concurrent enrollment in IDT 540. Focuses on the theoretical basis, issues, and strategies for improving teaching and learning through the use of emerging technologies.

550 Practicum in Instructional Design and Technology (3)

Prerequisites: concurrent enrollment in IDT 597 and consent of Program Coordinator. Provides strategies for effectively implementing and evaluating instructional design and technology to improve learning; course includes significant field work assignments in work-related settings.

597 Project (3)

Prerequisites: concurrent enrollment in IDT 550 and consent of Program Coordinator. Individual research on an empirical project, with conferences with the instructor, culminating in a project.

PROGRAM COORDINATOR

Irene Lange

PROGRAM WEBSITE

http://sbaeweb.fullerton.edu/Programs/interbus.htm

PROGRAM OFFICE

University Hall 313

PROGRAM OFFERED

Bachelor of Arts in International Business

Concentrations in:

- Chinese
- French
- German
- Japanese
- Portugese
- Spanish

PROGRAM COUNCIL

James Dietz (Economics)

Linda Andersen (Department of Modern Languages and Literatures)

Josefina Hess (Department of Modern Languages and Literatures)

Vijay Karan (Accounting)

Irene Lange (Marketing)

Marjorie Tussing (Department of Modern Languages and Literatures)

Gustav Vargas (Management)

ADVISERS

The Business Advising Center, Langsdorf Hall 731, provides information on admissions, curriculum and graduation requirements, registration and grading procedures, residence and similar academic matters. Additional advising on curriculum content and career opportunities is available from the International Business Program:

International Business	Irene Lange
Chinese	Han-Hua Chao
French	Linda Andersen
German	Marjorie Tussing
Japanese	Setsue Shibata
Portuguese	Ronald Harmon
Spanish	Josefina Hess

INTRODUCTION

The international business curriculum covers the fundamentals of business administration, with an emphasis on international business. Foreign language courses are required and stress the use of the applied language. The program also includes an internship with an international business. This curriculum prepares students for entry level positions. Opportunities exist in contracts, distribution and sales and may lead to general management positions. Since Southern California is a major international business center, there are career opportunities with internationally oriented firms in this area. Other career opportunities may involve international travel or overseas assignments.

Language concentrations are offered in Chinese, French, German, Japanese, Portuguese, and Spanish. Other concentrations may be developed in the future. The program is offered jointly by the College of Business Administration and Economics and the Department of Modern Languages and Literatures.

Scholarship In International Business

Friends of International Marketing

Preparation For The Major

Students who expect to complete this program in the usual four-year period should realize that the total requirements, including general education courses and prerequisites, can exceed 124 semester units. Intermediate level competency in a foreign language, equivalent to courses numbered 204 in the Department of Modern Languages and Literatures, is prerequisite to the required concentration courses. It is therefore strongly recommended that students complete a minimum of three years of foreign language study while in high school. Similarly, algebra and geometry are necessary for many required business courses. The equivalent of three years of high school mathematics, including a second course in algebra, is the prerequisite for the required Mathematics 135, Business Calculus. Students without the necessary background will need to enroll in Mathematics 115, College Algebra.

BACHELOR OF ARTS IN INTERNATIONAL BUSINESS

Admission to the International Business major involves two steps. Students who apply to the major are initially classified as pre-international business. After completing the lower-division core requirements with grades of at least C, and demonstrating satisfactory progress toward intermediate competency in a foreign language, students may apply to the international business major. Pre-international business students may take lower-division business courses, but most upper-division courses are not open to pre-international business students.

All of the following requirements must be met for the degree. Students must earn a grade of at least C in each course in the major. The International Business degree requires a minimum of 124 units which includes courses for the major, General Education, all University requirements, and free electives. For assistance in interpreting these requirements, contact the Business Advising Center, Langsdorf Hall 731.

Required Lower-Division Core Courses

Accounting 201A Financial Accounting (3)

Accounting 201B Managerial Accounting (3)

Business Admin 201 Business Writing (3)

Economics 201 Principles of Microeconomics (3)

Economics 202 Principles of Macroeconomics (3)

Management 246 Business and Its Legal Environment (3)

Info Sys/Decision Sci 265 Introduction to Computing and Application Software (3)

Math 135 Business Calculus (3)

OR Math 130A Short Course in Calculus (4)

OR Math 150A Analytic Geometry and Calculus (4)

Intermediate competency in the appropriate foreign language is prerequisite to the required concentration courses. To achieve the required competency level, students should enroll in Chinese, French, German, Japanese, Portuguese, or Spanish courses in consultation with an adviser in the Department of Modern Languages and Literatures who will determine student preparation based on prior experience or study.

Required Upper-Division Core Courses

International business majors shall not enroll in any required upper-division core course until they have completed all of the required lower-division core courses with a grade of at least C in each course.

Business Administration 301 Advanced Business Communication (3)

Economics 335 International Economy (3)

Finance 320 Business Finance (3)

Finance 370 International Business Finance (3)

Management 339 Principles of Management & Operations (3)

Management 340 Organizational Behavior (3)

Info Sys/Decision Sci 361A Quantitative Business Analysis: Probability and Statistics (3)

Marketing 351 Principles of Marketing (3)

Marketing 445 International Marketing Strategies (3)

Required Capstone Core Course

After completing all lower- and upper-division core courses, take Management 480 Global Strategic Management (3).

Required Concentration

Choose one of the following concentrations:

Concentration in Chinese

Chinese 310 Chinese in the Business World (3)

Chinese 311 Chinese for International Business (3)

Chinese 315 Introduction to Chinese Civilization (3)

Chinese 325 Contemporary Chinese Culture (3)

Concentration in French

French 310 French in the Business World (3)

French 311 French for International Business (3)

French 315 Origins of Modern France (3)

French 325 Contemporary French Civilization (3)

Concentration in German

German 310 German in the Business World (3)

German 311 German for International Business (3)

German 315 Introduction to German Civilization (3)

German 325 Current Trends in Culture of German-Speaking Peoples (3)

Concentration in Japanese

Japanese 310 Japanese for Business (3)

Japanese 311 Japanese for International Business (3)

Japanese 315 Introduction to Japanese Civilization (3)

Japanese 316 Modern Japan (3)

Concentration in Portuguese

Portuguese 310 Portuguese in the Business World (3)

Portuguese 317 Advanced Conversation and Composition (3)

Portuguese 320 Introduction to Luso-Brazilian Culture and Civilization (3)

Portuguese 325 Contemporary Brazilian Civilization (3)

One of the following courses may be substituted for Portuguese 320 or 325:

Spanish 310 Spanish in the Business World (3)

Spanish 311 Spanish for International Business (3)

Concentration in Spanish

Spanish 310 Spanish in the Business World (3)

Spanish 311 Spanish for International Business (3)

Spanish 315 Introduction to Spanish Civilization (3)

Spanish 316 Introduction to Spanish-American Civilization (3)

Note: Students may substitute one of the following for Spanish 315 or 316:

Spanish 415 Contemporary Spanish Culture (3)

Spanish 416 Contemporary Spanish-American Culture (3)

Collateral Requirement (3 units)

Complete at least one approved collateral elective. It is recommended that students take up to 12 units of electives, if possible. The list of approved courses is available in the Business Advising Center, Langsdorf Hall 731 or the International Business Program Office, University Hall 313.

Internship Requirement

Internships outside the United States: Students who successfully arrange an internship in a country where the language of their concentration is used, will enroll for three units in a language internship and for three units in a business internship. During this experience, students are expected to spend a minimum of four months in full-time employment with a faculty-approved firm. Simultaneous enrollment in the two internships is expected and students normally will not engage in any other academic activity.

Internships in the United States

Students who complete internships locally must arrange a business internship that involves some aspects of international operations. In addition, these students must complete an additional pre-approved three-unit upper-division foreign language course. The course must increase students' understanding of the language and culture of their concentration. If students are expected to use their foreign language on a daily basis as part of their business internship work activity, students may complete a foreign language internship rather than the course. Approval for this option must be obtained prior to enrollment in the business internship and written evidence of language use must be provided at the completion of the language internship.

Internship Courses

Accounting 495 Internship (3)

Foreign Languages 495 Internship (3)

Economics 495 Internship (3)

Finance 495 Internship (3)

Management 495 Internship (3)

Info Sys/Decision Sci 495 Internship (3)

Marketing 495 Internship (3)

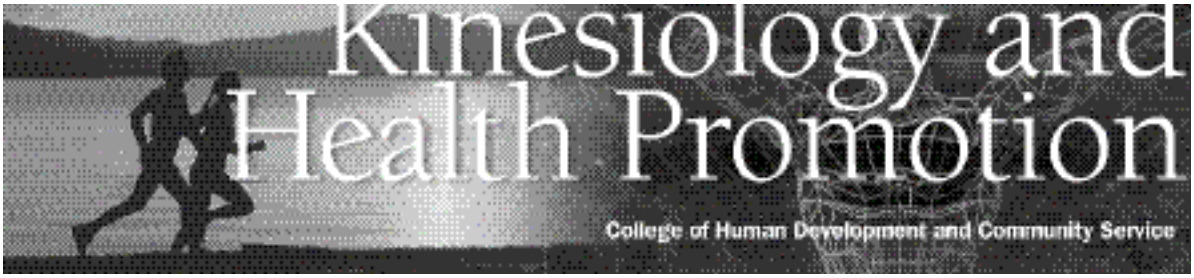
Other Requirements

Other Subjects: Complete at least 50 percent of the course work for the degree in subjects other than business administration or economics. Complete all university requirements for the bachelor's degree.

Grade Point Average (GPA): Attain at least a 2.0 GPA (C average) in all university courses and in the concentration courses. Earn at least a C grade in each course required for the major (other than concentration courses).

Grade Options: Take all required core and concentration courses for a letter grade (A,B,C,D,F). The credit/no credit grading option may not be used for these courses, and a grade of CR (credit) will not satisfy the requirements of the degree. Exceptions: Calculus (Math 130, 135 or 150A) and Internship may be taken under the credit/no credit option, although courses taken to meet general education requirements must be taken for a letter grade.

Residence: At least 12 units of upper-division core courses, 6 units of upper-division concentration courses and 6 units of internships must be taken in residence at CSUF.



DIVISION OF KINESIOLOGY AND HEALTH PROMOTION

DIVISION CHAIR

Kathy Koser

DIVISION OFFICE

Physical Education 134

DIVISION WEBSITE

http://hdcs.fullerton.edu/knes/khp.htm

PROGRAMS OFFERED

Bachelor of Science in Kinesiology

Minor in Kinesiology

Athletic Training Education Program

Subject Matter Preparation Program in Physical Education for the Single Subject Credential

Master of Science in Kinesiology

Bachelor of Science in Health Science

Minor in Health Promotion

Master of Public Health

FACULTY

Gene Adams, C. Ian Bailey, Michele Barr, William Beam, Lee Brown, Dapeng Chen, Yosuke Chikamoto, C. Jessie Jones, Robert Kersey, Kathleen Koser, Patricia Laguna, Julie Max, Shari McMahan, Vince Merrill, Guillermo Noffal, Karen Perell, Janet Peterson, Kenneth Ravizza, Debra Rose, Clay Sherman, Stephan Walk, Kathy Webster, Carol Weinmann, Lenny Wiersma, Ronald Witchey

INTRODUCTION

The mission of the Division of Kinesiology and Health Promotion is to provide a broad understanding of human motor performance and health through its degree programs and through the scholarship and creativity of its faculty and students. Emphasis is placed on examination of the entire lifespan from infancy to older adult years, with special attention to understanding human movement and health in the context of a diverse and ever-changing society. The Division's degree programs include foundation courses, essential core courses, and advising tracks related to multiple career objectives and subdisciplines within the health and human movement fields. The cross-disciplinary focus of the Division's curriculum fosters the development of a diversity of values and skills important to a liberal arts education: critical thinking, leadership, verbal and written communication, technological competency, and performance and wellness assessment.

The Bachelor of Science degree in Kinesiology offers students a variety of professional focus areas such as education, sports, therapeutic intervention, and fitness/wellness. The Bachelor of Science degree in Health Science is a competency-based program with focus areas in community health, occupational and environmental health, or special studies. The undergraduate minors in Health Promotion and Kinesiology, also based upon core curricula, provide opportunities for professional and/or personal enhancement.

The Master of Science degree in Kinesiology has a required core curriculum, plus individualized courses leading to professional or disciplinary specific preparation.

In addition, select courses within the curriculum service the general education program, various credential programs, and other university degree programs that require human movement or health science foundations. Performance courses provide university-wide opportunities for development of skills and knowledge leading to lifelong enjoyment of physical activity, health, well-being and worthy use of leisure time. Internships, practica, independent study, and scholarly outreach provide opportunities for interaction and service within the community.

Student Awards/Scholarships

Awards and scholarships are presented each year to outstanding undergraduate and graduate students. Additional information is available in the Kinesiology and Health Promotion office.

Advisement

Entering students interested in either Kinesiology or Health Science should contact the Kinesiology and Health Promotion Student Advising Center prior to their first semester at Cal State Fullerton to receive appropriate advisement materials. Students transferring course work from other colleges and universities should provide transcripts of all prior course work to the KHP Student Advising Center.

Transfer students and students seeking advisement related to completion of General Education requirements, should visit the Academic Advisement Center located in University Hall 179.

BACHELOR OF SCIENCE IN KINESIOLOGY

The Division of Kinesiology and Health Promotion offers the Bachelor of Science in Kinesiology for students preparing for professional careers or for graduate work in fields related to exercise, sport, movement and wellness.

The degree consists of 120 units with 51 units required for the major. Within the major, students must complete nine units of foundation courses, an 18-unit disciplinary core,

a three-unit writing course, and a 21-unit advising track in one of the following focus areas: Athletic Training, Clinical Exercise Science, Fitness and Health Promotion, Gerokinesiology, Sports Studies, or Teacher Education. With adviser approval, students also have the option of developing a "Special Studies" advising track if their interests lie outside of these designated areas. The "Special Studies" plan must include a rationale statement, 21 units of upper-division course work, and must be approved by a faculty adviser and the Division Chair. Students are strongly encouraged to seek advising from Division faculty in planning careers, selecting advising tracks, and choosing elective courses.

Each course counted toward the major, including prerequisites, must be completed with a grade of C or higher. All courses counted toward the major must be taken on an Option 1 (letter grade) basis.

Prerequisite Requirements

Prerequisite requirements for the major include three units of anatomy/physiology (Biology/Kinesiology 210 or equivalent) and six units of performance classes, representing the following performance areas: Fitness, Martial Arts/Combatives, Aquatics, Individual Sports, Racquet Sports, and Team Sports. Four of the six performance courses must be completed prior to enrollment in Kinesiology 300 Principles of Movement. All performance courses must be completed prior to completion of the Disciplinary Core Courses and prior to enrollment in Kinesiology 385.

Prerequisite Performance Courses (6 units)

Fitness

Kinesiology 100 Physical Conditioning (1)

Kinesiology 102 Jogging (1)

Kinesiology 103 Fitness Walking (1)

Kinesiology 144 Aerobic Exercise and Weight Control (1)

Kinesiology 146 Weight Training (1)

Aquatics

Kinesiology 110 Swimming (1)

Kinesiology 214A Basic Scuba (3)

Kinesiology 214B Intermediate Scuba (2-3)

Martial Arts/Combatives

Kinesiology 151 Aikido (1)

Kinesiology 152 Karate (1)

Kinesiology 154 Self-Defense (1)

Kinesiology 155 Fencing (1)

Individual Sports

Kinesiology 105 Cycling (1)

Kinesiology 117 Bowling (1)

Kinesiology 119 Golf (1)

Kinesiology 120 Gymnastics (1)

Kinesiology 246A Basic Hatha Yoga (2)

Racquet Sports

Kinesiology 130 Badminton (1)

Kinesiology 131 Tennis (1)

Kinesiology 132 Racquetball (1)

Team Sports

Kinesiology 161 Softball (1)

Kinesiology 164 Volleyball (1)

Kinesiology 165 Soccer (1)

Kinesiology 167 Basketball (1)

REQUIREMENTS FOR THE MAJOR

Foundation Courses (9 units)

Kinesiology 202 Introduction to Kinesiology (3)

Kinesiology 260 Movement Anatomy (3)

Kinesiology 349 Measurement and Statistics in Kinesiology and Health (3)

Disciplinary Core Courses (18 units)

Kinesiology 300 Principles of Movement (3)

Kinesiology 348 Exercise Physiology (3)

Kinesiology 371 Human Motor Control and Learning (3)

Kinesiology 380 History and Philosophy of Human Movement

Kinesiology 381 Sports, Games and Culture (3)

Kinesiology 383 Psychology of Sport and Physical Activity (3)

Upper-Division Writing Course (3 units)

English 301 Advanced College Writing (3)

Advising Track Requirement (21 units)

Courses are to be selected from one of the following advising track focus areas: Athletic Training, Clinical Exercise Science, Fitness and Health Promotion, Gerokinesiology, Sports Studies, Teacher Education, or Special Studies. See descriptions and specific course requirements below.

CLINICAL EXERCISE SCIENCE (CES) ADVISING TRACK (21 UNITS)

The Clinical Exercise Science advising track provides students with background knowledge and practical experience in preparation for careers in a variety of settings in which exercise is used in conjunction with other therapeutic modalities, (such as clinical exercise physiology, geriatric pathokinesiology, and sports health care) and/or for further study leading to a variety of health care professions (e.g., physical/occupational therapy, medicine, physician assistant, etc.*). This advising track also prepares students for advanced study in clinical exercise science.

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*Note: Students taking course work in preparation for admission to a specific professional program, such as physical or occupational therapy, should check the entry requirements for the specific program at the institution to which they intend to apply. Through careful planning students can maximize the number of courses that meet CSUF General Education and Kinesiology degree requirements, as well as the entry requirements for other programs of interest.

CES Advising Track Requirements (12 units)

Kinesiology 348L Exercise Physiology Laboratory (1)

Kinesiology 377 Therapeutic Exercise (3)

Kinesiology 451 Sports Medicine (3)

Kinesiology 461 Biomechanics (3)

Kinesiology 495 Internship (2)

CES Advising Track Electives (9 units)

Select 9 units from:

Kinesiology 351, 364, 365, 371, 373, 374, 375, 378, 432, 452, 454, 455, 463, Health Science 401

FITNESS AND HEALTH PROMOTION (FHP) ADVISING TRACK (21 UNITS)

The Fitness and Health Promotion advising track provides students with background knowledge and experience supporting careers in areas such as personal training, fitness instruction, corporate fitness/worksite health promotion, and older adult fitness/wellness. This advising track also prepares students for advanced study in fitness and health promotion, as well as provides opportunities for personal enrichment and growth.

FHP Advising Track in Fitness and Health Promotion (9 units)

Kinesiology 350 Nutrition (3)

Kinesiology 351 Principles of Conditioning (3)

Kinesiology 452 Graded Exercise Testing & Prescription (3)

FHP Culminating Experience (3 units)

Kinesiology 495 Internship in Kinesiology (2)

Kinesiology 348L Exercise Physiology Laboratory (1)

OR Kinesiology 400 Program Design in Kinesiology and Health Promotion (3)

Note: Students who intend to specialize in the older adult fitness/health area should select the Internship/Laboratory (495/348L) option for their culminating experience.

FHP Elective Courses (6 units)

Select 6 units from:

Kinesiology 342, 400, 406, 432, 451, 454, 455, Health Science 440

GEROKINESIOLOGY (GK) ADVISING TRACK (21 UNITS)

The Gerokinesiology advising track provides students with the background knowledge and skills necessary to develop and teach a variety of fitness and physical activity classes and/or personalized training programs for older adults. This advising track also prepares students for advanced study in geriatric pathokinesiology, and meets national recommendations for preparing senior fitness instructors.

GK Advising Track Requirements (12 units)

Kinesiology 452 Graded Exercise Testing & Prescription (3)

Kinesiology 454 Physical Dimensions of Aging (3)

Kinesiology 455 Functional Perform Assess Program for Older Adults (3)

Kinesiology 495 Internship in Kinesiology (2)

Kinesiology 348L Exercise Physiology Laboratory (1)

GK Elective Courses (9 units)

Select 9 units from:

Kinesiology 342, 351, 364, 375, 377, 378, 400, 432, 440, 451

Psychology 362

SPORT STUDIES (SS) ADVISING TRACK (21 UNITS)

The Sport Studies advising track provides course work for students interested in careers related to youth sports programs, athletic coaching, and/or sports performance enhancement. In consultation with an adviser, students choose electives that allow for further study of various aspects of sports performance, including physiological performance enhancement (biomechanics, exercise physiology, motor control and learning), psychological performance enhancement, athletic coaching, community/youth physical activity and sports program, and the study of sport (history, philosophy and sociology). Students may also choose electives in preparation for advanced study in one or more of the subdisciplines of kinesiology.

SS Advising Track Requirements (12 units)

Kinesiology 325 Techniques of Coaching (3)

Kinesiology 351 Principles of Conditioning (3)

Kinesiology 365 Prevention/Care of Athletic Injuries (3)

Kinesiology 385 Instructional Analysis of Human Movement (3)

SS Electives (9 units)

Select 9 units from:

Kinesiology 350, 384, 386, 387, 400, 430, 432, 461, 480, 483, 495/495S

ATHLETIC TRAINING (AT) ADVISING TRACK (21 UNITS)

The Athletic Training advising track is for students interested in completing a Bachelor's Degree in Kinesiology while focusing their electives in athletic training and related areas. Students selecting this track have the option of also applying for admission to the CSUF Athletic Training Education Program (ATEP) in preparation for becoming a Certified Athletic Trainer. (See Athletic Training Education Program description below).

Thus, students completing the 21-unit Athletic Training advisement track can meet the requirements for the B.S. Degree in Kinesiology, but only partially will meet the minimum ATEP and Certification requirements.

AT Advisory Track Requirements (21 units)

Kinesiology 365 Prevention and Care of Athletic Injuries (3)

Kinesiology 373 Advanced Assessment of Lower Extremities (3)

Kinesiology 374 Advanced Assessment of Upper Extremities (3)

Kinesiology 375 Management of Athletic/Exercise Emergencies (3)

Kinesiology 377 Therapeutic Exercise in Rehabilitation (3)

Kinesiology 378 Therapeutic Modalities in Rehabilitation (3)

Kinesiology 465 Administration & Leadership in Athletic Training (3)

In addition to the requirements for the Kinesiology major and the Athletic Training advising track, other requirements for those admitted to the ATEP program include: 1500 supervised clinical hours, cardio-pulmonary resuscitation (CPR) certification, and 37 additional units of course work, some of which can be taken as part of the General Education requirements. Specific requirements for the Athletic Training Education Program and for becoming a Certified Athletic Trainer are provided below.

ATHLETIC TRAINING EDUCATION PROGRAM (ATEP)

The Athletic Training Education Program (ATEP), a supplement to the Kinesiology degree program, is designed to prepare students for careers as Certified Athletic Trainers (ATCs). Certified Athletic Trainers are allied health care professionals recognized by the American Medical Association as specialists in the prevention, recognition, management, and rehabilitation of injuries and/or illnesses to athletes and physically active individuals.

Acceptance into the ATEP is based on a competitive admissions process, including evaluations in five areas: 1) collegiate academic performance; 2) personal or professional recommendations; 3) written communications; 4) oral communications; and 5) practical experiences (see ATEP Director in the Division of Kinesiology & Health Promotion). ATEP applicants must have completed 30 semester units, including the following classes with a minimum grade of "C": Kinesiology 200, Biology 101 or 131, Health Science 101, and Psychology 101. In addition, a human anatomy class is strongly recommended. Applications are available from the ATEP Director, and deadlines for applying are November 1st and May 1st each year.

In addition to entrance requirements, there are also minimal standards for continuation and completion of the ATEP. Each student in the ATEP will commit to a minimum of 5 semesters and 1,500 hours of clinical experiences. Those in the ATEP will be progressively rotated through a variety of clinical settings to learn and perfect the needed knowledge and skills. All ATEP students must achieve and maintain a 2.50 overall GPA, a 3.00 ATEP-Core GPA, and a 2.50 ATEP-Support GPA. A current CPR card must be maintained throughout the program. Upon successful completion of the Athletic Training Education Program, the student is eligible to take the National Athletic Trainers' Association - Board of Certification examination.

Those students interested in the Athletic Training Education Program should meet as soon as possible with the Director to plan their academic program. In addition to the University General Education requirements and the Kinesiology Foundation, Core, and Activity requirements, students in the ATEP must complete the following classes (or their equivalents):

Athletic Training Education Program - Core (29 units)

Kinesiology 200 Introduction to Athletic Training (3)

Kinesiology 365 Prevention and Care of Athletic Injuries (3)

Kinesiology 373 Advanced Injury Assessment of Lower Extremities (3)

Kinesiology 374 Advanced Injury Assessment of Upper Extremities (3)

Kinesiology 375 Management of Sport/Exercise Emergencies (3)

Kinesiology 377 Therapeutic Exercise in Rehabilitation (3)

Kinesiology 378 Therapeutic Modalities in Rehabilitation (3)

Kinesiology 465 Administration & Leadership in Athletic Training (3)

Kinesiology 268 Clinical Proficiencies in Athletic Training I (1)

Kinesiology 368 Clinical Proficiencies in Athletic Training II (1)

Kinesiology 369 Clinical Proficiencies in Athletic Training III (1)

Kinesioogy 468 Clinical Proficiencies in Athletic Training IV (1)

Kinesiology 469 Clinical Proficiencies in Athletic Training V (1)

Athletic Training Education Program - Support (29 units)

Health Science 101 Personal Health (3)

Psychology 101 Introduction to Psychology (3)

Chemistry 111 Nutrition and Drugs (3)

Chemistry or Physics Class from General Education Category III.A.2a (3)

Biology 101 or 131 Elements of Biology or Principles of Biology (3)

Biology 310 Human Physiology (3)

Biology 361 Human Anatomy (4)

Kinesiology 348L Physiology of Exercise Lab (1)

Kinesiology 351 Principles of Conditioning (3)

Kinesiology 450 Sports Medicine (3)

TEACHER EDUCATION (TE) ADVISING TRACK (21 UNITS)

The Teacher Education advising track is designed for students interested in completing the Bachelor's Degree in Kinesiology while focusing their elective units on preparation for entering the teaching profession. Students completing the coursework below meet only some of the requirements for the Subject Matter Preparation Program which is designed to prepare students to enter a Single Subject Credential Program in Physical Education. Specifically, students completing this advisement track must complete additional units to fulfill California state- mandated subject matter competencies for pursuit of the single-subject teaching credential in kinesiology. Students interested in the Subject Matter Preparation Program should see the program description below. Coursework in the Teacher Education advising track may help students qualify for teaching and coaching positions in the public schools, provide background knowledge and experiences for advanced study in pedagogy, and provide personal enrichment in the art and the science of human movement.

TE Advisement Track Requirements: (21 units)

Kinesiology 325 Techniques of Coaching (3)

Kinesiology 363 Developmental Adaptations of the Atypical (3)

Kinesiology 364 Motor Development (3)

Kinesiology 385 Instructional Analysis of Human Movement (3)

Kinesiology 386 Movement and the Child (3)

Kinesiology 387 Movement and the Adolescent (3)

Kinesiology 400 Program Design for Kinesiology (3)

In addition to the 51-unit requirement for the Kinesiology degree and the Teacher Education advising track, students who wish to fulfill California state-mandated subject matter competencies (i.e., the Subject Matter Preparation Program) for pursuit of the single-subject teaching credential in physical education must also complete the requirements described below.

SUBJECT MATTER PREPARATION PROGRAM (FOR OBTAINING SINGLE SUBJECT TEACHING CREDENTIAL IN PHYSICAL EDUCATION)

The Kinesiology and Health Promotion Division offers course work as part of the Subject Matter Preparation Program (SMPP) for obtaining a Single-Subject Credential (K-12) in Physical Education. In addition to the requirements for a major in Kinesiology (which includes the Teacher Education advising track described above), all credential candidates must complete the following courses with a minimum grade of C, the same as is required of all other course work for the program. A grade point average of 3.0 in the major and 2.75 cumulative is required for admission to the fifth-year teacher education program.

Additional Requirements: Subject Matter Preparation Program in Physical Education (23 units)

Ed Sec 310 The Teaching Experience (3)

Ed Sec 320 Adolescence (3) (May count as a General Education Category IV)

Ed Sec 330 Literacy Development in Secondary Schools (3)

Ed Sec 340 Teach Diverse Pop in Secondary Schools (3)

Ed Sec 404 Personal Proficiency in Ed Technology (3)

Health Science 102 Prevention and First Aid (2) (or current CPR/First Aid Cert)

Kinesiology 494 Practicum (2) (Co-requisite for Kinesiology 386 and 387)

Kinesiology 120 Gymnastics (1)

Dance 101 Introduction to Dance (3) (May count as General Education Category III.B.1.)

OR Dance 471 Creative Dance for Children (3)

Advisement

The division offers guidance for students considering a teaching career, available through the Kinesiology Teacher Education Coordinator. Prospective students should consult with the Teacher Education Coordinator as early as possible in order to plan and acquire needed experiences prior to entry into the Teacher Education Program. The university program for meeting basic requirements for the teaching credential with a specialization in Physical Education can be found elsewhere in this catalogue (see Teaching Credential Programs).

Admission to Teacher Education

In addition to the requirements set forth in the Teaching Credential Programs and in the Department of Secondary Education, the Division of Kinesiology and Health Promotion requires candidates to complete the SMPP and to submit an application for the teaching program. A screening committee evaluates candidates' qualifications based on grade-point average, required SMPP course work, experiences with children and adolescents, having passed the California Basic Education Skills Test (CBEST) and other criteria. In addition, the candidate must be available for a personal interview by the Kinesiology Teacher Education Committee. Applications to the Teacher Education Program may be submitted when all required SMPP courses are completed or are in progress. Prospective Teacher Education candidates are encouraged to consider a supplementary credential in a second subject area. More information is available from the Secondary Education Admissions Office.

Acceptance into the program allows the candidate to enroll in the following Fall-Spring semester sequence:

Fall semester (15 units):

Ed Sec 410, 440S, 440F; Kinesiology 442, 449E

Spring semester (15 units):

Ed Sec 460; Kinesiology 449I and 449S

MINOR IN KINESIOLOGY

A kinesiology minor consists of 24 units of approved course work. All courses for the minor must be taken for a letter grade and completed with C or better. Students are encouraged to meet with a faculty adviser for assistance in developing a cohesive set of courses that would best support their educational, career, or personal goals.

Performance Courses (3 units)

Three courses (1 unit each) must be taken from any three of the following areas: Fitness, Martial Arts/Combatives, Aquatics, Individual Sports, Team Sports, or Racquet Sports.

Required Courses (9 units)

Kinesiology 202 Perspectives in Kinesiology (3)

Kinesiology 210 Human Anatomy and Physiology (3)

Kinesiology 260 Movement Anatomy (3)

Upper-Division Electives (Select 12 units)

Kinesiology 300 Principles of Human Movement (3)

Kinesiology 325 Theories of Coaching (3)

Kinesiology 348 Physiology of Exercise (3)

Kinesiology 351 Principles of Conditioning (3)

Kinesiology 353 Physical Activity and Lifelong Well-being (3)

Kinesiology 371 Human Motor Control and Learning (3)

Kinesiology 380 History and Philosophy of Human Movement (3)

Kinesiology 381 Sport, Games and Culture (3)

Kinesiology 383 Psychology of Sport and Physical Activity (3)

Kinesiology 386 Movement and the Child (3)

Kinesiology 387 Movement and the Adolescent (3)

BACHELOR OF SCIENCE IN HEALTH SCIENCE

The Bachelor of Science degree in Health Science is offered for students who are preparing for careers as health educators as well as for those who seek quality preparation for advanced study. Students in Health Science learn how to effectively plan, implement, and evaluate prevention strategies that are practical and effective at the community, state, and national levels. In addition, through required and elective coursework, students may complete a focus area in community health, occupational and environmental health, or special studies. The competency-based degree program prepares students for certification as a health education specialist and for careers in community health, worksite health promotion, occupational health and safety, and/or environmental health. The degree consists of 120 units with 52 units required in the major.

Each course counted toward the major, including prerequisites, must be completed with a grade of C or higher. All courses counted toward the major must be taken on an Option 1 (letter grade) basis.

Prerequisite Course Work Applicable to General Education (13 units)

Biology 101 Elements of Biology (3)

Chemistry 115 Introduction to Chemistry (4)

Psychology 101 Introduction to Psychology (3)

Speech Comm 102 Public Speaking (3)

Core Courses (28 units)

Health Sci 101 Personal Health (3)

Kinesiology 210 Human Anatomy and Physiology (3)

Health Sci 220 Concepts in Health Science (3); concurrent with
Health Sci 494 Practicum in Health Science (1)

Health Sci 349 Measurement and Statistics in Kinesiology and Health (3)

Health Sci 400 Program Design for Kinesiology and Health Promotion (3)

Health Sci 401 Epidemiology (3)

Health Sci 440 Determinants of Health Behavior (3)

Health Sci 475 Health Science Planning, Research and Evaluation (3)

Health Sci 495 Internship in Health Science (3)

Advisory Tracks (21 units)

In addition to the core requirements that all health science majors must complete, students are required to select one of the three advisory tracks to successfully complete the requirements of the degree.

Health Promotion and Disease Prevention Advisory Track (21 units)

Required (9 units)

Health Sci 410 Community Health Education (3)

Health Sci 411 Promoting Health in Multicultural Populations (3)

Health Sci 460 Worksite Health Promotion (3)

Electives (6-12 units)

Health Sci 321 Drugs and Society (3)

Health Sci 325 Consumer Health (3)

Health Sci 342 Stress Management (3)

Health Sci 350 Nutrition (3)

Health Sci 353 Physical Activity and Lifelong Well-being (3)

Health Sci 358 Contemporary Issues on Children's Health (3)

Health Sci 450 Applied Health Promotion Throughout the Lifespan (3)

Health Sci 461 Occupational Safety and Health (3)

Elective Courses from other Departments (0-6 units)

Students choose a maximum of six adviser-approved units from the following

Afro 304 Black Family (3)

American Studies 438 American Minds: Images of Sickness and Health (3)

Anthro 308 Culture and Aging (3)

Anthro 315 Culture and Nutrition (3)

Anthro 344 Human Evolution (3)

Asian Amer 340 Asian American Communication (3)

Asian Amer 342 Asian Pacific American Families (3)

Asian Amer 346 Asian American Psychology (3)

Biology 300 Environmental Biology (3)

Biology 305 Human Heredity and Development (3)

Biology 306 Biology of Aging (3)

Biology 310 Human Physiology (3)

Biology 360 Biology of Human Sexuality (3)

Chemistry 303B Medical Biotechnology (3)

Chemistry 303C Agricultural/Environmental Biotechnology (3)

Chemistry 311 Nutrition and Disease (3)

Chemistry 313A Air Pollution (1)

Chemistry 313B Water Pollution (1)

Chemistry 313C Land Pollution (1)

Chicano 305 The Chicano Family (3)

Kinesiology 348 Physiology of Exercise (3)

Kinesiology 351 Principles of Conditioning

Kinesiology 454 Physical Activity and the Aging Process (3)

Psychology 312 Psychology of Human Sexual Behavior (3)

Psychology 341 Abnormal Psychology (3)

Psychology 351 Social Psychology (3)

Psychology 362 Psychology of Aging (3)

Sociology 300 Introduction of Social Welfare (3)

Sociology 333 Sociology of Aging (3)

Sociology 354 Sex Roles and Gender (3)

Sociology 360 Sociology of Death and Dying (3)

Sociology 381 Sociology of Human Sexuality (3)

Sociology 385 Family Violence (3)

Speech Comm 345 Communication and Aging (3)

Special Ed 371 Exceptional Individual (3)

Women's Studies 410 Women's Health and Aging (3)

Environmental and Occupational Health and Safety (21 units)

Required (9 units)

Course in Worksite Injury Prevention and Rehabilitation (3)*

Health Sci 461 Occupational Safety and Health (3)

Course in Environmental Health (3)*

Electives (6-12 units)

Health Sci 321 Drugs and Society

Health Sci 325 Consumer Health

Health Sci 342 Stress Management

Health Sci 350 Nutrition

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*Check with department for current course number description, and semester offerings.

Health Sci 353 Physical Activity and Lifelong Well-being

Health Sci 358 Contemporary Issues in Children's Health

Health Sci 410 Community Health Education

Health Sci 411 Promoting Health in Multicultural Populations

Health Sci 450 Applied Health Promotion Throughout the Lifespan

Health Sci 460 Worksite Health Promotion

Elective Courses from other Departments (0-6)

Students choose maximum six adviser-approved units from the department's approved list of elective courses (see elective list above under "Health Promotion and Disease Prevention" electives from other departments).

Special Studies (21 units)

Students meet with an adviser and develop a "Special Studies" program consisting of 21 adviser-approved electives.

English Proficiency Requirement (3 units)

In order to satisfy the upper-division writing requirement of the university, Health Science majors must pass (1) English 301 Advanced College Writing with a grade of C or better and (2) the Cal State Fullerton Examination in Writing Proficiency (EWP). Please see additional information provided in this catalog on the writing requirement.

MINOR IN HEALTH PROMOTION

The Division of Kinesiology and Health Promotion offers a minor in health promotion consisting of 21 units. Students interested in personal growth, community service, worksite health promotion, intellectual stimulation and professional career opportunities in the health field will find this minor a method to achieve these goals. In addition, the minor provides a concentration of courses in the health field which can be a useful adjunct for students majoring in Child Development, Human Services, Kinesiology, Psychology and Sociology.

The minor provides students with necessary tools to understand factors contributing to the promotion of health and well-being and the prevention of disease and disability. This sequence of courses offers traditional and modern approaches to education and career development in the Health Science field. It encourages a multi-disciplinary orientation.

In completing the requirements for the minor, a minimum of twelve (12) units, of which at least six (6) must be upper division, must be distinct and different from the units used to complete the requirements of the major. Any units above the minimum requirement, which can be used to satisfy both the requirements for the minor and for the major may be double counted. General education courses, however, may be used to meet minor requirements.

Course work must be taken for a letter grade and completed with a C grade or better to be counted toward the minor.

Required Courses (6 units)

Health Sci 101 Personal Health (3)

Health Sci 440 Determinants of Health Behavior (3)

Elective Courses from Health Science (9-15 units of the following)

Health Sci 321 Drugs and Society (3)

Health Sci 342 Stress Management (3)

Health Sci 350 Nutrition (3)

Health Sci 353 Physical Activity and Lifelong Well-Being (3)

Health Sci 358 Contemporary Issues in Children's Health (3)

Health Sci 410 Community Health Education (3)

Health Sci 411 Promoting Health in Multicultural Populations (3)

Health Sci 460 Worksite Health Promotion (3)

Health Sci 461 Occupational Health and Safety (3)

Elective Course from other Departments (0-6 units of any of the following)

Afro 304 The Black Family (3)

American Studies 438 American Minds: Images of Sickness and Health (3)

Anthro 308 Culture and Aging (3)

Anthro 315 Culture and Nutrition (3)

Anthro 344 Human Evolution (3)

Asian Amer 340 Asian American Communication (3)

Asian Amer 342 Asian Pacific American Families (3)

Asian Amer 346 Asian American Psychology (3)

Biology 300 Environmental Biology (3)

Biology 305 Human Heredity and Development (3)

Biology 306 Biology of Aging (3)

Biology 310 Human Physiology (3)

Biology 360 Biology of Human Sexuality (3)

Chemistry 303B Medical Biotechnology (3)

Chemistry 303C Agricultural/Environmental Biotechnology (3)

Chemistry 311 Nutrition and Disease (3)

Chemistry 313A Air Pollution (1)

Chemistry 313B Water Pollution (1)

Chemistry 313C Land Pollution (1)

Chicano 305 The Chicano Family (3)

Kinesiology 348 Physiology of Exercise (3)

Kinesiology 454 Physical Activity and the Aging Process (3)

Nursing 301 Promotion of Optimal Health (3)

Psychology 312 Psychology of Human Sexual Behavior (3)

Psychology 351 Social Psychology (3)

Psychology 362 Psychology of Aging (3)

Sociology 300 Introduction to Social Welfare (3)

Sociology 333 Sociology of Aging (3)

Sociology 354 Sex Roles and Gender (3)

Sociology 360 Sociology of Death and Dying (3)

Sociology 381 Sociology of Human Sexuality (3)

Sociology 385 Family Violence (3)

Speech Comm 345 Communication and Aging (3)

Special Ed 371 Exceptional Individual (3)

Women's Studies 410 Women's Health and Aging (3)

MASTER OF SCIENCE IN KINESIOLOGY

The graduate program in Kinesiology provides a broad, comprehensive study of the varied aspects of human movement. Movement across the entire lifespan is observed and studied from mechanical, physiological, psychological, sociocultural, behavioral, instructional, and professional points of view.

The course work for the degree is designed to: (1) provide students with background knowledge and experience for professional careers in a variety of areas including clinical exercise science, fitness and health promotion, pedagogical studies, and sport studies, and/or (2) to prepare students for further graduate study in one or more of the sub-disciplines of kinesiology: biomechanics, exercise physiology, motor control/ learning, philosophical perspectives, sports psychology, or socio-cultural perspectives.

Application Deadlines

Applications need to be postmarked no later than March 1st for the fall semester and October 1st for the spring semester. However, deadlines may be changed based upon enrollment projections. Check the university graduate studies website for current information at http://www.fullerton.edu/graduate.

Admission Requirements

All graduate degree applicants must meet the university requirements for admission, which include a baccalaureate degree from an accredited institution with a grade-point average of at least 2.5 in the last 60 semester units attempted. To be admitted into the graduate program in Kinesiology, a student must further submit to the Kinesiology graduate program: (1) transcripts showing an undergraduate degree in Kinesiology, Exercise Science, or Physical Education with a grade-point average of at least 3.0 in upper-division major coursework; (2) Graduate Record Exam scores general test; (3) a 500-word essay describing the applicant's academic preparation and goals in the area of intended study within the degree program; and (4) two letters of recommendation. Screening of fall semester applicants begins March 1; screening of spring semester applicants begins November 1.

Students who meet the general university requirements, but do not meet the Kinesiology degree requirements, may apply to the university for postbaccalaureate-unclassified standing. Any student without an undergraduate degree in Kinesiology, Exercise Science, Physical Education, or a related field must complete a prescribed set of undergraduate coursework (usually about 12 units) with a grade-point average of at least 3.0. Any student with a grade-point average deficiency must complete additional undergraduate coursework as specified by the Kinesiology graduate program adviser. Once all admission requirements are subsequently met, a change of program may be requested from postbaccalaureate-unclassified standing to conditionally classified in Kinesiology.

Classified Standing

Classified standing requires the development of a study plan (see below) approved by the faculty adviser, graduate studies committee, Kinesiology graduate program adviser, and office of graduate studies. No more than nine units of graduate work taken before classification may be included on the study plan. Any changes to the study plan after classified standing is granted must be approved in advance, in writing, by the Kinesiology graduate program.

Advancement to Candidacy

Advancement to candidacy is attained by requesting a graduation check in the semester prior to graduation (see class schedule for deadlines) and receiving subsequent approval from the graduate studies adviser on the grad check completion review form, mailed by the Graduate Studies Office. Students not completing requirements by the graduation date specified on the original graduation check must contact the Graduate Studies Office.

Graduate Advisement

Students should consult with the Kinesiology graduate studies adviser for general information regarding the program. Upon acceptance to the program, students choose or are assigned a faculty adviser who assists in developing the study plan. Thesis/project advisers are selected in consultation with the student, faculty adviser, and potential thesis/project chair. Students may not register for thesis/project without the consent of the thesis/project chair.

GRADUATE STUDY PLAN

The graduate degree in Kinesiology consists of a total of 30 units, at least 18 units of which must be 500-level. Once accepted into the program, each student must create an adviser-approved study plan before completing nine units of work. With adviser approval, up to nine units of 400/500-level course work may be included on the study plan that was taken at another university or in another department at CSUF.

The study plan must include Kinesiology 508 and Kinesiology 510 (which fulfills the graduate level writing requirement), and at least two advanced study courses-one in the students major academic area of interest and one in a minor or supporting academic area. The study plan also must include 15 units of electives selected from one of five advisement tracks: clinical exercise science, fitness and health promotion, pedagogical studies, sport studies, or special studies. Finally, the study plan must include one of three culminating experience options: a thesis, a project, or a comprehensive examination.

Core Course Requirements (9 units)

Kinesiology 508 Statistical Methods in Kinesiology (3)

Kinesiology 510 Research in Kinesiology (3)

Kinesiology 597/598 Project/Thesis (3) or Comprehensive Examination*

*Students who select the Comprehensive Examination shall be required to complete an additional adviser-approved 500-level course in Kinesiology (3 units).

Advisement Track Requirements (21 units)

The remaining 21 units of course work is to be selected from one of the following six advisement tracks: (1) Clinical Exercise Science, (2) Fitness and Health Promotion, (3) Gerokinesiology, (4) Teacher Education/Pedagogical Studies, (5) Sport Studies, or (6) Special Studies. Advanced study courses are required within each track, as well as recommended electives.

MASTER OF PUBLIC HEALTH

As of catalog press-time, approval for this new program was still pending. For current information on availability, please consult the Kinesiology and Health Promotion Division website or visit the department office in the Physical Education Building (714) 278-3316.

The purpose of the Master of Public Health program is to prepare public health professionals to draw on the knowledge and skills from a variety of disciplines and to define, critically assess, evaluate and resolve public health problems. MPH program graduates will have a common educational grounding that will enable them to work effectively with the broad spectrum of public health issues related to their public health careers.

The proposed Master of Public Health will require 42 units of approved graduate work: 27 units of core competency classes (which includes a six-unit internship) and 15 units of electives. Students will work with a faculty adviser to select 15 units of electives to support career areas in health promotion, environmental and occupational health, gerontological health, nursing leadership, or in a 'special studies' track such as health anthropology or health counseling to be developed with an adviser to meet special academic/career needs. These career tracks will allow students to select unique combinations of courses appropriate for their professional objectives.

KINESIOLOGY COURSES

Courses are designated as KNES in the class schedule.

Only one section of the following performance courses may be taken in the same semester (e.g., Kinesiology 131 A,C,D is the same semester activity): Kinesiology 100, 102 through 167, 214A, 214B, and 246A.

100-167 Performance Courses (1)

100 Physical Conditioning; 102 Jogging; 103 Fitness Walking; 110 Swimming; 112A Beginning Surfing; 112B Intermediate Surfing; 117 Bowling; 119 Golf; 120 Gymnastics; 130 Badminton; 131 Tennis; 132 Racquetball; 144 Aerobic Exercise and Weight Control; 146 Weight Training; 151 Aikido; 152 Karate; 154 Self-Defense; 155 Fencing; 161 Softball; 164 Volleyball; 165 Soccer; 167 Basketball. Performance courses are primarily instructional. Beginning intermediate, and advances sections are offered for most performance courses. Students who already possess proficiency in an activity should consider the course chosen from the standpoint of the level of skill development that may be encountered, standards of proficiency expected and their own ability level. Initial assessment and determination will be made by the course instructor. May be repeated for credit.

170-189 Intercollegiate Sports (2)

Prerequisite: consent of coach. An inter-collegiate activity in individual or team sports in an educational setting under the direction of a coach. 170 Gymnastics; 172 Cross Country; 174 Track-Field; 175 Tennis; 176 Wrestling; 177 Fencing; 178 Basketball; 179 Baseball; 180 Soccer; 184 Football; 185 Volleyball - W; 186 Softball. May be repeated for credit.

190 Team Management (2)

Prerequisites: consent of coach and department chair. Field experience in the management of an intercollegiate sport. May be repeated for maximum of eight units of credit. (Credit/No Credit only)

200 Introduction to Athletic Training (3)

Practical skills acquisition for the treatment, prevention and care of sports-related injuries. Basic required course for all students admitted to the Athletic Training Education Program. (2 hours lecture/2 hours activity)

202 Perspectives in Kinesiology (Formerly 302) (3)

An introduction to the study of human movement, including its role in daily life, its place in higher education, and professional career opportunities in areas related to sport, movement, exercise, and fitness. Examines the multiple ways of knowing and studying human movement with a focus on the subdisciplines within kinesiology.

210 Human Anatomy and Physiology (3)

(Same as Biology 210)

214A Basic Scuba (3)

Prerequisites: ability to swim 400 yards, tread water one minute and swim 25 yards underwater. Skin and scuba diving, theory of diving, safety procedures and ocean environment. Open Water Basic Scuba Certification earned with successful completion. (1 hour lecture, 2 hours pool activity/ocean dives)

214B Intermediate Scuba (2-3)

Prerequisite: Open Water Scuba Certification. Application of scuba diving, including photography, navigation, salvage, game hunting, night diving and others. Advanced Scuba Certification for successful completion. (1 hour lecture, 2 hours pool activity/ocean dives)

246A Basic Hatha Yoga (2)

Basic Yoga postures, breathing and relaxation techniques, and beginning meditation techniques from theoretical and experiential perspectives. Awareness, concentration and breathing patterns that accompany the movements of Hatha Yoga. (1 hour lecture, 2 hours activity) (Same as Religious Studies 246A)

250 Mental Skills for Sport Performance (3)

Developing an understanding of the mental aspects of sport performance and learning mental skills that can be used to enhance sport performance. (Credit/No Credit only)

260 Movement Anatomy (3)

Prerequisite: Kinesiology/Biology 210 or equivalent. The muscular-skeletal system and its function in human movement. Movement in sports skills and the muscles involved.

268 Clinical Proficiencies in Athletic Training I (1)

Prerequisites: Kinesiology 200 and admission to the Athletic Training Education Program. This course is designed to develop a cognitive understanding and a practical knowledge of the various clinical skills required in a first-semester athletic training student.

300 Principles of Human Movement (3)

Prerequisites: Kinesiology 260, four of required six units of approved performance courses, and junior or senior standing. General movement patterns as applied to sport and human movement.

325 Techniques of Coaching (3)

Prerequisite: junior or senior standing. Factors related to coaching strategies and techniques: philosophy, ethics, legal issues, gender, multicultural and equity issues, leadership, motivation, team management, budget, recruiting, equipment purchase, skill acquisition, season planning, conditioning, nutrition, and drugs.

342 Stress Management (3)

(Same as Health Science 342) Kinesiology majors may count this course either for the major or for General Education.

348 Physiology of Exercise (3)

Prerequisites: Kinesiology 210 or equivalent and junior or senior standing. Physiological processes in physical activities and the effect of training upon performance.

348L Physiology of Exercise Laboratory (1)

Prerequisite: prior completion or concurrent enrollment in Kinesiology 348. Laboratory techniques in physiology of exercise. (3 hours laboratory)

349 Measurement and Statistics in Kinesiology and Health Promotion (3)

Prerequisite: junior or senior standing. A study of measurement theory and statistics used in the evaluation of health and human performance, with special focus on the analysis and interpretation of data in different environments. (Same as Health Science 349)

350 Nutrition (3)

(Same as Health Science 350)

351 Principles of Conditioning (3)

Prerequisites: Kinesiology 260 and 348 required, 300 recommended, and junior or senior standing. Conditioning for those who plan to coach or supervise fitness programs. Circuit training, nutrition, motivation, weight control and kinesiology factors.

352 Principles of Teaching Group Fitness (3)

Prerequisites: Kinesiology 210 and junior or senior standing. Provide content knowledge and practical experience concerned with teaching group fitness. Emphasis will be placed on teaching principle, techniques and safety. A variety of exercise formats will be introduced.

353 Physical Activity and Lifelong Well-Being (3)

Prerequisites: one course from Category III of General Education and junior or senior standing. An integration of physiological, psychological and sociological understandings of the human being in relationship to physical activity as a lifelong pursuit. Topics include physical fitness, nutrition, stress reduction, socialization, and individual differences in human behavior. Health Science majors may count this course either for the major or for General Education. Kinesiology majors may not count this course for General Education. (Same as Health Science 353)

363 Developmental Adaptions of Atypical (3)

Prerequisites: Kinesiology 300, 348, 364, and junior or senior standing. The study of the disabled whose unique needs in motor development determine their least restrictive environment in physical activity. Programs of games, sports and exercise in diversified settings; legally mandated regulations.

364 Motor Development (3)

Prerequisites: Kinesiology 260 and junior or senior standing. Life span motor development: age, sex, ethnic, cultural and perceptual components, their implications and the main course of action needed in developmental strategies for optimal motor behavior development.

365 Prevention and Care of Athletic Injuries (3)

Prerequisites: Kinesiology 200 and junior or senior standing. Focuses upon immediate observation and examination of injuries. Special emphasis will be placed upon the etiology, pathology, signs, symptoms and complications related to injuries sustained by athletes.

368 Clinical Proficiencies in Athletic Training II (1)

Prerequisites: KNES 268 and junior or senior standing. Knowledge and develop clinical skills related to athletic training, including environmental safety, protective equipment, surface anatomy, palpation skills, special and functional tests, fitness testing techniques, etc.

369 Clinical Proficiencies in Athletic Training III (1)

Prerequisites: Kinesiology 368 and junior or senior standing. Knowledge and develop clinical skills related to athletic training, including environmental safety, protective equipment, surface anatomy, palpation skills, special and functional tests, fitness testing techniques, etc.

371 Human Motor Control and Learning (3)

Prerequisite: junior or senior standing. An examination of the neural musculoskeletal, and psychological mechanisms underlying the control and learning of movement skills across the lifespan.

371L Human Motor Control Learning Laboratory (1)

Prerequisites: prior completion or concurrent enrollment in Kinesiology 371 and junior or senior standing. Laboratory techniques in motor control and learning studies. (3 hours laboratory)

373 Advanced Injury Assessment of the Lower Extremity (3)

Prerequisites: Kinesiology 365 and junior or senior standing. This advanced course is designed to develop the knowledge and clinical skills related to the recognition, evaluation, and assessment of pathologies to the lower extremity and lumbar spine.

374 Advanced Injury Assessment for the Upper Extremity (3)

Prerequisites: Kinesiology 365 and junior or senior standing. This is an advanced course intended to develop the knowledge and clinical skills related to the recognition, evaluation, and assessment of pathologies to the upper extremity and cervical spine

375 Management of Sport/Exercise Emergencies (3)

Prerequisites: Kinesiology 200 and junior or senior standing. This course is designed to provide the theoretical, practical, and clinical basis for the recognition, treatment, and management of medical emergencies and catastrophic situations involving the physically active individuals, including athletes.

377 Therapeutic Exercise in Rehabilitation (3)

Prerequisites: Kinesiology 200 and junior or senior standing. This course is designed to provide the theoretical and clinical basis for therapeutic exercise in rehabilitation. Therapeutic exercises as they relate to injury rehabilitation will be developed for student syntheses and understanding.

378 Therapeutic Modalities in Rehabilitation (3)

Prerequisites: Kinesiology 200 and junior or senior standing. This course is intended to provide theoretical, clinical, and practical basis for the use of therapeutic modalities in rehabilitation. Information concerning physical agents and biophysics, indications, contraindications, physiological effects, and applications will be developed.

380 History and Philosophy of Human Movement (3)

Prerequisites: completion of General Education Category II.A and III.B.2 and junior or senior standing. Historical development of thought and practice in athletics, sport, kinesiology, play, dance, and other human movement forms from ancient Greeks to the present. Philosophical theories of human movement relative to personal identity, reality, being, values, and nature of competition.

381 Sports, Games and Culture (3)

Prerequisites: one course from Category III of General Education and junior or senior standing. Human movement in the cultural milieu. Historical and contemporary interpretations of the role of play, games, sports, dance and recreation in human life.

383 Psychology of Sport and Physical Activity (3)

Prerequisite: junior or senior standing. Introduction to theory and research of psychological processes that influence human performance in numerous movement settings including sport, exercise, and rehabilitation. Topics include individual difference variables (e.g., personality, arousal/anxiety, and motivation), social psychological variables (e.g., aggression, leadership, and group dynamics), and assessment and intervention (e.g., goal setting, cognitive techniques, and behavioral change strategies).

384 Sport Sociology (3)

Prerequisite: Kinesiology 381 and junior or senior standing. Sport and social institutions and social processes. Understanding sport as a social phenomenon.

385 Instructional Analysis of Human Movement (3)

Prerequisites: completion of all six units of Kinesiology performance classes in specified areas (i.e., fitness, aquatics, combatives, individual sports, court/racquet sports, team sports), Kinesiology 300, and junior or senior standing. This course examines variables and principles which contribute to effective observation, analysis, and instruction of human movement skills across the life span.

386 Movement and the Child (3)

Prerequisite: for Kinesiology majors only: Kinesiology 385. Corequisite: Kinesiology 494 (1 unit) and junior or senior standing. Characteristics of the child; physical growth and development; basic mechanical principles underlying efficient movement; and programs for physical needs of children in the elementary school.

387 Movement and the Adolescent (3)

Prerequisite: for Kinesiology majors only: Kinesiology 385. Corequisite: Kinesiology 494 (1 unit) and junior or senior standing. Prepares students to implement physical education programs at the secondary level. Addresses cognitive, affective and psychomotor development; structure, concepts and principles related to human movement and motor learning; concepts related to the design of secondary school movement programs.

396 Physical Education Tutorial (1)

Prerequisite: consent of instructor and tutorial adviser and junior or senior standing. Supervised experience in performance or laboratory situations through tutoring or assisting in instruction. May be repeated for six units of credit. A maximum of three units may be applied toward the major.

400 Program Design in Kinesiology (3)

Prerequisites: Kinesiology 202 and junior or senior standing. This course is designed to provide the student with the skills necessary for developing, implementing, and evaluating human movement and/or health promotion programs for specific target populations.

406 Principles of Sport and Exercise Management (3)

Prerequisite: junior or senior standing. A broad overview of sport/exercise management enterprise, including school, facility, professional, commercial, industrial, corporate management and specialists in marketing, print/electronic media. Job descriptions, professional preparation and placement opportunities are detailed. Portfolio development.

408 Sports Fund Raising and Packaging (3)

Prerequisites: Kinesiology 406 and junior or senior standing. Fund raising theories and principles with application to educational, professional and commercial sports. The importance of marketing within the sports setting. Theories and principles as relevant to the intercollegiate and professional athletic leagues.

414 Legal Issues in Sport and Exercise (3)

Prerequisite: junior or senior standing. Analysis of the major legal issues involved in the conduct of amateur and professional sport and the teaching and administration of Physical Education. Issues include: coaching, student athlete, sports medicine, officials, spectators, facilities, equipment, and contracts.

430 Applied Sport Psychology (3)

Prerequisites: Kinesiology 383 and junior or senior standing. Application of principles from sport psychology literature to enhance athletes' and coaches' performance.

432 Applied Exercise Psychology (3)

Prerequisites: Kinesiology 383 and junior or senior standing,. Understanding and applying the principles from exercise psychology to enhance competencies and skills related to preventive and rehabilitative exercise programs.

442 Teaching Physical Education (3)

Prerequisite: admission to Teacher Education. Objectives, methods and materials of teaching Physical Education K to 12. Required before student teaching. Part of the 12-unit education block and may not be taken separately. (Credit/No Credit only. Requires B or better for credit.)

449E Externship in Secondary Teaching (3)

To be taken concurrently with Kinesiology 442. See description under Secondary Education. (Credit/No Credit only. Requires B or better for credit.)

449I Internship in Secondary Teaching (10)

See description under Secondary Education. (Credit/No Credit only. Requires B or better for credit.)

449S Seminar in Secondary Teaching (2)

See description under Secondary Education. (Credit/No Credit only. Requires B or better for credit.)

451 Sports Medicine (3)

Prerequisites: junior or senior standing, Kinesiology 348 and 348L. Addresses those alterations in human movement, anatomy, and physiology that are caused by such factors as injury, drugs, and environment.

452 Graded Exercise Testing and Prescription (3)

Prerequisites: junior or senior standing, Kinesiology 348 and 348L; Kinesiology 351 and 451 recommended. Methods of graded exercise testing in the apparently healthy adult. Guidelines for aerobic exercise prescription. Discussion of cardiovascular disease and identification of risk factors.

453 Clinical Exercise Physiology (3)

Prerequisites: Kinesiology 348 and 452, Kinesiology 350 recommended, and junior or senior standing. Application of exercise physiology concepts to clinical/pathological situations in order to determine the therapeutic and functional benefits of physical activity.

454 Physical Dimensions of Aging (3)

Prerequisites: minimum of 6 units of upper-division. Kinesiology courses completed or 6 units from the Gerontology minor and junior or senior standing. Examination of the scientific evidence concerning the relationship between level of physical activity and one's physical, mental and psychological well-being during aging.

455 Functional Performance Assessment and Programming for Older Adults (3)

Prerequisites: Kinesiology 349 and either Kinesiology 353, 371, or 454 and junior or senior standing. This course emphasizes the development of technical and personal skills related to functional performance assessment and to the development and implementation of physical activity programs for healthy and frail older adults.

461 Biomechanical Analysis of Human Movement (3)

Prerequisites: Kinesiology 300 and junior or senior standing, Physics 211 recommended. An analytical approach to the mechanics of human motion. Quantitative video analysis techniques are introduced and applied to select movement analysis projects.

463 Biomechanics of Musculoskeletal Injury (3)

Prerequisites: Kinesiology 300 and junior or senior standing, Biomechanical analysis of bone, joint cartilage, and callagenous tissue, and of forces and moments acting at the major joints of the human body with specific interest on how these forces contribute to musculoskeletal injuries.

465 Administration and Leadership in Athletic Training (3)

Prerequisites: Kinesiology 365 and junior or senior standing. This course is intended to enable students to comprehend and appraise the many theoretical, legal, moral, ethical, technical, and practical aspects of administration and leadership in sports health care programs, including those in athletic training.

468 Clinical Proficiencies in Athletic Training IV (1)

Prerequisites: Kinesiology 369 and junior or senior standing. This course is designed to develop a cognitive understanding and a practical knowledge of the various clinical skills required of a fourth-semester athletic training student.

469 Clinical Proficiencies in Athletic Training V (1)

Prerequisites: Kinesiology 468 and junior or senior standing. This course is designed to develop a cognitive understanding and a practical knowledge of the various clinical skills required of a fifth-semester athletic training student.

471 Motor Control and Movement Dysfunction (3)

Prerequistes: Kinesiology 371 and junior or senior standing. This course will examine contemporary motor control theories and how they are applied to the development of therapeutic exercise programs for children and adults with balance and movement disorders caused by disease and/or trauma to the neurological system.

480 Women and Sport (3)

Prerequisites: minimum of 15 Kinesiology upper-division units completed and junior or senior standing. A multidimensional focus of influences impacting women's competitive and non-competitive sport participation with emphasis on access, inclusion, adherence, benefits/liabilities, and lifelong well being.

494 Practicum (1-3)

Prerequisites: junior or senior standing, consent of faculty sponsor, field supervisor, fieldwork coordinator, and chair. Planning, preparing, coaching, teaching in public school, college, or community physical education or recreation programs. May be repeated for a maximum of six units of credit. Credits not applicable toward major or fifth year work. (Credit/No Credit only).

495 Internship Seminar (1)

Prerequisites: minimum of 12 units of upper-division Kinesiology courses completed, consent of faculty sponsor, field supervisor, fieldwork coordinator and chair and junior or senior standing. Co-requisite: Kinesiology 495L. Analysis of field experiences including appropriate theory, skills and techniques. May not be repeated for credit toward the major.

495L Internship in Kinesiology (2)

Prerequisites: minimum of 12 units of upper-division Kinesiology courses completed, consent of faculty sponsor, field supervisor, fieldwork coordinator and chair, and junior or senior standing. Corequisite: Kinesiology 495 or equivalent. Supervised experience in an approved fieldwork location agency. Internship must be specific to the discipline of kinesiology. Minimum of 120 hours per semester. Application forms must be completed and approved prior to enrollment. Upon completion of the internship, a written report must be submitted. May not be repeated for credit toward the major.

499 Independent Study (1-3)

Prerequisite: minimum of 15 upper division Kinesiology courses completed and junior or senior standing. Topics based on a study plan prepared in cooperation with a faculty supervisor. Culminates in a paper, project, comprehensive examination or performance. Application forms must be completed and approved prior to enrollment. Maximum of three units in any one semester; may be repeated once.

508 Statistical Methods in Kinesiology (3)

Prerequisites: graduate status, Kinesiology 349. Statistical theory, data collection procedures, techniques for analysis and interpretation of data.

510 Research Methods in Kinesiology (3)

Prerequisites: graduate status, Kinesiology 508. The fundamental tools of research. Types of research, process of scientific inquiry and critical analysis of research. Topic selection and development of a research proposal.

516 Advanced Study of the Philosophical Perspective of Human Movement (3)

Prerequisites: graduate status, Kinesiology 380. Methods of the philosophical process and human movement.

550 Graduate Internship (3)

Prerequisites: graduate status, consent of faculty sponsor, field supervisor, field coordinator and chair. On-the-job training experiences supervised by a fully trained practitioner. Minimum of 150 hours per semester plus conferences with faculty sponsor. Application forms must be completed and approved prior to enrollment. Upon completion of the internship, a written evaluation must be submitted. Not open to students on, or subject to, academic probation.

551 Advanced Study in Physiology of Exercise (3)

Prerequisites: graduate status, Kinesiology 348 and 348L. Current issues and research in physiology of exercise with emphasis on physiological control during acute exercise. Includes written, oral and laboratory assignments.

555 Scientific Bases of Training (3)

Prerequisites: graduate status , Kinesiology 351 and 551. The anatomical and physiological bases for programs that develop physical fitness and performance.

556 Environment Exercise Physiology (3)

Prerequisites: graduate status, Kinesiology 551. The interrelationship between the physical environment and the human while exercising under different states of fitness and acclimatization.

557 Instructional Strategies in Physical Education and Sport (3)

Prerequisites: graduate status, Kinesiology 371 or 383. Study of theoretical concepts, models, and research on instructional strategies for Physical Education, sport and related professional setting. Highly recommended for graduate students in all concentrations in Physical Education.

558 Advanced Study in Teaching Human Movement (3)

Prerequisites: graduate status, Kinesiology 300 or Kinesiology 371 or consent of the instructor. Provides a general overview of historical perspectives and current trends \in pedagogical research and the resultant principles that undergird the science of teaching human movement.

561 Advanced Study in Biomechanics (3)

Prerequisites: graduate status, Kinesiology 461. Advanced methods and concepts associated with the quantification of human movement. Emphasis is placed upon the biomechanical analysis of force plate and three-dimensional video data.

571 Advanced Study in Human Motor Control and Learning (3)

Prerequisites: graduate status, Kinesiology 371. In-depth study of contemporary trends and issues in motor control/learning research. Emphasis on application of research to practice.

580 Advanced Study in Sport and Exercise Psychology (3)

Prerequisites: graduate status, Kinesiology 383. Current issues and research in sport and exercise psychology. Topic areas include: motivation, personality, leadership and group dynamics, attention/concentration, exercise adherence/compliance, sport and exercise injury, and behavioral change strategies.

581 Consultation in Applied Sport Psychology (3)

Prerequisites: Kinesiology 383 and 430, and graduate standing. Explores factors related to effective consultation for enhancing athletic performance. Knowledge of consultation issues will be derived from the existing best practices and literature with the purpose of drawing practical applications for the new professional.

582 Advanced Study in Sociocultural Perspectives of Human Movement (3)

Prerequisites: graduate status and Kinesiology 384, or consent of instructor. An in-depth study of the theories and methods of the sociocultural perspective and their application to the study of human movement phenomena.

597 Project (3)

Prerequisites: graduate classified status, Kinesiology 510, successful completion of an oral presentation of the project, and signature of all committee members on or before the census date of the semester in which the student elects to enroll. Directed independent inquiry. Not open to students on, or subject to, academic probation.

598 Thesis (3)

Prerequisites: graduate classified status, Kinesiology 510, successful completion of an oral presentation of the thesis, and signatures of all committee members on or before the census date of the semester in which the student elects to enroll. Student will select and have approved a research proposal, conduct the research, and prepare a formal analysis and report. May be repeated. Not open to students on, or subject to, academic probation.

599 Graduate Independent Research (1-3)

Prerequisites: graduate status, Kinesiology 510, and consent of the faculty adviser and chair. Student research in a specific area of human movement studies. Application forms must be completed and approved prior to enrollment. Upon completion of the research, a written report must be submitted. Not open to students on, or subject to, academic probation. Maximum of three units in any one semester; may be repeated once.

HEALTH SCIENCE COURSES

Courses are designated as HESC in the class schedule.

101 Personal Health (3)

Basic concepts relating to health and well-being from a holistic perspective. Mental, emotional, physical and socio-environmental dimensions of health, sexuality and relationships; nutrition and physical fitness; use and abuse of drugs; health care services and current health problems. Instructional fee required.

102 Prevention and First Aid (2)

The hazards in environment. The care and prevention of accidents. Standard first aid certification by the American Red Cross granted upon successful completion of requirements.

220 Concepts in Health Science (3) (Formerly 320)

Prerequisites: one course from General Education Category III.A. 2. or 3. and junior or senior status. Corequisite: Health Science 494 (1 unit). Theoretical and practical issues of Health Science as a profession. Topics include: history, status, resources, roles in various settings, legal and ethical issues in health education.

301 Promotion of Optimal Health (3)

(Same as Nursing 301)

321 Drugs and Society (3)

Prerequisite: completion of lower-division general education science requirement and junior or senior status. Habit-forming substances such as alcohol, tobacco, narcotics, hallucinogens, and related drugs, stimulants and depressants. Social, historical, and legal aspects of the drug problem are considered.

325 Consumer Health (3)

Prerequisites: Health Science 101 and junior or senior standing. Analysis and evaluation of health information, products and services; medical quackery, fraudulent health practices, and laws and agencies protecting the consumer will be explored.

342 Stress Management (3)

Prerequisites: one course from General Education Category IV. B; at least sophomore standing. The nature of stress and the physiological and psychological effects of prolonged stress responses. Includes short and long term somatic and behavioral techniques (exercise, relaxation, meditation, nutrition, time management and goal setting) for management of stress. Health Science majors may not count this course for General Education. Kinesiology majors may count this course either for the major or for General Education. (Same as Kinesiology 342)

349 Measurement and Statistics in Kinesiology and Health (3)

(Same as Kinesiology 349)

350 Nutrition (3)

Prerequisites: Chemistry 115 or equivalent course and junior or senior standing. Concepts of nutrition as they relate to nutritional needs, practices, and problems throughout the life cycle. Emphasis on nutritional counseling and education of individuals/groups toward health promotion and disease prevention. Open to non-nursing majors. (Same as Kinesiology 350)

353 Physical Activity and Lifelong Well-Being (3)

(Same as Kinesiology 353) Health Science majors may count this either for the major or for General Education.

356 Health Education for Secondary Teachers (3)

Prerequisite: senior or postbaccalaureate standing. Course is designed to assist secondary teachers to promote and protect the health and well-being of middle and high school students. This course is designed to satisfy the Commission on Teacher Credentialing requirement for health education, including nutrition, alcohol, tobacco, and other drugs.

357 Health Education for Elementary Teachers (3)

Prerequisite: senior or postbaccalureate standing. The teacher's role in the comprehensive school health system. This course is designed to satisfy the Commission on Teacher Credentialing requirement for health education, including nutrition, alcohol, tobacco, and other drugs.

358 Contemporary Issues in Children's Health (3)

Prerequisites: junior or senior standing. Overview of common causes of, interrelationships between, and prevention of morbidity and mortality among children and youth; focus is on preventive and promotive health concepts and practices; connections between health and learning are explored.

400 Program Design in Kinesiology and Health Promotion (3)

Prerequisites: Kinesiology 202 or Health Science 220. This course is designed to provide the student with the skills necessary for developing, implementing, and evaluating human movement and/or health promotion programs for specific target populations. (Same as Kinesiology 400)

401 Epidemiology (3)

Prerequisites: Health Science 220 and 349. Application of epidemiologic procedures to the understanding of the occurrence and control of infectious and chronic diseases, mental illness, environmental health hazards, accidents and geriatric problems. (Same as Nursing 401)

410 Community Health Education (3)

Prerequisites: Health Science 220 and junior or senior standing. Examination of the multiple settings for community health education practice and professional roles and skills that are required for health educators. Identification of community health education concepts with application to various segments of the nation's health.

411 Promoting Health in Multicultural Populations (3)

Prerequisites: Health Science 220. Focus on impact of cultural variables on health/illness. Current and potential strategies to improve health care delivery to ethnic groups will be explored. Identification of cultural competence skills that are essential for health educators.

440 Determinants of Health Behavior (3)

Prerequisites: Health Science 220 or Kinesiology 202. Survey of contemporary research on the health effect of human behavior. Introduction to theoretical foundations and practical applications of behavior in the context of health: physical, psychological, cultural and social health. Includes current issues and theories of health behavior.

445 Instructional Methodologies for Health Education (3)

Prerequisite: Health Science 220. Learner-centered instructional strategies designed to facilitate health behavior change for individuals in-group settings. Strategies focus in specific content, relationship to behavioral outcomes, and adult learning theories.

450 Applied Health Promotion through out the Lifespan (3)

Prerequisite: Health Science 220. Promotion/risk reduction program content, development, implementation, and evaluation. Topics include: weight control, stress management, substance abuse, physical fitness, and accident prevention.

455 Designing Health Education Curricula (3)

Prerequisite: Health Science 220. This course thoroughly explores the theory and skills necessary to develop curriculum based on analysis of individual, community and societal needs and interests.

460 Worksite Health Promotion (3)

Prerequisites: Health Science 220 or Kinesiology 202. Examination of the philosophy, rationale and guidelines for developing health promotion programs in the corporate setting. Unique considerations in assessing needs, planning and implementing programs, evaluating effectiveness and coordinating activities in the workplace are discussed. (Same as Kinesiology 460)

461 Occupational Health and Safety (3)

Prerequisite: Health Science 220 or Kinesiology 302. Occupational health principles including anticipation, recognition, evaluation, and control of occupational hazards are presented to heighten awareness of workplace hazards on human health. Occupational health laws, regulations and methods of compliance are reviewed.

475 Health Science, Planning, Research and Evaluation (3)

Prerequisites: Health Science 220 and 349. Identification and application of concepts related to Health Science planning, research and evaluation. Includes analysis of planning and research designs applicable to health professionals as well as tools for measurement of health status at individual, community, national levels.

494 Health Science Practicum (1-3)

Prerequisites: Health Science 220, junior/senior standing and consent of instructor. An elective for Health Science majors offering an opportunity to plan, implement, and evaluate special community-based projects under faculty supervision. May be repeated 6 units maximum. Credit/no credit only.

495 Internship in Health Science (3)

Prerequisites: Health Science 220 and 455, senior standing and consent of instructor. Supervised observation and field experience in community health settings as conducted by government, voluntary, professional or industrial/corporate organizations. (May be repeated one time.)

500 Issues in Public Health (3)

Prerequisite: admission to the Master of Public Health program. Historical perspectives, definitions, and discussion of current public health issues. Prepares public health professionals to draw on knowledge and skills from a variety of disciplines to define, critically assess, evaluate, and resolve public health problems.

501 Advanced Methods in Epidemiology (3)

Prerequisite: Health Science 401. Advanced application of epidemiologic procedures to the understanding of the occurrence and control of diseases and other health problems will be addressed. Emphasis is given to study design, data quality, statistical analysis, and causal inference.

540 Advanced Study in Health Promotion and Disease Prevention (3)

Prerequisite: Health Science 440 or equivalent. Study of psychological, social, ecological, economic, and political theories relevant to the mission and process of health promotion. Application of behavioral change techniques and health education methodology to health promotion targeting individuals and whole communities.

PROGRAM COORDINATOR

Sandra M. Pérez-Linggi

PROGRAM OFFICE

Humanities 420A

PROGRAMS OFFERED

Bachelor of Arts in Latin American Studies

Minor in Latin American Studies

WEBSITE

http://hss.fullerton.edu/latinamerican/

PARTICIPATING FACULTY

Ruth Capelle (Art), Isaac Cardenas (Chicano Studies), James Dietz (Economics), Roger Dittmann (Physics), Dagoberto Fuentes (Chicano Studies), Ana Garza (Education), Ron Harmon (Foreign Languages), Juan Carlos Gallego (Foreign Languages), Joanne Gass (English), Arturo Jasso (Foreign Languages), Leroy Joesink-Mandeville (Anthropology), Irene Lange (Marketing), Jocelyn Olcutt (History), Gerald Rosen (Sociology), Robert Voeks (Geography), Bruce Wright (Political Science), Phillipe Zacair (History).

ADVISER

Sandra M. Pérez-Linggi

INTRODUCTION

Latin America is our closest neighbor and is a developing region with vast potential. Countries range in size from the Dominican Republic to resource-rich Brazil, which is larger than the continental United States.

By pursuing a broad yet in-depth course of study, Latin American Studies students are well equipped to enter many fields and occupations as teachers in the United States or Latin America, as business people sensitive to Latin American history and culture, or as journalists, lawyers, and doctors where contact with Latin America or Latin Americans in the United States is important.

The Latin American Studies major is designed to provide an in-depth, interdisciplinary understanding of Latin America. Majors develop language proficiency in both Spanish and Portuguese and have a broad range of courses from which to choose in anthropology, art, Chicana/o studies, economics, history, geography, political science, and foreign languages and literatures. The major is well-suited for: (1) students who wish to pursue careers which require residence in or knowledge of Latin America (e.g., business, journalism, government); (2) those who plan to teach Spanish and/or social sciences in the secondary schools; and (3) students who wish to pursue graduate work in Latin American studies or other disciplines where a Latin American specialization would be helpful (e.g., political science, economics, history).

BACHELOR OF ARTS IN LATIN AMERICAN STUDIES

The Bachelor of Arts in Latin American Studies requires a minimum of 120 units, which includes courses for the major, General Education, all University requirements, and free electives.

Foundation Courses

All majors should develop a language proficiency level equivalent to Spanish 204 and Portuguese 102.

Students with no language background should take:

Spanish 101 Fundamental Spanish - A (5)

Spanish 102 Fundamental Spanish - B (5)

Spanish 203 Intermediate Spanish - A (3)

Spanish 204 Intermediate Spanish - B (3)

Portuguese 101 Fundamental Portuguese - A (4) (usually offered in the Fall)

Portuguese 102 Fundamental Portuguese - B (4) (usually offered in the Spring)

A student with a knowledge of Spanish and/or Portuguese may be able to meet part or all of the foundation course requirements after evaluation by the Department of Foreign Languages and Literatures.

Required Fields of Study

Upper-Division Writing Requirement (3 units)

English 301 Advanced Composition (3)

Language (3 units)

Spanish 301 Advanced Grammar and Composition (3)

OR Portuguese 317 Advanced Conversation and Composition (3)

History and Culture (9 units)

Spanish 316 Introduction to Spanish American Civilization (3)

OR Portuguese 325 Contemporary Brazilian Civilization (3)

Latin Amer Studies 300 Topics in Latin America (3)

Three units in upper-division Latin American History (3)

Social Science (6 units) selected from two departments

Anthro 325 Peoples of South America (3)

Anthro 423 The Ancient Maya (3)

Anthro 424 The Aztecs and Their Predecessors (3)

Economics 333 Economic Development: Analyses and Case Studies (3)

Economics 334 Economics of Latin America and the Caribbean (3)

Geography 333 Latin America (3)

Upper-division Latin American Political Science courses when offered

Elective Fields of Study

Twelve units selected from three or more of the following groupings chosen in consultation with the program coordinator:

Culture

Anthropology 325 Peoples of South America (3)

Anthropology 423 The Ancient Maya (3)

Anthropology 424 The Aztecs and Their Predecessors (3)

Chicano 302 Ancient Mexican Culture (3)

Chicano 353 Mexico Since 1906 (3)

Chicano 403 Cultural Differences in Mexico and the Southwest (3)

Portuguese 317 Advanced Conversation and Composition (3)

OR Spanish 301 Advanced Grammar and Composition (3)

Portuguese 320 Introduction to Luso-Brazilian Culture and Civilization (3)

Portuguese 325 Contemporary Brazilian Civilization (3)

OR Spanish 316 Introduction to Spanish-American Civilization (3)

Spanish 416 Contemporary Spanish-American Culture (3)

Fine Arts and Literature

Art 460 Pre-Columbian Art (3)

Art 462 Latin American Art from 1800 to the 1950s (3)

Art 480T Selected Topics in Art History (3)*

Chicano 304 Music of Mexico (3) (Same as Music 304)

Chicano 336 Main Trends in Spanish-American Literature (3)

Chicano 430 Evolution of Mexican Literature (3)

Chicano 433 Mexican Literature Since 1940 (3)

Spanish 440 Spanish-American Literature to Modernismo (3)

Spanish 441 Spanish-American Literature Since Modernismo (3)

Spanish 466 Spanish Phonology and Dialectology (3)

Spanish 485T Senior Seminar: Topics in Spanish-American Literature (3)

History and Politics

History 350 History of Latin American Civilization (3)

History 451 Colonial Period of Latin America (3)

History 452 20th-Century Brazil (3)

History 453 History of Mexico (3)

History 454 19th Century Latin America: Era of Nation Building (3)

History 455 Latin America Since 1945 (3)

Upper-division Latin American Political Science courses when offered.*

Geography and Economics

Economics 333 Economic Development: Analyses and Case Studies (3)

Economics 334 Economics of Latin America and the Caribbean (3)

Geography 333 Latin America (3)

Latin American Studies

Latin American Studies 399 Directed Studies (1-3)

MINOR IN LATIN AMERICAN STUDIES

The minor in Latin American studies is designed to complement other majors for which a focus on Latin America can be beneficial (e.g., history, international business, communications, Spanish, economics and political science). Prospective secondary teachers may find this minor particularly attractive. The minor requires proficiency in either Spanish or Portuguese, as defined above for the major; 3 units of cultural history (Latin Amer Studies 300, History 350 or Spanish 316 or Portuguese 325); and 9 units of approved electives from at least three departments listed below:

Anthro 423 The Ancient Maya (3)

Anthro 424 The Aztecs and Their Predecessors (3)

Anthro 325 Peoples of South America (3)

Art 460 Pre-Columbian Art (3)

Art 462 Latin American Art from 1800 to the 1950s (3)

Art 480T Selected Topics in Art History (3)*

Chicano 302 Ancient Mexican Culture (3)

Chicano 304 Music of Mexico (3) (Same as Music 304)

Chicano 336 Main Trends in Spanish-American Literature (3)

Chicano 353 Mexico Since 1906 (3)

Chicano 403 Cultural Differences in Mexico and the Southwest (3)

Chicano 430 The Evolution of Mexican Literature (3)

Chicano 433 Mexican Literature Since 1940 (3)

Chicano 440 Mexican Intellectual Thought (3)

Economics 333 Economic Development: Analysis and Case Studies (3)

Economics 334 Economics of Latin America and the Caribbean (3)

Geography 333 Latin America (3)

*Latin American focus only.

History 451 Colonial Period of Latin America (3)

History 452 20th-Century Brazil (3)

History 453 History of Mexico (3)

History 454 19th Century Latin America: Era of Nation Building (3)

History 455 Latin America Since 1945 (3)

Upper-division Latin American Political Science courses when offered*

Portuguese 310 Portuguese in the Business World (3)

Portuguese 317 Advanced Conversation and Composition (3)

Portuguese 320 Introduction to Luso-Brazilian Culture and Civilization (3)

Portuguese 325 Contemporary Brazilian Civilization (3)

Spanish 301 Advanced Grammar and Composition (3)

Spanish 310 Spanish in the Business World (3)

Spanish 316 Introduction to Spanish-American Civilization (3)

Spanish 416 Contemporary Spanish-American Culture (3)

Spanish 440 Spanish-American Literature to Modernismo

Spanish 441 Spanish-American Literature Since Modernismo (3)

Spanish 466 Spanish Phonology and Dialectology (3)

Spanish 485T Senior Seminar: Topics in Spanish-American Literature (3)

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*Latin American focus only.

LATIN AMERICAN STUDIES COURSES

Course is designated as LTAM in the class schedule.

300 Topics in Latin America (3)

Prerequisite: completion of General Education Category III.C.1. An interdisciplinary examination and discussion of the history, geography, peoples, and major issues of Latin America from pre-Colonial times to the present.

399 Directed Study (1-3)

Prerequisite: approval of program coordinator. Supervised individual or small group study as an elective. May be repeated for credit with different content.

INTRODUCTION

Liberal Studies is an interdisciplinary department that integrates concepts from the humanities and arts, the natural sciences and the social sciences. Some core courses trace the historical development of these areas of knowledge in their intellectual and cultural context. The broad framework of these courses will enable students to see the whole range of human knowledge. Other core courses compare and contrast the methods and underlying assumptions of the humanities and arts, the natural sciences and the social sciences, and explore the ways in which these disciplines communicate. The critical thinking and communication skills these courses develop provide students with the self-confidence that comes from being able to express one's ideas clearly and effectively both orally and in writing. The core courses use a combination of lecture, discussion and seminar to make the student not only a well-rounded, well-educated person, but also a more independent thinker and a more creative human being.

The major in Liberal Studies is designed for students who desire the broadest possible liberal education: (1) as preparation for teaching all subjects in the elementary school classroom; (2) as an alternative approach to careers in business; (3) as preprofessional preparation for entry into professional schools in the health sciences, law, ministry, etc.; (4) as a means of obtaining specific occupational requirements that cannot be met from course work in a single department; (5) and as a source of personal growth and development.

AWARDS IN LIBERAL STUDIES

The Outstanding Elementary Education Plan Student Award and the Outstanding Thematic Plan Student Award go to the outstanding graduating senior in each plan.

MULTIPLE SUBJECT MATTER PREPARATION PROGRAM

In addition to completing their B.A. in Liberal Studies, students seeking a Multiple Subject (Elementary) Credential need to enter a state-approved Multiple Subject Credential Program.

As part of the Multiple Subjects Credential Program requirements, students must either (1) complete an approved Multiple Subject Matter Preparation Program at CSUF or another institution or (2) take the state-approved exam based on the content of the Multiple Subject Matter Preparation Program. Students intending to meet the CSUF Multiple Subject Matter Preparation Program requirements while they are taking course work in the Liberal Studies major will need to consult with a liberal studies adviser.

The bachelor's degree in Liberal Studies may be effectively combined with subject matter studies necessary for the multiple subject teaching credential (K-8). Undergraduates are encouraged to work with the Center for Careers in Teaching (714-278-7130) as early as possible in their academic careers to plan efficient course selections for general education, the major and electives. With careful planning, it may be possible to enter the credential program in the senior year of the bachelor's degree. Postgraduate students should contact the Admission to Teacher Education office in the School of Education (714-278-3411) to obtain information on attending an overview presentation.

BLENDED TEACHER EDUCATION PROGRAM

Students in the Blended Teacher Education Program (BTEP) combine their bachelor's degree requirements with credential program classes to earn a baccalaureate degree and Level I credential in four calendar years. BTEP students complete general education, a major in either Child and Adolescent Development or Liberal Studies, and a Level I CLAD Emphasis Multiple Subject

DEPARTMENT CHAIR

James R. Hofmann

DEPARTMENT OFFICE

Education Classroom 622

DEPARTMENT WEBSITE

http://hss.fullerton.edu/liberal/

PROGRAMS OFFERED

Bachelor of Arts in Liberal Studies

FACULTY

Emily Bonney, April Bullock, Ronald Clapper, Christina Cogdell, Margaret Garber, Mark Fischer, Craig McConnell, Angeles Sancho-Velazquez, Terri Snyder

ADJUNCT FACULTY

Jane Hipolito (English and Comparative Literature), Gaylen Carlson (Geological Sciences), James Hofmann (Philosophy), Stewart Long (Economics), Bradley Starr (Comparative Religion), Bruce Weber (Chemistry and Biochemistry), James Woodward (History)

ADVISERS

Emily Bonney, April Bullock, Ronald Clapper, Christina Cogdell, James Hofmann, Craig McConnell, Terri Snyder, Bradley Starr

Credential (for teaching elementary school) or an Education Specialist Credential (for teaching special education). This academically challenging program is ideal for the strong, committed student who plans to teach elementary school or special education. Field experiences working with children every semester from Semester 2 through Semester 8 are an essential element in this program. BTEP students also have regular contact with faculty from the Elementary, Bilingual and Reading Department throughout their four years of study.

Students admitted to BTEP are members of a learning community where they make close friends and establish support networks. Each semester students take at least two classes reserved for BTEP students. Faculty members focus these classes on teacher preparation issues.

First-time freshman may apply to the program March through June prior to their entering fall semester. Up to 75 freshman are accepted for BTEP each year. Applicants are encouraged to apply early for priority consideration.

BACHELOR OF ARTS IN LIBERAL STUDIES

The Bachelor of Arts in Liberal Studies requires a minimum of 120 units which includes courses for the major, General Education, all University requirements, and free electives. The 27 units of core courses are required of all majors. In addition, students must take the 24-unit option under either the Elementary Education Plan or the Thematic Plan. Each course counted for the major must be completed with a grade of C or higher.

Core Courses (27 units)

Liberal Studies 290 Introduction to Liberal Studies (3)

Liberal Studies 301 Inquiry and Composition in Liberal Studies (3)*

History/Liberal Studies 302A Historical Dimension of Liberal Studies (3)

History/Liberal Studies 302B Historical Dimension of Liberal Studies (3)

Liberal Studies 303 Liberal Studies in the Humanities and Arts (3)

Liberal Studies 304 Liberal Studies in the Sciences (3)

Liberal Studies 305 Liberal Studies in the Social Sciences (3)

Liberal Studies/Philosophy 401 Knowledge in the Arts and Sciences (3)

One of the following Senior Seminars:

Liberal Studies 485 Senior Seminar in Cultural Diversity (3)

Liberal Studies 486 Senior Seminar in Humanities and Arts (3)

Liberal Studies 487 Senior Seminar in Evolution and Creation (3)

Liberal Studies 488 Senior Seminar in Environmental Studies (3)

Liberal Studies 489 Senior Seminar in Gender Issues (3)

Liberal Studies 490 Senior Seminar in Great Books (3)

Liberal Studies 491 Senior Seminar in Literature and Science (3)

Sequence of Core Courses

Because the core curriculum is designed as an integrated whole and builds upon the student's general education, there is an order in which these courses need to be taken and there are certain prerequisites for them. Introduction to Liberal Studies (Liberal Studies 290) and the Historical Dimension of Liberal Studies come first. The only prerequisite for Introduction to Liberal Studies is the completion of General Education category I. History or Liberal Studies 302A requires completion of General Education category II.A, but transfer students who have not had a course in western civilization or world history will be able to take History 110A (110B) and 302A (302B) concurrently. History or Liberal Studies 302A is a prerequisite for History or Liberal Studies 302B.

History or Liberal Studies 302B is a prerequisite for Liberal Studies 303, 304, and 305 because Liberal Studies in the Humanities and Arts, Liberal Studies in Science, and Liberal Studies in the Social Sciences pick up the historical developments where History or Liberal Studies 302B leaves off. Since the courses in these three areas also integrate what the student has learned from general education, completion of General Education category III.B.1&2 (including Music 101 or an equivalent course or background in basic music theory) is required for Liberal Studies 303; completion of General Education category III.A.1&2 is required for Liberal Studies 304; and completion of III.C.1 is required for Liberal Studies 305.

Knowledge in the Arts and Sciences and the Senior Seminar come last. Liberal Studies 401 or Philosophy 401 require the completion of Liberal Studies 304 and either Liberal Studies 303 or Liberal Studies 305. The Senior Seminar requires senior standing, the completion of 90 units of college work. Some of the senior seminars have additional prerequisites. Students may take whichever senior seminar they prefer.

Elementary Education Plan (24 units)

The Elementary Education Plan, which is designed for students seeking an elementary or multiple subjects teaching credential, provides academic preparation in many of the subject areas taught in the elementary school.

English 303 The Structure of Modern English (3)**

One of the following**

English 110 Literature of the Western World from Ancient through Medieval Times (3)

English 111 Literature of the Western World from the Renaissance through the 19th Century (3)

Comparative Literature 324 World Literature to 1650 (3)*

Comparative Literature 325 World Literature from 1650 (3)*

English 341 Children's Literature (3)*

OR Theatre 311 Oral Interpretation of Children's Literature (3)*

Mathematics 303A,B Fundamental Concepts of Elementary Mathematics (3,3)**

Science Ed 410 Physical Science Concepts (3)

OR Science Ed 453 Life Science Concepts (3)**

One of the following courses in Cultural Diversity in the Social Sciences*: Afro-Ethnic 304, 310, 311; American Studies 301, 450; Anthropology 350, Chicano 305, 331; Asian American Studies 300, 340, 342; Sociology 357, Speech Comm 320; Geography 332.

One of the following courses in Visual and Performing Arts: Art 380, Dance 471, Music 333, 433, Theatre 402A.

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*Fulfills the course requirement of the university upper-division baccalaureate writing requirement for Liberal Studies majors.

*These courses will also count toward meeting the upper-division requirement for general education.

**In exceptional cases substitutes may be made with the approval of the department chair.

Thematic Plan (24 units)

The Thematic Plan is designed for students who have broad interests that expand beyond the confines of a single department. For these students, the ability to construct their own area of interdisciplinary study by taking advanced course work in several disciplines may be more beneficial than restricting their study to one of the various majors offered by the university. The Thematic Plan does not duplicate any existing major, and does not consist of a random collection of courses.

It is a well-thought-out, highly individualized group of courses that, even though they come from various departments, have a common subject, focus, or interest.

Thematic Plan students may center their course work on an academic interest or may select courses that prepare them for later professional training or for specific careers.

The Personalized Coordinated Program (21 units)

Students are allowed to select, in consultation with a liberal studies adviser, 21 units of upper-division course work from various departments for the purpose of pursuing an interdisciplinary problem, theme, or issue.

To ensure breadth of knowledge, students are allowed to take (a) no more than 9 units from a single department and (b) no more than 15 units from a single area of knowledge (humanities and arts, science, social sciences). Students should have their study plan approved by a liberal studies adviser prior to taking course work.

The Senior Project (3 units)

To aid Thematic Plan students in integrating and synthesizing the knowledge from the specially selected courses in their personalized coordinated program, they will be required to complete a senior project (such as a thesis or a creative work) by enrolling in three units of independent study (499) under a professor of their own choosing. Since that professor will be responsible for evaluating the project, students sign up for independent study in that professor's department. Before asking a professor to direct their project, students should see a liberal studies adviser for help in preparing a project proposal. Once the professor who has agreed to direct the project has signed the project proposal form, a liberal studies adviser must also sign the proposal form, indicating that the project is relevant to the personalized coordinated program.

LIBERAL STUDIES COURSES

Courses are designated as LBST in the class schedule.

300 Introduction to Liberal Studies (3) (Formerly 290)

Prequisite: completion of General Education Category I. Focusing on the natural world as theme, introductory exploration of values and modes of inquiry and expression in the arts and humanities, natural and social sciences.

301 Inquiry and Composition in Liberal Studies (3)

Prerequisite: Liberal Studies 300. Exploration of selected thematic interconnections between the arts and humanities, sciences and social sciences through reading, discussion and composition, Satisfies the upper division writing course requirement for majors in Liberal Studies.

302A Historical Dimension of Liberal Studies (3)

(Same as History 302A)

302B Historical Dimension of Liberal Studies (3)

(Same as History 302B)

303 Liberal Studies in the Humanities and Arts (3)

Prerequisites: Music 101 or equivalent, History 302B, and completion of General Education category III.B.2. An interdisciplinary approach to the humanities and arts which examines their purposes, structures and major developments in this century.

304 Liberal Studies in the Sciences (3)

Prerequisites: History 302B and completion of General Education category III.A.1. and 2. An interdisciplinary introduction to the character and aims of 20th century science, current theories and knowledge, and the role of science and technology in contemporary society.

305 Liberal Studies in the Social Sciences (3)

Prerequisites: History 302B and completion of General Education category III.C.1. An interdisciplinary introduction to modern social science in which major thinkers, ideas, movements and problems will be approached historically, comparatively and analytically.

401 Knowledge in the Arts and Sciences (3)

(Same as Philosophy 401)

485 Senior Seminar in Cultural Diversity (3)

Prerequisites: senior standing, Liberal Studies 305, and completion of General Education cultural diversity category. An intensive interdisciplinary study of the historical and cultural experiences of racial and ethnic groups in America. Emphasizes student-led discussions.

486 Senior Seminar in Humanities and Arts (3)

Prerequisites: senior standing and Liberal Studies 303. Intensive interdisciplinary study of selected topics in the humanities and arts. Integrates and builds upon previous classes in Liberal Studies and emphasizes student-led discussions.

487 Senior Seminar in Evolution and Creation (3)

Prerequisites: senior standing and History 302B. An interdisciplinary examination of the relationship between evolutionary biology and the theology of divine creation. Traces the development of both perspectives from the pre-Darwinian period to the modern era. Emphasizes critical reading of texts and student-led discussions.

488 Senior Seminar in Environmental Studies (3)

Prerequisites: senior standing and Liberal Studies 304 or 305. An interdisciplinary seminar involving the examination and analysis of environmental problems from the perspectives of the natural sciences and the social sciences. Students participate in class discussions and write papers on environmental topics.

489 Senior Seminar in Gender Issues (3)

Prerequisites: senior standing and Liberal Studies 305. Intensive interdisciplinary study of gender issues in the modern period. Emphasizes student-led discussions.

490 Senior Seminar in Great Books (3)

Prerequisites: senior standing and History 302A,B. Intensive study of important books from early civilization to the present. Develops critical reading of texts, clear expression of ideas and integration of knowledge. Emphasizes student-led discussions.

491 Senior Seminar in Literature and Sciences (3)

Prerequisites: senior standing and Liberal Studies/History 302B. An interdisciplinary examination of the relationships between literary and scientific communities, and of literature as a forum for the critique, appraisal, and assessment of science in culture.

499 Independent Study (3)

Prerequisites: consent of instructor and approval by Liberal Studies department chair. Individually supervised studies and/or projects. May be repeated once for credit.

PROGRAM COORDINATOR

Franz Müller-Gotama

PROGRAM OFFICE

University Hall 323

LABORATORY FOR PHONETIC RESEARCH

University Hall 417

DEPARTMENT WEBSITE

http://hss.fullerton.edu/linguistics

PROGRAMS OFFERED

Bachelor of Arts in Linguistics

Minor in Linguistics

Master of Arts in Linguistics

FACULTY

Juan Carlos Gallego (Foreign Languages), Angela Della Volpe (English), Janet Eyring (Foreign Languages), Ronald Harmon (Foreign Languages), Alan Kaye (English), Kurt P. Kitselman (Speech Communication), Thomas P. Klammer (English), Edith C. Li (Speech Communication), Keiji Matsumoto (Foreign Languages), Franz Müller Gotama (English), James Santucci (Religious Studies), William R. Smith (Psychology), Setsue Shibata (Foreign Languages), Arden Thorum (Speech Communication), Richard Lee Wiseman (Speech Communication)

ADVISERS

Undergraduate: Franz Müllers-Gotama

Graduate: Alan Kaye

INTRODUCTION

Linguistics is the study of language. Like other rapidly developing fields, linguistics resists simple classification into one of the traditional categories of academic disciplines. As one of the humanities, linguistics is concerned with the historical development of a particular language or language family. As a social science, linguistics may be related to anthropology in describing language as part of culture; or it may be related to psychology in describing phonetics; it may even be considered a natural science, related to the physical science of acoustics and the biological sciences of anatomy and physiology. As an applied science, linguistics has found many applications in fields as far apart as language pedagogy, speech therapy, and computer programming. Finally, linguistics may be considered a formal science in its own right, related to mathematics and logic.

The interdisciplinary aspects of linguistic study are reflected in the organization of the program which offers a core of general linguistics courses and draws upon linguistically related courses in other departments.

Graduates use the major in linguistics for a liberal arts base in language-related fields. With advanced work, they enter teaching, language research, translation, and linguistic field work, as well as such professional fields as law or teaching English as a second language.

The Bachelor of Arts is for students with an exceptional interest in and aptitude for the study of language. The essential relationships between language and thought and language and culture, the structure of foreign languages as well as English, the historical study of language, and formal techniques and methodologies are the theoretical foundations of linguistic analysis.

The M.A. in Linguistics builds upon a foundation of undergraduate study in linguistics and allied areas, such as foreign languages, English language, anthropology, speech communication and related areas in psychology and philosophy. The program emphasizes strong preparation in general linguistics and offers the opportunity to specialize in one of several areas.

The relationship between linguistics and other disciplines and the application of its techniques, findings and insights to such activities as language teaching are treated in interdisciplinary courses and seminars.

Student Awards

Each year the program honors an outstanding undergraduate student with the Award for Excellence in Undergraduate Linguistics. The Patricia Bruner Memorial Award is awarded annually to a student in the M.A. program in recognition of a distinguished graduate project selected for publication in the program's Seminar Paper Series.

BACHELOR OF ARTS IN LINGUISTICS

The B.A. in Linguistics requires a minimum of 120 units which includes courses for the major, General Education, all University requirements, and free electives.

Language Requirement

Linguistics majors are required to take two progressive semesters of any two languages or four progressive semesters of any one language.

Core Requirements (15 units)

Linguistics 351 Introduction to Linguistic Phonetics and Phonology (3)

Linguistics 406 Descriptive Linguistics (3)

Linguistics 408 Syntax (3)

Linguistics 412 Sociolinguistics (3)

Linguistics 430 Historical Linguistics (3)

Electives (18 units)

Two must be from linguistics upper-division courses other than those listed as required above; and four may be selected from linguistics upper-division courses or from the courses listed below:

Child Development 312 Human Growth and Development (3)

English 303 The Structure of Modern English (3)

English 440 History of the English Language (3)

Foreign Languages, any upper-division course (3)

Philosophy 368 First Course in Symbolic Logic (3)

Psychology 415 Cognitive Processes (3)

Students must consult with an adviser in linguistics before establishing their individual programs of study. Other courses in the university may be taken as electives with the permission of the adviser.

MINOR IN LINGUISTICS

The minor in linguistics provides a solid introduction to the scientific study of language for students in a related major field. Students are required to take: Linguistics 106, Linguistics 351 and Linguistics 406. In addition, 12 units in elective courses selected with the approval of the undergraduate adviser are required. It is thus possible to tailor the minor to individual needs in rounding out a course of study in the student's major area of specialization.

LABORATORY OF PHONETIC RESEARCH

The Laboratory houses the program's sound spectrograph, recording equipment, and an extensive collection of tape recordings of lesser known languages and dialects. It is also the editorial home of the California Linguistic Notes.

MASTER OF ARTS IN LINGUISTICS

Application Deadlines

Applications need to be postmarked no later than March 1st for the fall semester and October 1st for the spring semester. However, deadlines may be changed based upon enrollment projections. Check the university graduate studies website for current information http://www.fullerton.edu/graduate/.

Admission to Graduate Standing: Conditionally Classified

Requirements include a bachelor's degree from an accredited institution and a minimum GPA of 2.50 in the last 60 semester units attempted.

Graduate Standing: Classified

Classified graduate standing requires a bachelor's degree in Linguistics or a related field from an accredited institution with at least 3.0 grade-point average in the major courses provided that a minimum of 24 units of upper-division course work is included.

If the student holds a bachelor's degree in a major other than Linguistics, 24 units of upper-division course work in Linguistics with a minimum of 3.0 grade-point average must have been completed. Included among the 24 units of course work must be the following courses or their equivalents:

Linguistics 351 Introduction to Linguistic Phonetics and Phonology (3)

Linguistics 406 Descriptive Linguistics (3)

Linguistics 408 Syntax (3)

Linguistics 412 Sociolinguistics (3)

Linguistics 430 Historical Linguistics (3)

A student who has not completed one or more of the preceding four courses may enroll in the required course(s) concurrently with graduate course work in the program.

If the student lacks the prerequisite number of Linguistics courses, they must be made up before commencing the master's degree program, with at least a 3.0 GPA in such makeup course work. In the event that the student's GPA in prerequisite Linguistics courses is less than 3.0, six to nine units of probationary, adviser-approved course work may be assigned. If the GPA in these probationary courses is 3.0 or better, the student may be classified. Some courses taken to make up qualitative deficiencies may be credited toward the M.A., if completed with a grade of B or better, and if applicable to the student's particular study plan. Courses taken to remove quantitative deficiencies may not be applied to the M.A. program.

Knowledge of one foreign language is required (equivalent of Foreign Languages 317 course). Students without course work in a foreign language may demonstrate proficiency by a score of average or better on the MLA-ETS Proficiency Examination for Advanced Students. Work toward fulfillment of this requirement may be taken concurrently with graduate work in linguistics.

Modifications of certain prerequisite requirements may be permitted in exceptional circumstances.

A study plan must be developed and approved for admission to classified graduate standing.

M.A. STUDY PLAN REQUIREMENTS

Descriptive and Historical Linguistics (15 units)

Linguistics 501 Research Methods and Bibliography (3)

Linguistics 505 Phonological Analysis (3)

Linguistics 507 Grammatical Analysis (3)

Linguistics 508 Theories of Syntax (3)

Linguistics 530 Graduate Seminar: Historical Linguistics (3)

Specialized Electives (9 units)

Course work selected from any one of the following six areas of specialization, including other courses in the university with the approval of the adviser:

Applied Linguistics

English 303 Structure of Modern English (3)

FL Ed 468 Language Transfer and TESOL (3)

FL Ed 509 Advanced Principles of TESOL: Listening/Speaking (3)

FL Ed 510 Advanced Principles of TESOL: Reading and Writing (3)

FL Ed 515 Pedagogical Grammar in TESOL (3)

FL Ed 527 Second Language Acquisition (3)

FL Ed 560 Second Language Assessment (3)

French 466 Introduction to French Linguistics (3)

French 599 Independent Graduate Research (1-3)

German 466 Introduction to German Linguistics (3)

German 599 Independent Graduate Research (1-3)

Linguistics 305 The English Language in America (3)

Linguistics 307 Speech/Language Development (3)

Linguistics 416 Anthropological Linguistics (3)

Linguistics 599 Independent Graduate Research (1-3)

Spanish 466 Introduction to Spanish Linguistics (3)

Spanish 467 Dialectology: Current Trends in Modern Spanish (3)

Spanish 468 Spanish-English Contrastive Analysis (3)

Spanish 599 Independent Graduate Research (1-3)

Anthropological Linguistics

Anthro 599 Independent Graduate Research (1-3)

FL Ed 468 Language Transfer and TESOL (3)

Linguistics 416 Anthropological Linguistics (3)

Linguistics 599 Independent Graduate Research (1-3)

Analysis of Specific Language Structures

FL Ed 468 TESOL Contrastive Analysis (3)

French 466 Introduction to French Linguistics (3)

German 466 Introduction to German Linguistics (3)

Japanese 466 Introduction to Japanese Linguistics (3)

Spanish 466 Introduction to Spanish Linguistics (3)

Japanese 468 Japanese-English Contrastive Analysis (3)

French 500 Graduate Seminar: Advanced Structure and Style (3)

German 500 Graduate Seminar: Advanced Structure and Style (3)

Spanish 500 Graduate Seminar: Advanced Structure and Style (3)

French 530 Graduate Seminar: Historical Linguistics (3)

German 530 Graduate Seminar: Historical Linguistics (3)

Spanish 530 Graduate Seminar: Historical Linguistics (3)

English 599 Independent Graduate Research (1-3)

Spanish 599 Independent Graduate Research (1-3)

French 599 Independent Graduate Research (1-3)

German 599 Independent Graduate Research (1-3)

Linguistics 599 Independent Graduate Research (1-3)

Communication and Semantics

Anthro 599 Independent Graduate Research (1-3)

Linguistics 416 Anthropological Linguistics (3)

Linguistics 417 Psycholinguistics (3)

Linguistics 442 Changing Words: History, Semantics and Translation (3)

Linguistics 599 Independent Graduate Research (1-3)

Speech Comm 599 Independent Graduate Research (1-3)

Disorders of Communication

Linguistics 307 Speech/Language Development (3)

Linguistics 369 Language, Sex Roles, and the Brain (3)

Linguistics 417 Psycholinguistics (3)

Linguistics 599 Independent Graduate Research (1-3)

Speech Comm 461 Audiology and Audiometry (3)

Speech Comm 472 Voice and Craniofacial Disorders (3)

Speech Comm 475 Fluency Disorders (3)

Speech Comm 599 Independent Graduate Research (1-3)

Linguistics or a Related Field Elective (3 units)

Linguistics 597 Project (3 units)

A minimum of 15 units in 500-level courses is required. Satisfactory completion of a written comprehensive examination is required at the conclusion of the program. The examination may be repeated only once. A reading list for the examination and specifications for the project are available in the program office.

For further information, consult the graduate adviser.

LINGUISTICS COURSES

Courses are designated as LING in the class schedule.

105 Language, Culture, And Thought (3)

(Same as Anthropology 105)

106 Language and Linguistics (3)

The nature of language, its origin and development; language in culture, the structure of language and its systems of writing and transcription, and its application to other areas of humanistic and scientific knowledge.

108 Linguistics and Minority Dialects (3)

The sounds, meanings and vocabulary of Afro-American, Chicano, and other English dialects and their historical origin. (Same as Chicano Studies 108 and Afro-Ethnic Studies 108)

301 Sanskrit (3)

An introduction to the devanagari script as well as the phonology, morphology and syntax of the Sanskrit language. A reading knowledge of Sanskrit will be the main goal of the course. (Same as Comparative Religion 301)

305 The English Language in America (3)

(Same as English 305)

307 Speech/Language Development (3)
(Same as Speech Comm 307)

351 Introduction to Linguistic Phonetics and Phonology (3)
The nature and structure of sound systems in language. A thorough investigation of the International Phonetic Alphabet as applied to many different languages including English. Language Acquisition (L1) and Language Learning (L2); analytic methods and techniques.

360 Nonverbal Communication (3)
Prerequisite: Linguistics 106 or Speech Comm 100. The physical actions, gestures and changes in the physiognomy that occur together with language and paralanguage in human communication; substitutions for language and modifications of it in varying cultures. (Same as Speech Comm 360)

369 Language, Sex Roles, and the Brain (3)
Examines how gender socialization is reflected in the structure and use of language and whether gender differences in language are biologically based or a consequence of sex roles.

406 Descriptive Linguistics (3)
A study of the sounds (phonology), forms and meanings (morphology), and syntax of languages. Examples and problem-solving in various languages will be emphasized. (Same as Anthropology 406)

408 Syntax (3)
Prerequisite: one of the following: Linguistics 106, 406, or English 303. The study of sentence structure in human language. Practice in syntactic analysis in a variety of languages.

412 Sociolinguistics (3)
Prerequisite: Linguistics 406 or equivalent. Social dialects in relation to the surrounding communities. Social stratification, acculturation, language maintenance, standardization, language planning and language change. Not available for graduate degree credit.

416 Anthropological Linguistics (3)
(Same as Anthro 416)

417 Psycholinguistics (3)
(Same as Psychology 417)

430 Historical Linguistics (3)
Prerequisite: Linguistics 406 or its equivalent. The comparative method in diachronic linguistic methodology and theory, graphemics, glottochronology, language families, dialect geography and internal reconstruction. Fulfills the course requirement of the university upper division baccalaureate writing requirement for linguistics majors.

442 Changing Words: History, Semantics, and Translation (3)
Prerequisite: Linguistics 351 or 430. Study of Etymology, related problems of Lexicography and translation. Recent developments in theory of semantic change as related to cultural shifts. Emphasis on words, collocations, idioms. (Same as English 442)

492 Linguistic Fieldwork (3)
Prerequisite: Linguistics 351 or 406. Methodology and practice of linguistic analysis and language description as practiced in the field. Data collection and processing of a non-Indo-European linguistic structure using native informants. May be repeated for credit.

499 Independent Study (1-3)
Supervised projects with consent of program coordinator. Topic varies with the student. May be repeated for credit.

501 Research Methods and Bibliography (3)
Prerequisites: graduate standing and Linguistics 406, or equivalent. Principal books, periodicals and collections in general linguistics, specific languages and related fields; techniques of preparing research papers and field reports in linguistics. Must be taken prior to Linguistics 597.

505 Phonological Analysis (3)
Prerequisites: Linguistics 351 and 406. Phonological systems that occur in languages; emphasis on terminology used to describe changes in the system and processes affecting it; problem solving of selected language data.

507 Grammatical Analysis (3)
Prerequisite: Linguistics 406. Word formation in a variety of languages with emphasis on the terminology used to describe morphological representation on various levels; problem solving of selected language data. (Same as Anthro 507)

508 Theories of Syntax (3)
Prerequisite: Linguistics 408 or equivalent. Contemporary theories of grammar, such as transformational-generative, with emphasis on theoretical problems in the analysis of language structure.

509 Advanced TESOL-Listening/Speaking Focus (Formerly 443A) (3)
(Same as FL-Ed 509)

510 Advanced TESOL-Reading/Writing Focus (Formerly 443B) (3)
(Same as FL-Ed 443B)

530 Graduate Seminar: Historical Linguistics (3)
Prerequisite: Linguistics 430 or its equivalent. The history of language, including principles and techniques for the historical study and classification of individual languages and language families, writing systems, lexicostatistical methods and linguistic geography.

597 Project (3)
Prerequisite: Linguistics 501. Preparation and completion of an approved project

599 Independent Graduate Research (1-3)
Prerequisites: graduate standing and consent of program coordinator. May be repeated for credit.

DEPARTMENT CHAIR

Gus Manoochehri

DEPARTMENT OFFICE

Langsdorf Hall 640

DEPARTMENT WEBSITE

http://business.fullerton.edu/management

PROGRAMS OFFERED

Bachelor of Arts in Business Administration

- Concentration in Entrepreneurship
- Concentration in Management

Master of Business Administration

- Concentration in Entrepreneurship
- Concentration in Management

FACULTY

Farouk Abdelwahed, Michael Ames, Thomas Apke, Mei Liang Bickner, Peng Chan, Ellen Dumond, Treena Gillespie, Gamini Gunawardane, Thomas Johnson, Jina Kang, Reza Karim, Brian Kleiner, Elliot Kushell, Brian Lee, Gus Manoochehri, Thomas Mayes, James Nour, Tai Oh, Seungwook Park, Richard Parry, Goli Sadri, Sharon Segrest, Charles Smith, Hamid Tavakolian, Gustavo Vargas

INTRODUCTION

Managers are needed in a wide variety of different types of organizations – business and non-business, large and small, foreign and domestic. In all of these organizations, managers need technical, human and conceptual skills to help achieve organizational goals.

Management courses are designed to teach the fundamental principles underlying organizations, to emphasize education which will improve students' thought processes, to provide familiarity with the analytical tools of management, and to develop in the student an ability to use the techniques involved in analyzing and evaluating managerial problems and making sound decisions.

Students may pursue a wide variety of academic and career interests through four different emphases. These emphases include: (1) entrepreneurial management, (2) general management, (3) organization behavior/human resources management, and (4) operations management.

Advisers

The Business Advising Center, Langsdorf Hall 731, provides information on admissions, curriculum and graduation requirements; registration and grading procedures; residence and similar academic matters. In addition, the Management Department provides advising on career opportunities within the Management and Entrepreneurship Concentrations:

Entrepreneurship	Michael Ames
General Management	Farouk Abdelwahed
Organization Behavior/Human Resources	Elliot Kushell
Operations Management	Seungwook Park
Graduate Program	Gus Manoochehri

Credential Information

For students interested in a teaching credential, the Management Department offers courses which may be included in the Subject Matter Preparation and Supplementary Authorization Programs for secondary teaching.

Further information on the requirements for teaching credentials is found in the Teaching Credential Programs section of this catalog and is also available from the Department of Secondary Education. Students interested in exploring careers in teaching at the elementary or secondary school levels should contact the Office of Admission to Teacher Education (714-278.3411).

Awards in Management

The Gus Berger Award/Operations Management

The H. Peter Guertin/APICS Orange County Chapter Scholarship

BACHELOR OF ARTS IN BUSINESS ADMINISTRATION

See "Business Administration, MBA Specialist Plan."

MASTER OF BUSINESS ADMINISTRATION

See "Business Administration, MBA Specialist Plan."

MANAGEMENT COURSES

Courses are designated as MGMT in the class schedule.

246 Business and Its Legal Environment (3)

Examines laws and regulations affecting the business environment and managerial decisions including the legal system and methods of dispute resolution. Topics include torts, crimes, contracts, product liability, business organization, employment, antitrust, environmental protection; incorporates ethical considerations and international perspectives. Uses case studies.

339 Principles of Management and Operations (3)

Prerequisites: all lower-division business core courses and Business Admin 301. Corequisite: Info Sys/ Decision Sci 361A. Administrative processes in utility-creating business operations: decision-making; planning; controlling; supporting business information systems; measuring and improving effectiveness; production processes, production operations and institutions in American and worldwide business. Uses the Production Lab.

340 Organizational Behavior (3)

Prerequisites: General Education in Social Sciences. Corequisites: Business Admin 301 and Info Sys/Decision Sci 361A. Social and cultural environments of business. Business ethics. Communication, leadership, motivation, perception, personality development, group dynamics and group growth. Human behavior and organizational design and management practice in American and world wide business.

343 Human Resource Management (3)

Prerequisites: Business Admin 301 and Management 340 or equivalent. A survey of the Human Resource Management function in organizations. Topics include the following: Selection, Recruiting, Training, Compensation and Performance Appraisal.

346 International Law for Business (3)

Prerequisite: Management 246 or equivalent. Study of the international legal environment in which firms operate. Case studies in the areas of treaties and laws, EU, NAFTA, international contracts, regulation of imports, exports and competition, government policies, enforcement of property rights and issues involving ethical responsibilities.

348 Commercial Law (3)

Prerequisite: Management 246 or equivalent. The philosophy, institutions and role of law and ethical considerations in commercial transactions. Case studies in sales, storage and shipment of goods, commercial paper, debtor and creditor rights and remedies, bankruptcy, secured transactions and suretyship.

349 Law for Small Business (3)

Prerequisites: Business Admin 301 and Management 246. The philosophy, institutions, and role of law and their practical applications in the areas of interest to the small business person. Product liability, consumer rights, worker's compensation and other topics.

350 International Management (3)

Prerequisite: Management 339 or Management 340. A survey course on business activities of firms across national boundaries. It includes sociocultural patterns, global logistics and sourcing, foreign investment and banking, technology transfer, and macroeconomic and regulatory environments. World regions and economic blocks are incorporated in the analysis.

421 Operations Systems Design (3)

Prerequisite: Info Sys/Decision Sci 361A. Managerial problems associated with designing an operations system, including product and process design, facilities planning, capacity choice, job design, automation, quality management and maintenance.

422 Production and Inventory Control (3)

Prerequisite: Info Sys/Decision Sci 361A. Planning and controlling of production activities and inventory levels. Identification of key problem areas. Presentation of applicable techniques and systems, and organizational and managerial concepts. Utilization of computer decision models.

425 Productivity and Quality Management (3)

Prerequisites: Management 339 and Info Sys/Decision Sci 361A or equivalent. Definition, discussion and measurement of productivity and quality and their strategic role. Development of a comprehensive approach to managing and improving productivity and quality, including strategic, organizational, operational and technological aspects. Case studies on productivity and quality in service and manufacturing operations.

430 Integrated Supply Chain Management (3)

Prerequisites: Management 339 (or equivalent) and Marketing 351 or consent of instructor. Study of managing the productive flow of materials throughout an organization from the acquisition of materials, capital, and services to the delivery of finished products and services to the final customer. Emphasis is placed on the development of strategies to synthesize the individual processes into a cohesive system.

432 Staffing (3)

Prerequisite: Management 343 or equivalents. This course examines the theories and techniques related to employee staffing. Topics include the following: planning, legal issues, job analysis, measurement, internal and external recruitment and selection, and decision-making.

433 Current Issues in Human Resource Management (3)

Prerequisite: Management 343. Contemporary concepts and procedures in compensation and staffing. Current topics and controversial issues of critical importance to human resource management will be covered.

434 Compensation (3)

Prerequisite: Managemment 343 or equivalent. This course focuses on the developmet of equitable compensation and benefit programs in order to retain a productive workforce. Topics include the following: job analysis and evaluation, pay structures, salary survey, individual compensation, incentive systems, and benefits.

435 Service Organizations and Operations (3)

Prerequisite: Management 339. Analysis and applications of general management and operations management concepts to service organizations, and interactions among various functional areas. Case analyses of banks, airlines, health care, food service and others. Includes field trips and use of computer labs and models.

440 Emerging Issues in Management (3)

Prerequisites: Management 339 and 340 or consent of instructor. For upper-division and graduate students. Business and management in America. The interrelationships of technological, economic, political and social forces with the business enterprises and their ethical obligations to owners, employees, consumers and society at large. Open to nonbusiness majors.

441 Labor-Management Relations (3)

Prerequisite: Management 340. Impact of labor-management relations upon labor, management, and the public. Proper grievance procedure, collective bargaining and settlement of disputes.

443 Team Leadership Skills (3)

Prerequisites: Management 339 and 340 or equivalent. Managerial skills in group dynamics as they relate to team performance. Cultural diversity including value differences and perception. Leadership: problem solving, idea generation, communications and conflict management. Organization change and designs that enhance team effectiveness.

444 Project Management (3)

Prerequisites: Management and Information Systems core and other 300-level management courses in student's concentration. Technology for managing business and other enterprises as cybernetic systems. The design and control of systems appropriate for product, project and program levels of analysis. (2 hours lecture, 2 hours activity) Uses Production Lab.

445 Employment Law (3) (Formerly 347)

Prerequisites: Management 246 or consent of instructor. Corequisite: Management 343. The study of legal and ethical issues of the employment relationships and environment. Case studies in the area of agency, independent contractors, responsibilities of managing offers, the hiring process, discrimination, wages, hours and benefits, termination, OSHA, workers compensation and other regulations affecting employment. International implications of employment will also be discussed.

446 Entertainment Business Law (3)

Prerequisite: Management 246 or consent of instructor. Study of the legal/business issues of the Entertainment Industry. Topics include: Copyright, trademark, publicity and privacy right, artistic credit, defamation, entertainment contracts, creator control, moral rights, entertainment guilds, business and legal representation of artists, performing rights societies and government regulation.

447 Internet Legal Issues (3)

Prerequisites: Management 246; junior, senior or graduate standing in Business Administration; or consent of instructor. Study of the legal and ethical issues relating to the internet and information technology. Case studies in the areas of intellectual property, e-commerce, on-line contracting, taxation, securities, privacy, obscenity, defamation, information security, network crimes, and global issues.

449 Seminar in Strategic Management (3)

Prerequisites: Business Admin 301, all other College of Business and Economics core courses and departmental approval. Integrative cases from top management viewpoint. Administrative processes, ethical-legal-economic implications of business decisions, international applications; organization theory and policy formulation. Individual and team efforts.

455 Comparative Management - U.S. and East Asia (3) (Formerly 355)

Prerequisite: Management 339 or Management 340. Cross-cultural analysis of managerial characteristics and behavior between the United States and East Asia (Japan, South Korea, Hong Kong, Singapore, Taiwan). Focuses on the shared post-Confucian cultural values and environmental constraints which influence East Asia's management practices. Not available for graduate degree credit.

461 Entrepreneurial Management (3)

Prerequisites: Accounting 201B and Management 339 for CBE students. Accounting 201A and BAE 301 for non-CBE students. How to plan organize and control new ventures. Emphasis on setting up business level strategy and corresponding systems to improve venture performance. Casework, research and fieldwork with selected local businesses.

464 Entrepreneurial Leadership (3)

Prerequisite: Management 340 for CBE students. Coverage of leadership roles, organizational development and human resource management of new ventures. Emphasis on setting up systems to improve venture performance that comply with related laws and regulations. Casework, research and fieldwork with selected local businesses.

465A New Venture Creation and Funding (3)

Prerequisites: Management 461, Marketing 462, Accounting 463, Management 464 or consent of instructor. How to develop product and service concepts for new ventures, test the concepts, set business strategy, design operating systems, and develop financial forecasts, while complying to related laws and regulations. Venture teams will prepare business plans and make funding presentations.

465B New Venture Launch (3)

Prerequisite: Management 465A. Venture teams will launch new ventures. The new ventures may be start up businesses or new profit centers within existing businesses. Final report and oral presentation on venture results.

480 Global Strategic Management (3)

Prerequisites: Business Admin 301, completion of all other International Business core courses and departmental approval. This course deals primarily with the conceptualization, formulation, and implementation of successful global business strategies. Other topics include managing cultural differences, strategic alliances, and strategies for the Pacific Rim and Europe.

495 Internship (1-3)

Prerequisites: six units of upper-division management courses including Management 339; concentration in management or international business; consent of department internship adviser; at least junior standing, 2.5 GPA and one semester in residence at the university. Planned and supervised work experience. May be repeated for credit up to a total of six units. Credit/No Credit only.

499 Independent Study (1-3)

Prerequisites: senior standing and approval by the Department Chair. Open to qualified students desiring to pursue directed independent inquiry. May be repeated for credit. Not open to students on academic probation.

515 Management of Information in the Corporate Environment (3)

Prerequisite: classified CBE status. Review and application of management information systems in business. System planning, system design and analysis, use of files, decision support systems, expert systems, and implementation of management information systems.

516 Organizational Theory and Management of Operations (3)

Prerequisites: classified CBE status, Information Systems/Decision Sciences 514 (may be taken concurrently), Accounting 510, Economics 515. Modern organization theory and application in utility-creating operations. Interpersonal behavior, planning, control, organizing, directing, communication, production and information systems, and measures of effectiveness. International applications. Business ethics and relationships to society and politics. Graduate discussion and research reports.

518 Legal Environment of Business (3)

Prerequisite: classified CBE status. Law applicable to business institutions and inherent in business decisions with consideration of the ethical, social and political influences as they affect business organizations and operations both here and abroad; nature and sources of law, the judicial system and case studies in areas of enforceable agreements, products liability, employment, business organizations and trade regulation.

520 International Legal Environment of Business (3)

Prerequisite: classified CBE status. Study of the international legal environment in which firms operate. Case studies in the areas of treaties and laws. World Trade Organization, EU, NAFTA, international contracts, dispute resolutions, regulation of imports, export and competition, government policies, enforcement of property rights and issues involving ethical responsibilities.

524 Seminar in Organizational Behavior and Administration (3)

Prerequisites: classified CBE status, Management 516 and 518 or equivalent. Human behavior in organizations, studies in organizational theories, and administrative action.

525 Team Leadership Skills (3)

Prerequisite: Management 524 or equivalent (with instructor's consent). Graduate seminar and workshop to develop hands-on leadership skills to manage high-performance work teams. Topics include methods for self-awareness, making oral presentations, interviewing, stress management, supportive communication, problem solving, influencing and motivating others, managing conflict, empowering, delegating, and team building.

535 Production/Operations Management (3)

Prerequisites: Management 516 and Info Sys/Decision Sci 514. An in-depth study of selected POM topics. Discussions of the operations function role and its importance, identification of the problem areas, and reviewing of the related concepts and techniques, including computer applications. Emphasizing the current POM topics of interest to top management.

539 Supply Chain Management: Making E-Business Happen (3)

Prerequisite: Management 516 or equivalent. This course briefly introduces the mechanics and impact of E-business and then focuses on the development of the E-supply chain, a key component of E-business. It discusses the strategic design of E-business and the supply chain, methods of integration throughout the supply chain, and the means by which to develop differentiation of competitive advantage through the supply chain. Articles and cases from both services and manufacturing will be used.

540 New Venture Leadership and Management (3)

Prerequisite: Management 516. Coverage of leadership roles, organizational development and human resource management, planning, and control issues for new ventures. Emphasis on setting up operations, and engaging human resources, to better serve customers and improve venture performance. Casework, research and fieldwork with selected local businesses.

542 Labor and Employment Relations Seminar (3)

Prerequisites: classified CBE status, Management 516 and 518. An exploration and review of traditional labor relations as well as the developing issues in employment relations involving non-union employees, with a special focus on the various ways of resolving both labor and employment disputes. The seminar will explore collective bargaining, bargaining by objectives, dispute resolution methods in both interest and rights disputes: arbitration, mediation, and fact-finding of both traditional labor disputes involving salaried and professional employees.

543 Seminar in Human Resource Management (3)

Prerequisites: classified CBE status, Management 516 and 518. Cases, problems and significant personnel administration literature in personnel administration and human relations.

547 Comparative Management (3)

Management practices and processes in five geographical areas; market-structures and management characteristics different from those in the United States. Constraints which vary between countries because of cultural, legal, economic and/or political differences.

581 Entrepreneurship and New Ventures (3)

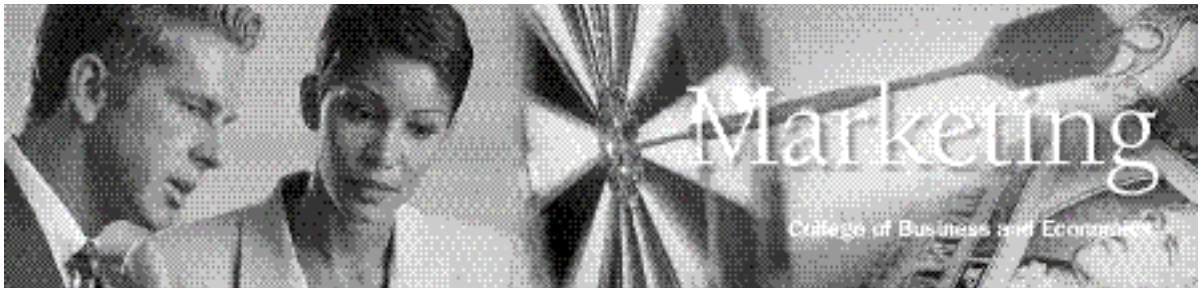
Prerequisites: classified CBE status and all MBA foundation coursework except Business Admin 590. Advanced application of business administration techniques for the planning, financing, capitalization and operation of emerging, fast growth business. Casework, research and fieldwork with selected local businesses.

582 Organizational Development and Change (3)

(Same as Political Science 582)

599 Independent Graduate Research (1-3)

Prerequisites: classified CBE status, consent of instructor, consent of the department chair and Associate Dean. May be repeated for credit. Not open to students on academic probation.



DEPARTMENT CHAIR

Irene Lange

DEPARTMENT OFFICE

University Hall 313

DEPARTMENT WEBSITE

http://business.fullerton.edu/marketing

PROGRAMS OFFERED

Bachelor of Arts in Business Administration

Concentration in Marketing

Master of Business Administration

Concentration in Marketing

FACULTY

Catherine Atwong, Tom Boyd, Neil Granitz, Scott Greene, Katrin Harich, Paul Hugstad, Mary Joyce, Robert Jones, Stephen Koernig, Chiranjeev Kohli, Irene Lange, Lance Leuthesser, Monica Perry, Robert Zimmer

ADVISERS

The Business Advising Center, Langsdorf Hall 731, provides information on admissions, curriculum and graduation requirements, registration and grading procedures, residence and similar academic matters. In addition, the Marketing Department provides advising on curriculum content and career opportunities.

INTRODUCTION

Marketing is a basic business function covering a wide range of activities. It includes studying markets, planning products, pricing them, promoting them, selling them, and then delivering these products to customers. People in wholesaling, retailing, advertising agencies, research firms and transportation companies are all working in the marketing area. Any firm which is reviewing its product policies needs marketers to identify the market, choose the products, find where they can be sold and decide on a price for them.

Credential Information

For students interested in a teaching credential, the Department of Marketing offers courses which may be included in the Subject Matter Preparation Program for secondary teaching.

Further information on the requirements for teaching credentials is found in the Teaching Programs section of the catalog and is also available from the Department of Secondary Education. Students interested in exploring careers in teaching at the elementary or secondary school levels should contact the Office of Admission to Teacher Education.

Scholarships and Awards in Marketing

The Michael T. Ashton Memorial Leadership Award

The Robert M. Olsen Outstanding Marketing Major Award

Honors Networking Program Outstanding Student Award

Anaheim/Orange County Visitor & Convention Bureau Scholarship

Enterprise Rent-A-Car Scholarship

Target Stores Scholarship

BACHELOR OF ARTS IN BUSINESS ADMINISTRATION

See "Business Administration, Marketing Concentration."

MASTER OF BUSINESS ADMINISTRATION DEGREE

See "Business Administration, Marketing Concentration."

MARKETING COURSES

Courses are designated as MKTG in the class schedule.

351 Principles of Marketing (3)

Prerequisite: Economics 202. Corequisites: Business Admin 301, Info Sys/Decision Sci 361A. Application of current theories and concepts in effectively marketing goods and services to define target customers from a domestic and global perspective. Includes market research, identifying target customers, developing product offers, branding, pricing, marketing communications, and distribution channels. Marketing is critically examined from the perspective of the consumer, economy, technology, legal/political issues, and ethical/social responsibility.

353 Marketing Information Technology (3)

Prerequisites: Business Admin 301, Info Sys/Decision Sci 361A. Corequisite: Marketing 351. Examines information sources, databases and tools applied by marketers to transform data into useful formats for the strategic decision-making process. Includes segmentation, target marketing and positioning, media selection, market share, break-even analysis, pricing, sales forecasting, and profit scenario analysis. Extensive use of Excel spreadsheets, the Internet, and other technology resources.

370 Buyer Behavior (3)

Prerequisite: Business Admin 301. Corequisite: Marketing 351. Consumer buying patterns, motivation and search behavior. The consumer decision-making process. Inter-disciplinary concepts from economics, sociology, psychology, cultural anthropology and mass communications. Case analyses and research projects. Completion of the course must be with a grade of C or better; grade below C requires enrollment in the course the following semester.

379 Marketing Research Methods (3)

Prerequisites: Business Admin 301, Marketing 351 and Info Sys/Decision Sci 361A. Marketing research process. Problem formulation, identifying data sources, data collection, analysis techniques, preparing research reports. Application of these concepts to marketing research projects.

401 Professional Selling (3)

Prerequisite: Marketing 351. The steps of the sales cycle as an interpersonal influence process. Selling skills and techniques based on communication and buyer behavior concepts. Written sales projects and oral presentations are expected.

405 Integrating Marketing Communications (3)

Prerequisite: Marketing 351. Corequisites: Marketing 370 and 379. Examines advertising, public relations, and other marketing communication elements. Students learn to set communication objectives; build IMC budgets; develop, execute and evaluate creative strategies; build media plans; and develop press kits and releases.

415 Managing the Sales Force (3)

Prerequisite: Marketing 351. Sales manager's role in organizing and deploying a field sales force, developing effective sales training programs, designing complete motivation and compensation plans, asserting strong leadership and evaluating sales people's performance. Relies heavily on case studies and group discussion.

425 Retail Marketing Strategy (3)

Prerequisite: Marketing 351. Evolution of retailing into a global, high technology industry; developing integrated marketing and financial strategies. Strategically positioning the retail offer to establish and maintain relationship with target customers. Examining evolving market conditions, buying behavior, retail venues, channel relationships, information, communication and decision support systems, and merchandise management.

430 Sports Marketing (3)

Prerequisite: Marketing 351 or consent of instructor. Develops understanding of Sports Marketing, its role in business and society. Develops understanding of different functional areas. Students develop the ability to apply theories and knowledge to solve problems faced by Sports Marketers.

445 International Marketing (3)

Prerequisites: Business Admin 301 and Marketing 351. Theories of international trade and role of marketing decisions across national boundaries and markets. Focuses on concepts and principles of marketing strategies in organizations from recognition of environmental differences, market assessments, entry alternatives, positions of global interdependence, marketing problems and critical implications. Integrative cases, individual and team efforts emphasized.

455 Strategic Internet Marketing (3)

Prerequisite: Marketing 351. Marketing of goods, services, and ideas on the Internet. Integrating e-commerce into a total marketing strategy for businesses ranging from entrepreneurial to multinational corporations. Includes history and emergence of e-commerce, utility of the Internet as a tool to increase effectiveness, efficacy, and competitiveness. Designing effective Web pages.

462 Marketing for Entrepreneurs (3)

Prerequisites: Accounting 201B and Marketing 351. Coverage of market analysis for new products and services, competitive analysis, alternatives for entering markets, associated costs, and launch feasibility. Casework, research, and fieldwork with selected local businesses.

465 Managing Services Marketing (3)

Prerequisite: Marketing 351. Unique marketing needs and challenges faced by service firms in an increasingly challenging global environment. Specific strategies for marketing services in a variety of industries including entertainment, tourism, hospitality, health care, and financial services. Also includes strategies used by manufacturing firms using service as a competitive strategy.

475 Export Marketing Strategies (3)

Prerequisite: Marketing 351. Export and import strategies, including international logistics. In-depth knowledge of the export and import process for both large companies and small international businesses. Understanding of logistics planning and choosing the best incoterms, the export process and the evaluation of alternative export strategies. Understanding import process including outsourcing and other government regulatory requirement and documentation.

489 Developing Marketing Strategies (3)

Prerequisites: Marketing 351, 353, 370, 379 and senior standing. Focuses on the development of marketing strategies in a wide variety of business situations, involving products as well as services, and domestic as well as international markets. Relies heavily on case analysis and group interaction.

495 Internship (3)

Prerequisites: six units of upper-division marketing courses, including Marketing 351, concentration in marketing or in international business, consent of department chair, at least junior standing, 2.5 GPA and one semester in residence at Cal State Fullerton. Planned and supervised work experience. May be repeated for credit up to a total of six units. Credit/No Credit only.

499 Independent Study (1-3)

Prerequisites: senior standing and approval by the Department Chair. Open to undergraduate students desiring to pursue directed independent inquiry. May be repeated for credit. Not open to students on academic probation.

519 Marketing Management (3)

Prerequisites: Accounting 510, Economics 515, Info Sys/Decision Sci 513, 514, Management 516, 518 (may be taken concurrently) and classified CBE status. Concepts, principles and techniques used in decision making for effective marketing of products, persons and services. Topics include market research, selecting target markets, product development, branding, pricing, promotion and distribution channels. The role of marketing within the context of society and the business firm, ethical/social responsibility of business, and international marketing.

525 Seminar in Marketing Problems (3)

Prerequisites: Marketing 519 and classified CBE status. Marketing decision making for developing effective, ethical and socially responsible strategies for promotion, distribution and pricing of products and service. Uses case analysis approach for domestic and international markets.

535 Marketing New Ventures (3)

Prerequisite: Marketing 519. Coverage of market analysis for new products and service, competitive analysis, alternatives for entering markets, associated costs, and launch feasibility. Casework, research, and fieldwork with selected local businesses.

555 E-Marketing Strategy (3)

Prerequisite: Marketing 519. Current theory and practice in the area of Internet marketing which presents new opportunities and challenges to traditional marketing approaches. Includes case analyses and development of an integrated marketing plan for an e-commerce business.

596 Contemporary Topics in Marketing (3)

Prerequisites: Marketing 519 or equivalent and classified CBE status. Topics in areas such as information strategy, business-to-business marketing, customer relationship marketing, services consulting, and others. May be repeated for credit.

599 Independent Graduate Research (1-3)

Prerequisites: classified CBE status, consent of instructor and approval by the Department Chair and Associate Dean. May be repeated for credit. Not open to students on academic probation.

DEPARTMENT CHAIR

James Friel

VICE CHAIR

Maijian Qian

DEPARTMENT OFFICE

McCarthy Hall 154

DEPARTMENT WEBSITE

http://math.fullerton.edu

PROGRAMS OFFERED

Bachelor of Arts in Mathematics

- Pure Mathematics Concentration
- Applied Mathematics Concentration
- Probability and Statistics Concentration
- Teaching Mathematics Concentration

Minor in Mathematics

Minor in Mathematics for Teacher Education

Master of Arts in Mathematics

- Teaching Option
- Applied Mathematics Option
- Special Topics Program

Subject Matter Preparation Program for the Single Subject Credential

Emphasis in Middle School Mathematics

FACULTY

Alfonso Agnew, Scott Annin, George Arthur, Martin Bonsangue, Wan-Ying Chang, Michael Clapp, Cherlyn Converse, Steven Davis, Paul De Land, Harriet Edwards, James Friel, Charles Funkhouser, Gerald Gannon, William Gearhart, Stephen Goode, Theodore Hromadka, Mortaza Jamshidian, Vuryl Klassen, Vyron Klassen, Charles H. Lee, Kathy Lewis, Gerald Marley, Armando Martinez-Cruz, John Mathews, Karen Messer, David Pagni, John Pierce, Maijian Qian, Nashat Saweris, Harris Shultz, Ernie Solheid, Bogdan Suceava, Lawrence Weill, Yun-Cheng Zee

INTRODUCTION

The Department of Mathematics offers a standard undergraduate major program in mathematics with concentrations in pure mathematics, applied mathematics, probability and statistics, and teaching mathematics. Courses are provided to satisfy the needs of:

- Students planning graduate study in mathematics;
- Students planning to use mathematics in a career in business, industry or government;
- Students planning to teach at the elementary or secondary level;
- Students majoring in a discipline using mathematics as a descriptive or analytic tool.

All major programs are designed to give sufficient breadth and depth in the study of mathematics to prepare students for subsequent graduate study in mathematics or related areas.

The pure mathematics concentration is deigned for students planning on graduate study. The applied and the probability and statistics concentrations provide the mathematics needed for certain careers in industry and government. For students interested in teaching in elementary or secondary schools, the teaching concentration may be combined with programs leading to a teaching credential to meet both university degree requirements and California credential law.

SINGLE SUBJECT TEACHING REQUIREMENT IN MATHEMATICS

The Department of Mathematics offers coursework meeting the requirements for California single subject credential in mathematics. For CSUF to recommend this credential, an individual must have completed the department's state-approved Single Subject Matter Preparation Program, and have completed the two-semester math education and teacher education program, which includes methodology coursework and the student teaching experience. Students may enter this program in either the fall or spring semester. Students should contact the Center for Careers in Teaching (714-278-7130) for information on the application process and orientation meetings.

BACHELOR OF ARTS IN MATHEMATICS

All students seeking a B.A. in Mathematics are expected to be skilled in elementary computer programming. Students may choose from Mathematics 320, Engineering 205 Digital Computation or Computer Science 121 Programming Concepts. Each student is also required to select one of seven cognates from the disciplines of computer science, economics, management science, physics, chemistry, civil engineering or mathematics. Those students selecting the computer science cognate are required to take Computer Science 121. Students may not double count Mathematics 320 for the mathematics cognate and the programming requirement. Each course required for the major must be completed with a grade of C or better, and may not be taken on a credit/no credit basis. Courses required for the major may not be challenged by examination.

Mathematics majors should take the lower-division mathematics courses (150A,B, 250A,B) during their first two years. Mathematics 350 Advanced Calculus I should be completed before the senior year. Mathematics 150A may be used to satisfy general education requirements. Students planning to continue their studies toward a Ph.D. degree in Mathematics should try to include
Math 407, 414, and 450 in their program.

Course substitutions are possible with the approval of the student's adviser and the Department Chair.

The requirements for the Bachelor of Arts in Mathematics consists of a total of 45 units in mathematics plus 3 units of History of Mathematics (Math 380), to meet the upper-division writing requirement, plus an additional 9-12 units in a cognate. The 45 units of mathematics

is divided into the core requirement (27 units) and an 18-19 unit requirement in one of four possible concentrations: Pure Mathematics, Applied Mathematics, Probability and Statistics, or Teaching Mathematics. Total units needed to complete the B.A. in Mathematics are 120. Each student should develop an individual study plan in consultation with an academic adviser in the Mathematics Department. The following general guidelines should be followed.

Students who intend to either enter the applied mathematics master's program at Cal State Fullerton or to pursue employment in business, industry, or government are advised to take Mathematics 370 and 435. Students who intend to enter graduate school in applied mathematics are advised to take Mathematics 302, 406, 412 and 450. Students are advised to take Mathematics 302 before attempting the Graduate Record Examination (GRE).

Core Requirements (27 units)

All students are required to complete the following 27 units:

Math 150A,B Calculus (8)

Math 250A Multivariate Calculus (4)

Math 250B Introduction to Linear Algebra and Differential Equations (4)

Math 280 Strategies of Proof (2)

Math 307 Linear Algebra (3)

Math 335 Mathematical Probability (3)

Math 350 Advanced Calculus I (3)

Additional Requirements (18-19 units)

Each student is required to complete one of the following concentrations:

Pure Mathematics Concentration

Math 302 Modern Algebra (3)

Math 370 Mathematical Model Building (3)

OR 375 Discrete Dynamical Systems and Chaos (3)

Math 412 Complex Analysis (3)

Math 450 Advanced Calculus II (3)

Two courses from the two groups below:

Math 407 Abstract Algebra (3)

Math 414 Topology (3)

OR 417 Foundations of Geometry (3)

OR 425 Differential Geometry (3)

Applied Mathematics Concentration

Math 306 Vector and Tensor Analysis (3)

Math 310 Ordinary Differential Equations (3)

Math 340 Numerical Analysis (3)

Three courses from the following list, with at least two at the 400-level:

Math 302 Modern Algebra (3)

Math 370 Mathematical Model Building (3)

Math 375 Discrete Dynamical Systems and Chaos (3)

Math 406 Introduction to Partial Differential Equations (3)

Math 412 Complex Analysis (3)

Math 425 Differential Geometry (3)

Math 435 Mathematical Statistics (3)

OR Math 438 Introduction to Stochastic Processes (3)

Math 440 Advanced Numerical Analysis (3)

Math 450 Advanced Calculus II (3)

Math 470 Advanced Mathematics Model Building (3)

Probability and Statistics Concentration

Math 338 Statistics Applied to Natural Sciences (3)

Math 340 Numerical Analysis (3)

Math 370 Mathematical Model Building (3)

OR Math 375 Discrete Dynamical Systems and Chaos (3)

Math 435 Mathematical Statistics (3)

Math 438 Introduction to Stochastic Processes (3)

Math 471 Combinatorics (3)

Teaching Mathematics Concentration

Math 302 Modern Algebra (3)

Math 338 Statistics Applied to Natural Sciences (3)

OR Math 370 Mathematical Model Building (3)

OR Math 375 Discrete Dynamical Systems and Chaos (3)

Math 401 Algebra and Probability for the Secondary Teacher (3)

Math 402 Logic and Geometry for the Secondary Teacher (3)

Cognates (9-12 units)

Each student is required to complete one of the following cognates:

Computer Science Cognate (10 units)

Computer Sci 131 Data Structures Concepts (3)

Computer Sci 223V C++ Programming (3)

Computer Sci 231 File System Concepts (3)

Computer Sci 253U Operating System Workshop in Unix (1)

Economics Cognate (12 units)

Economics 201 Principles of Microeconomics (3)

Economics 202 Principles of Macroeconomics (3)

One of the following:

Economics 310 Intermediate Microeconomic Analysis (3)

Economics 320 Intermediate Macroeconomics Analysis (3)

One of the following:

Economics 440 Econometrics (3)

Economics 441 Mathematical Economics (3)

Information System and Decision Sciences Cognate (9 units)

Three courses from the following list:

ISDS 467 Statistical Quality Control (3)

ISDS 472 Design of Experiments (3)

ISDS 473 Applied Statistical Forecasting (3)

ISDS 475 Multivariate Analysis (3)

Physics Cognate (11 units)

Physics 225 Fundamental Physics: Mechanics (3)

Physics 225L Fundamental Physics: Mechanics Laboratory (1)

Physics 226 Electricity and Magnetism (3)

Physics 226L Electricity and Magnetism Laboratory (1)

Physics 227 Waves, Optics and Modern Physics (3)

Chemistry Cognate (10 units)

Chemistry 120A General Chemistry (5)

Chemistry 120B General Chemistry (5)

Civil Engineering Cognate (9 units)

Civil Engineering 201 Statics (3)

Civil Engineering 301 Mechanics of Materials (3)

One of the following:

Civil Engineering 302 Dynamics (3)

Civil Engineering 325 Structural Analysis (3)

Mathematics Cognate (9 units)

Three upper-division courses in Mathematics from one of the four concentrations of the Mathematics major other than the student's own concentration. Math 430 can be considered as part of either the Pure Mathematics Concentration or the Teaching Concentration for the purposes of satisfying this requirement.

Writing Requirement

Math 380 will satisfy the University's upper-division writing requirement for mathematics majors.

Internships in Mathematics

Internships in applied mathematics provide work experience in advanced mathematics through positions in business, industry or government. Students should contact the Center for Internships and Cooperative Education, LH-209.

MINOR IN MATHEMATICS

The mathematics minor consists of 25 units of course work which must include Math 150A,B, 250A,B and at least nine units of upper-division mathematics, exclusive of Math 303A,B, 380, 401, 402, 403A,B, 495, 496 and 499. All courses must be completed with a grade of C or better.

MINOR IN MATHEMATICS FOR TEACHER EDUCATION

A. For elementary education the minor consists of 20 units of course work selected from the courses offered by the Department of Mathematics. The courses must include Mathematics 150B or 338, and Mathematics 303A,B. All courses must be completed with a grade of C or better.

B. For secondary education the minor consists of 22 units of course work selected from the courses offered by the Department of Mathematics. The courses must include Mathematics 250B and six units of upper-division courses in mathematics. All courses must be completed with a grade of C or better.

MASTER OF ARTS IN MATHEMATICS

The M.A. in Mathematics is designed to provide advanced study for students interested in continuing studies for a Ph.D. in mathematics or mathematics education, high school and community college teaching or mathematical analysis in government, business or industry.

Prerequisites

An applicant must meet the University requirements for admission to conditionally classified graduate standing: a baccalaureate from an accredited institution and a grade-point average of at least 2.5 in the last 60 semester units attempted and be in good standing at the last college attended. In addition, students must have an undergraduate major in mathematics with a grade-point average of at least 3.0 in all upper-division mathematics courses, or a combination of previous course work and work experience approved students by the graduate committee of the Mathematics Department.

Students who meet the requirements for conditionally classified graduate standing may be granted classified graduate standing upon meeting the following requirements: development of a study plan approved by an adviser, the graduate committee and the Office of Graduate Studies and completion of the University Writing requirement. For the Teaching Option, students must have completed courses in linear algebra, modern algebra and advanced calculus. In addition, students in the Teaching Option should have completed a minimum of one year of full-time teaching. Students in the Applied Option must have completed mathematical probability and advanced calculus with grades of B or better. Students with subject or grade deficiencies who have been admitted to conditionally classified standing must complete all courses required by the graduate committee with at least a 3.0 average before they will be classified.

Application Deadline

Applications need to be postmarked no later than March 1st for the fall semester and October 1st for the spring semester. However, deadlines may be changed based upon enrollment projections. Check the university graduate studies website for current information at http://www.fullerton.edu/graduate/.

Teaching Option

This option, designed for mathematics teachers, requires 30 units of graduate study approved by the graduate committee. At least sixteen of these units must be 500-level mathematics courses. The following course work must be included:

Math 581 Studies in Geometry (3)

Math 582 Studies in Algebra (3)

Math 584 Studies in Analysis (3)

Math 586 Studies in Discrete Mathematics (3)

Math 587 Studies in Mathematical Problem Solving (3)

Math 599 Independent Graduate Research (3-6)

Each student will be required to take adviser-approved mathematics electives to meet the 30-unit requirement, and pass a set of four comprehensive exams. Comprehensive exams may be taken at most twice.

Applied Mathematics Option

For those interested in applied mathematics, the Department of Mathematics offers the following courses in applied mathematics:

Math 489A,B Applicable Analysis and Linear Algebra (3,3)

Math 501A,B Numerical Analysis and Computation I and II (3,3)

Math 502A,B Probability and Statistics I and II (3,3)

Math 503A,B Mathematical Modeling I and II (3,3)

Math 504A,B Simulation Modeling and Analysis (3,3)

Mathematics 597 Project (6)

These courses were developed in consultation with mathematicians and scientists in the local industrial community and are specifically intended for individuals who are seeking positions, or who currently hold positions, which involve mathematics or quantitative applications. The subject matter emphasizes modern practical applied mathematics, modeling, problem solving and computation. The culminating experience is a project in which students have the opportunity of working in teams on a real problem, contracted and paid for by a local industrial firm. All classes are scheduled in the evening and can be taken in sequence in two calendar years, summers included.

Special Topics Program

Under certain circumstances, a plan of study leading to a Master of Arts in Mathematics may be designed to provide advanced work in mathematics. A personalized study plan to meet the objectives of each student may be developed within the general framework of the degree requirements.

The program requires a study plan with a minimum of 30 units of course work, planned by the student and the student's adviser, and approved by the graduate committee of the Mathematics Department. At least 16 of these units must be 500-level mathematics courses. Some of the 500-level courses may be accompanied by one unit of Mathematics 599 Independent Graduate Research. Students will also be required to pass a set of comprehensive exams or complete a six-unit project.

Additional Information

Part-time instructor and research assistantships are available for selected graduate students. For more information, contact the Department of Mathematics.

Emphasis in Middle School Mathematics

This program is offered under the Master of Science in Education (Secondary Education Concentration). See the Department of Secondary Education for a program description.

MATHEMATICS COURSES

Courses are designated as MATH in the class schedule.

030A Intermediate Algebra-ILE (3)

An intermediate algebra course designed specifically for students who are advised to take the Mathematics Intensive Learning Experience based upon their performance on the ELM exam. Equations and inequalities, algebraic expressions, functions, and sequences and series. Degree credit is not awarded for these courses. Successful completion of Math 30B satisfies the ELM requirement.

030B Intermediate Algebra-ILE (3)

An intermediate algebra course designed specifically for students who are advised to take the Mathematics Intensive Learning Experience based upon their performance on the ELM exam. Equations and inequalities, algebraic expressions, functions, and sequences and series. Degree credit is not awarded for these courses. Successful completion of Math 30B satisfies the ELM requirement.

040 Intermediate Algebra (3)

An intermediate algebra course designed specifically for students who have taken but not passed the ELM exam. Linear equations and inequalities, polynomial, rational, and radical expressions, quadratic functions, exponential and logarithmic functions, and sequences and series. Degree credit is not awarded for this course. Successful completion satisfies the ELM requirement.

045 Intermediate Algebra Minicourse (1)

Prerequisites: a score between 438 and 548 on the ELM exam. Linear equations, polynomials, rational expressions, radical expressions, quadratic formulas, exponential functions and logarithmic functions. Degree credit is not awarded for this course. Successful completion satisfies the ELM requirement.

110 Mathematics for Liberal Arts Students (3)

Prerequisites: passing score on the ELM or exemption and three years of high school mathematics, including two years of algebra and one year of geometry. Survey of traditional and contemporary topics in mathematics, such as elementary logic, counting techniques, probability, graph theory, codes and coding, and the mathematics of the social sciences. For non-science majors. (CAN MATH 2)

115 College Algebra (4)

Prerequisites: passing score on the ELM or exemption and three years of high school mathematics, including two years of algebra and one year of geometry. For students planning to take Math 130 or 135. Equations, inequalities, and systems of equations. Properties of functions and their graphs, including polynomial functions, rational functions, exponential and logarithmic functions, with applications. Sequences and series. If both Math 115 and Math 125 are taken, credit is given for second course only. (CAN MATH 10)

120 Introduction to Probability and Statistics (3)

Prerequisites: passing score on the ELM or exemption and three years of high school mathematics, including two years of algebra and one year of geometry. Set algebra, finite probability models, sampling, binomial trials, conditional probability and expectation. Recommended for students of economics, business, the biological, geological and social sciences.

125 Precalculus (5)

Prerequisites: passing score on the ELM or exemption and three years of high school mathematics, including two years of algebra and one year of geometry. For students planning to take Math 150A. Functions and their use in mathematical models, including linear functions, polynomial and rational functions, exponential and logarithmic functions, and trigonometric functions. If both Math 115 and Math 125 are taken, credit is given for second course only. (CAN MATH 16)

125W Precalculus Workshop (1)

Corequisites: Math 125 and consent of instructor. Supplementary problem-solving workshop in a collegial setting. (3 hours workshop)

130 A Short Course in Calculus (4)

Prerequisites: passing score on the ELM or exemption and three years of high school mathematics, including two years of algebra and one year of geometry and Math 115 or 125 or equivalent or a passing score on the Mathematics Qualifying Exam (MQE). A survey of differential and integral calculus and applications. For students of biological and social sciences, business and economics. If both Math 130 and Math 135 are taken, credit is given for second course only. Six units of credit are given if both Math 130 and Math 150A are taken. (CAN MATH 30)

135 Business Calculus (3)

Prerequisites: passing score on the ELM or exemption; three years of high school mathematics, including two years of algebra and one year of geometry; and Math 115 or 125 or equivalent or a passing score on the Mathematics Qualifying Exam (MQE). A survey of differential and integral calculus with applications, including derivatives, integrals and max-min problems. For students of business and economics. If both Math 130 and Math 135 are taken, credit is given for the second course only. Six units of credit is given if both Math 135 and 150A are taken. (CAN MATH 34)

150A Calculus (4)

Prerequisites: passing score on the ELM or exemption and four years of high school mathematics, including college algebra and trigonometry and Math 125 or equivalent or a passing score on the Mathematics Qualifying Exam (MQE). Analytic geometry and properties of functions. The limit, derivative, and definitive integral concepts; applications of the derivative, techniques and applications of integration; Taylor polynomials and series. Introduction to differential equations. Six units of credit is given for both Math 150A and Math 130 or for both Math 150A and Math 135. (150A = CAN MATH 18, 150B = CAN MATH 20; 150A + 150B = CAN MATH SEQ B; 150A, 150B, + 250A = CAN SEQ C)

150B Calculus (4)

Prerequisite: Math 150A or equivalent. Analytic geometry and properties of functions. The limit, derivative, and definitive integral concepts; applications of the derivative, techniques and applications of integration; Taylor polynomials and series. Introduction to differential equations. (150A = CAN MATH 18, 150B = CAN MATH 20; 150A + 150B = CAN MATH SEQ B; 150A, 150B, + 250A = CAN SEQ C)

151A Calculus I Workshop (1)

Corequisites: Math 150A and consent of instructor. Supplementary problem-solving in a collegial setting. (3 hours workshop)

151B Calculus II Workshop (1)

Corequisites: Math 150B and consent of instructor. Supplementary problem-solving in a collegial setting. (3 hours workshop)

196 Student-to-Student Tutorials (1-3)

Consult "Student-to-Student Tutorials" in this catalog for more complete course description. May be taken CR/NC only.

250A Multivariate Calculus (4)

Prerequisites: Math 150A,B or equivalent. Calculus of functions of several variables. Partial derivatives and multiple integrals with applications; parametric curves; vectors and vector-valued functions. (CAN MATH 22; 150A + 150B + 250A = CAN SEQ C).

250B Introduction to Linear Algebra and Differential Equations (4)

Prerequisite: Math 250A. An introduction to the solutions of ordinary differential equations and their relationship to linear algebra. Topics include matrix algebra, systems of linear equations, vector spaces, linear independence, linear transformations and eigenvalues.

250L Intermediate Calculus: Computer Laboratory (1)

Corequisite: Math 250A. Use of computer software to solve calculus problems. (3 hours laboratory)

270A Mathematical Structures I (3)

Prerequisite: four years of high school mathematics. First of two semesters of fundamental discrete mathematical concepts and techniques needed in computer-related disciplines. Logic, truth tables, elementary set theory, proof techniques, and combinatorics.

270B Mathematical Structures II (3)

Prerequisite: Math 270A. Second of two semesters of fundamental discrete mathematical concepts and techniques needed in computer-related disciplines. Graph theory, Boolean algebra, algebraic structures, linear algebra.

280 Strategies of Proof (2)

Prerequisite: Math 150B. Logic, set theory, and methods for constructing proofs of mathematical statements. A bridge to the rigors of upper-division mathematics courses containing significant abstract content.

302 Modern Algebra (3)

Prerequisites: Math 250B and Math 280. The integers, rational numbers, real and complex numbers, polynomial domains, introduction to groups, rings, integral domains and fields.

303A Fundamental Concepts of Elementary Mathematics (3)

Prerequisite: Completion of a mathematics course that satisfies the General Education requirement. Structure and form of the mathematics that constitutes the core of the K-8 mathematics curriculum, including the real number system, number theory and equations.

303B Fundamental Concepts of Elementary Mathematics (3)

Prerequisites: Completion of a mathematics course that satisfies the General Education requirement and a grade of C or better in Math 303A. Structure and form of the mathematics that constitutes the core of the K-8 mathematics curriculum, including the real number system, number theory and equations.

303W Math 303A/B Workshop (1)

Corequisite: Math 303A or B. Lessons involving manipulatives to support and clarify the material represented in Math 303A and B. May be repeated once for credit.

306 Vector and Tensor Analysis (3)

Prerequisite: Math 250B. Vector analysis, including coordinate bases, gradient, divergence, and curl, Green's, Gauss' and Stokes' theorems. Tensor analysis, including the metric tensor, Christoffel symbols and Riemann curvature tensor. Applications will be drawn from differential geometry, continuum mechanics, electromagnetism, general relativity theory.

307 Linear Algebra (3)

Prerequisite: Math 250B. Corequisite: Math 280. Introduction to the theory of vector spaces. Linear equations and matrices, determinants, linear transformations and eigenvalues, norms and inner products.

310 Ordinary Differential Equations (3)

Prerequisite: Math 250B. Theory and methods of solutions for ordinary differential equations, including Laplace transform methods and power series methods. Oscillation theory for second order linear differential equations and/or theory for systems of linear and nonlinear differential equations.

320 Introduction to Mathematical Computation (3)

Corequisite: Math 250B. Introduction to problem-solving on the computer using modern interactive software. Numerical and symbolic computation. A variety of problems arising in mathematics, science, and engineering will be explored. Also serves as preparation for subsequent computer-based courses in mathematical modeling.

335 Mathematical Probability (3)

Prerequisite: Math 250A. Probability theory; discrete, continuous, and multivariate probability distributions, independence, conditional probability distribution, expectation, moment generating functions, functions of random variables, and the central limit theorem.

337 Introduction to Experimental Design and Statistics in the Laboratory Sciences (3)

Prerequisite: passing score on the ELM or exemption; completion of one of the following courses: Biology 241, 261; Chemistry 120; or Physics 211, 225. Graphical and numerical descriptive statistics; experimental design, randomization, replication, block designs, stratified samples, controlled experiments versus observational studies. Fundamental inference for proportions, means, variances. Analysis of variance, regression. Computer analysis of data from the laboratory sciences, e.g., Biology, Chemistry, Geology.

338 Statistics Applied to Natural Sciences (4)

Prerequisite: Math 130 or 150B or consent of instructor. Introduction to the theory and application of statistics. Elementary probability, estimation, hypothesis testing, regression, analysis of variance, non-parametric tests. Computer-aided analysis of real data. Graphical techniques, generating and interpreting statistical output, presentation of analysis (3 hours lecture, 2 hours activity).

340 Numerical Analysis (3)

Prerequisites: Math 250B and either Engineering 205, Computer Science 121 or equivalent. Approximate numerical solutions of systems of linear and nonlinear equations, interpolation theory, numerical differentiation and integration, numerical solution of ordinary differential equations. Computer coding of numerical methods.

350 Advanced Calculus I (Formerly 350A) (3)

Prerequisite: Math 250B. Corequisite: Math 280. The real number system, limits of sequences, and limits of functions. Continuity, differentiation, and integration of functions of one variable. Infinite series.

368 First Course in Symbolic Logic (3)

(Same as Philosophy 368)

370 Mathematical Model Building (3)

Prerequisite: Math 250B or consent of instructor and one of the following: Math 320, Engineering 205, Computer Science 121 or equivalent. Introduction to mathematical models in science and engineering: dimensional analysis, discrete and continuous dynamical systems, flow and diffusion models.

375 Discrete Dynamical Systems and Chaos (3)

Prerequisite: Math 250B or consent of instructor. Analysis of the evolution of linear and nonlinear deterministic discrete systems with emphasis on long range behavior, stability and instability of stationary states and periodic orbits, chaotic orbits, strange attractors, fractional dimension and Lyapunov exponents; examples from current research literature.

380 History of Mathematics (3)

Prerequisite: Math 250B. The history of mathematics through its methods and concepts. Designed to help the student become proficient in writing and reading mathematical literature. Satisfies the upper-division writing requirement for mathematics majors.

401 Algebra and Probability for the Secondary Teacher (3)

Prerequisites: 12 units of upper-division mathematics. Overview of mathematical topics relevant to the teacher of secondary mathematics. Problem-solving approach to areas including algebra, number theory, combinatorics and probability while maintaining an historical perspective.

402 Logic and Geometry for the Secondary Teacher (3)

Prerequisites: 12 units of upper-division mathematics. A course parallel to Math 401 but with emphasis on geometry, trigonometry and the theory of equations.

403A Fundamental Concepts of Middle School Mathematics I (3)

Prerequisite: Math 303B. Designed to help provide the content background to satisfy the requirements for the California Supplementary Credential in mathematics. Focuses on gaining a thorough understanding of algebra, including patterns, functions and the use of technology.

403B Fundamental Concepts of Middle School Mathematics II (3)

Prerequisite: Math 403A. Designed to help provide the content background to satisfy the requirements for the California Supplementary Credential in mathematics. Focuses on gaining a thorough understanding of advanced algebra, geometry, probability and statistics, and the use of technology.

406 Introduction to Partial Differential Equations (3)

Prerequisite: Math 306. First order linear and quasi-linear partial differential equations. Classification of second order linear partial differential equations. Fourier analysis, Sturm-Liouville theory, integral transforms, and their application to boundary-value problems for the potential, wave, and diffusion equations.

407 Abstract Algebra (3)

Prerequisite: Math 302. Sets, mappings, groups, rings, modules, fields, homomorphisms, advanced topics in vector spaces and theory of linear transformations, matrices, algebras, ideals, field theory, Galois theory.

412 Complex Analysis (3)

Prerequisite: Math 350. Complex differentiation and integration, Cauchy's theorem and integral formulas, maximum modulus theorem, harmonic functions, Laurent series, analytic continuation, entire and meromorphic functions, conformal transformations and special functions.

414 Topology (3)

Prerequisite: Math 350. Topological spaces and continuous functions, connectedness and compactness, metric spaces and function spaces.

417 Foundations of Geometry (3)

Prerequisite: Math 307. A study of the foundations of Euclidean and non-Euclidean geometries through transformations and formal axiomatics.

425 Differential Geometry (3)

Prerequisite: Math 307. The differential geometry of curves and surfaces. Frenet-Seret formulas, the Gauss-Weingarten equations, the Gauss-Bonnet theorem.

430 Number Theory (Formerly 330) (3)

Prerequisite: Math 302. Basic concepts of classical number theory with modern applications. Divisibility, congruences. Diophantine approximations and equations, primitive roots, continued fractions. Applications to public key cyprotography, primality testing, factoring methods, and check digits.

435 Mathematical Statistics (3)

Prerequisite: Math 335 or equivalent. Statistical theory and its applications, based on the use of calculus.

438 Introduction to Stochastic Processes (3)

Prerequisite: Math 335. Stochastic processes including Markov chains, the Poisson Process, the Wiener Process. Applications to birth and death processes and queuing theory.

440 Advanced Numerical Analysis (3)

Prerequisite: Math 340. Advanced topics in numerical analysis selected from iterative methods for linear systems, approximation of eigenvalues and eigenvectors, numerical methods for ordinary and partial differential equations, optimization methods and approximation theory. Error and convergence analysis and computer coding.

450 Advanced Calculus II (Formerly 350B) (3)

Prerequisite: Math 350. Sequences and series of functions. Continuity, differentiation, and integration of functions of several variables. Advanced topics in analysis, such as Lebesgue integration or the theory of metric spaces.

470 Advanced Mathematical Model Building (3)

Prerequisites: Math 307, 335, and 370 or consent of instructor. A capstone course for students with strong mathematical preparation. Topics may include stochastic models, Monte Carlo integration, simulation of discrete event systems, simulation software, and further studies in dynamic systems and flow and diffusion models.

471 Combinatorics (Formerly 371) (3)

Prerequisite: Math 302 or 307. Analysis of discrete structures, including existence, enumeration, and optimization. Permutations and combinations, combinatorial identities, the inclusion-exclusion principle, recurrence relations, Polya counting. Basic definitions and properties of graphs, Euerian and Hamiltonian graphs, trees, graph colorings and chromatic number, planar graphs.

489A Applicable Linear Algebra (3)

Prerequisites: undergraduate calculus, linear algebra, advanced calculus and consent of instructor. Corequisite: Math 489B. Topics from linear algebra useful in graduate studies in applied mathematics. Finite and infinite dimensional vector spaces, linear transformations and matrices. An introduction to Hilbert spaces. The projection theorem and some of its applications.

489B Applicable Analysis (3)

Prerequisites: undergraduate calculus, linear algebra, advanced calculus and consent of instructor. Corequisite: Math 489A. Topics from analysis useful in graduate studies in applied mathematics. Topics may include initial and boundary value problems, including series solutions, eigenvalues and eigenfunctions, Fourier analysis, generalized functions, an introduction to the calculus of variations, and transform methods.

495 Internship in Applied Mathematics (1-3)

Prerequisites: 15 units of upper-division mathematics and consent of instructor. Work experience in advanced mathematics through positions in business, industry or government.

496 Student-to-Student Tutorials (1-3)

Consult "Student-to-Student Tutorials" in this catalog for more complete course description. May be taken CR/NC only.

499 Independent Study (1-3)

Prerequisite: consent of instructor. Special topic in mathematics, selected in consultation with and completed under supervision of instructor.

501A Numerical Analysis and Computation I (3)

Prerequisites: Math 489A,B. Corequisite: Math 501B. Numerical methods for linear and nonlinear systems of equations, eigenvalue problems. Interpolation and approximation, spline functions, numerical differentiation, integration and function evaluation. Error analysis, comparison, limitations of algorithms.

501B Numerical Analysis and Computation II (3)

Prerequisites: Math 489A,B. Corequisite: Math 501A. Numerical methods for initial and boundary-value problems for ordinary and partial differential equations. The finite element method. Error analysis, comparison, limitations of algorithms.

502A Probability and Statistics I (3)

Prerequisites: Math 335 and 489A,B. Theory and applications of probability models including univariate and multivariate distributions; expectations and transformations of random variables. Must be taken prior to or concurrently with Math 502B.

502B Probability and Statistics II (3)

Prerequisite: Math 502A. Theory and applications of sampling theory, statistical estimation, and hypothesis testing. Must be taken after or concurrently with Math 502A.

503A Mathematical Modeling I (3)

Prerequisites: Math 489A,B. Corequisite: Math 503B. Mathematical modeling concepts. Topics may include: dimensional analysis, scaling, and sensitivity; system concepts, state space, observability, controllability, and feedback; dynamical systems, models and stability analysis; optimization models.

503B Mathematical Modeling II (3)

Prerequisites: Math 489A,B. Corequisite: Math 503A. Development and analysis of mathematical models in such areas as mechanics, economic planning, operations management, environmental and ecological sciences, biology and medicine. The course includes a project, with students working in a team setting.

504A Simulation Modeling and Analysis (3)

Prerequisites: Mathematics 501A,B; 502A,B; 503A,B. Corequisite: Math 504B. Advanced techniques of simulation modeling, including the design of Monte Carlo, discrete event, and continuous simulations. Topics will include output data analysis, comparing alternative system configurations, variance-reduction techniques, and experimental design and optimization.

504B Applications of Simulation Modeling Techniques (3)

Prerequisites: Mathematics 501A,B; 502A,B; 503A,B. Corequisite: Math 504A. Introduction to a modern simulation language, and its application to simulation modeling. Topics will include development of computer models to demonstrate the techniques of simulation modeling, model verification, model validation, and methods of error analysis.

581 Studies in Geometry (3)

Prerequisites: Mathematics 307, graduate standing, plus one year of full-time teaching in secondary school mathematics. Topics relating to the high school curriculum from an advanced standpoint including the axiomatic method and non-Euclidean geometry.

582 Studies in Algebra (3)

Prerequisites: Mathematics 302, graduate standing, plus one year of full-time teaching in secondary school mathematics. Topics relating to the high school curriculum from an advanced standpoint including algorithms, fields and polynomials.

584 Studies in Analysis (3)

Prerequisites: Mathematics 350, graduate standing, plus one year of full-time teaching in secondary school mathematics. Topics relating to the high school curriculum from an advanced standpoint including limits, continuity, differentiation and integration.

586 Studies in Discrete Mathematics (3)

Prerequisites: Mathematics 335 and either Engineering 205, Computer Science 121 or equivalent; graduate standing and one year of full time teaching in secondary school mathematics. Topics relating to the high school curriculum from an advanced standpoint including combinatorics, probability, matrices, and linear programming.

587 Studies in Mathematical Problem Solving (3)

Prerequisites: Math 302, graduate standing, plus one year of full-time teaching in secondary school mathematics. problem solving via non-routine and enrichment-type problems from several branches of mathematics.

597 Project (3)

Prerequisite: consent of instructor. May be repeated for credit. Students in the Applied Master's Program earn a total of 6 units.

599 Independent Graduate Research (1-3)

Prerequisites: graduate standing and consent of instructor. One unit required for each regular graduate course. Also offered without being attached to any course. May be repeated for credit.

MATHEMATICS EDUCATION COURSES

Courses are designated as MAED in the class schedule

442 Teaching Mathematics in Secondary School (3)

Prerequisite: admission to Teacher Education Program in Mathematics or consent of instructor. Objectives, methods, and materials and technology for teaching mathematics. Required before student teaching, of mathematics majors for the general single subject credential. (2 hours lecture, 2 hours activity)

449E Externship in Secondary Teaching (3)

See description under Department of Secondary Education.

449I Internship in Secondary Teaching (10)

See description under Department of Secondary Education.

449S Seminar in Secondary Teaching (3)

See description under Department of Secondary Education.

499 Independent Study (1-3)

Prerequisite: consent of instructor. Special topic in mathematics education, selected in consultation with and completed under supervision of the instructor. May be repeated for credit.

INTRODUCTION

Military Science provides a dynamic dimension to the university by offering an unmatched hands-on leadership and management education. Military Science is also a university endorsed co-ed club and offers various extra-curricular teams and activities such as: "Ranger Challenge" (intercollegiate competition based on physical fitness and agility, rifle marksmanship and map reading/land navigation), Paintball, one Field Training Exercise (overnight bivouac) per semester, rapelling demonstrations and a Color Guard team (presents flags at ceremonies and events) as well as several other exciting activities. All curriculum and activities are designed to build and enhance leadership, management and team building skills that apply in both military and civilian sectors and last a lifetime.

Military Science courses are accredited and available to students in all academic disciplines. Full-time students are also eligible to enroll as cadets in accordance with university and Department of the Defense policies. Several competitive financial assistance programs are available which include: three-year and two-year scholarships, Reserve Forces and National Guard duty, GI Bill and loan repayment options. Additionally, scholarship recipients and Advanced course students earn up to $400 per month.

Upon successful completion of the two or four-year Reserve Officers Training Corps (ROTC) program, cadets are commissioned as second lieutenants in the United States Army, United States Army Reserves or Army National Guard.

Four-Year Program

This program is comprised of a lower division "Basic Course" and an upper division "Advanced Course." The Basic Course refers to first and second year courses (MLSC 101, 102, 201 and 202) which are designed for beginning students who want to try Reserve Officers Training Corps (ROTC) without obligation. Once the Basic Course is completed, students qualify for entry into the upper-division Advanced Course (MLSC 301, 302, 401, 402) which prepares them to be commissioned as officers in the United States Army, the Army Reserves, or the Army or National Guard. Upon entry into the Advanced Course, cadets are required to sign a contract with the Department of the Army agreeing to complete the ROTC program and accept a commission as a second lieutenant. Once the contract is signed, Advanced Course cadets will receive up to $400 per month, along with free uniforms for all military science courses.

Two-Year Program

This program is for those students who have at least four semesters of work remaining on campus as either an undergraduate or graduate student, and who did not participate in ROTC earlier. These students enter the Advanced Course of the program after attending a one week all expenses paid summer leadership internship or providing proof of completion of Military Basic Training, or three years JROTC. Students enrolled in the two-year program are eligible for contracting under the same benefits, requirements and guidelines as the four-year students.

International Learning Opportunities in Military Science

Advanced course students have an opportunity to attend overseas Cadet Troop leadership Training (CTLT) for three weeks between their junior and senior years. CTLT gives cadets a chance to serve as an acting platoon leader with an actual active duty U.S. Army unit. Many of the CTLT positions are with overseas units in Korea and Europe. Additionally, commissioned second lieutenants selected for active duty will have the opportunity to serve at duty stations all over the world, work with fellow military officers from other countries, attend foreign military schools, and immerse themselves in the culture of their host nation while they live and work there.

PROFESSOR OF MILITARY SCIENCE
Lieutenant Colonel Christian D. Taddeo

ENROLLMENT COUNSELOR
Captain Michaelle M. Munger

SENIOR MILITARY INSTRUCTOR
Master Sergeant David Takacs

DEPARTMENT OFFICE
Faculty Terrace South 1007-1012,
Phone: (714) 278-3007

DEPARTMENT WEBSITE
http://www.fullerton.edu/militaryscience

PROGRAMS OFFERED

- Summer Leadership Internships
- Adventure/leadership training and physical training/weight lifting (no military obligation)
- Minor in Military Science
- Second Lieutenant Commission (U.S. Army, Reserves or National Guard)

MINOR IN MILITARY SCIENCE

The Military Science Minor is comprised of a combination of courses from many disciplines totaling 24 units. Students interested in this program should seek additional information from the Military Science Department.

General Requirements

All enrolled cadets will take courses corresponding to their academic standing in order to remain academically aligned. Labs must be taken with corresponding lecture class.

MLSC 100 Army Physical Training (1) (This class can be repeated up to 8 times.)

KNES 146 Weight Lifting (1)
(For cadets desiring extra conditioning.)

Freshmen

MLSC 101 Foundations of Officership (2)

MLSC 101L Leadership Laboratory (1)

MLSC 102 Basic Leadership (2)

MLSC 102L Leadership Laboratory (1)

Sophomores

MLSC 201 Individual Leadership Studies (2)

MLSC 201L Leadership Laboratory (1)

Course in Basic Army Skills (2)

MLSC 202L Leadership Laboratory (1)

Juniors

MLSC 301 Leadership and Problem Solving (3)

MLSC 301L Leadership Laboratory (1)

MLSC 302 Leadership and Ethics (3)

MLSC 302L Leadership Laboratory (1)

ROTC Advanced Camp

Seniors

MLSC 401 Leadership and Management (3)

MLSC 401L Leadership Laboratory (1)

MLSC 402 Officership (3)

MLSC 402L Leadership Laboratory (1)

Optional

MLSC 499 Independent Study in U.S. Military History (3)

MILITARY SCIENCE COURSES

Courses are designated as MLSC in the class schedule.

100 Army Physical Training (1)

Required each semester of all students in the Military Science Program. Emphasizes the principles of cardiorespiratory and muscular endurance, muscular strength, flexibility, and military technique. Designed to improve the student's ability to develop and lead an organizational level physical training program. May be repeated for credit.

101 Foundations of Officership (2)

Learn fundamental concepts of leadership and management in the classroom with practical application in outside activities. Develop interpersonal, organizational and motivational skills necessary for leaders of the 21st century. This is useful for both corporate and military career preparation; however, students will become familiar with basic military skills and customs.

101L, 102L, 201L, 202L Leadership Laboratory (1,1,1,1)

Build self-confidence and team-building leadership skills that can be applied throughout life. Learn basic skills then practice them through hands-on exercises. Different roles for students at different levels in the program. Required of all students in associated Military Science courses.

102 Basic Leadership (2)

Prerequisite: Military Science 101 or consent of the instructor. Learn to apply principles of effective leadership. Reinforce self-confidence through participation in physically and mentally challenging exercises. Develop communication skills to improve individual performance and group interaction. Relate ethical values to the effectiveness of a leader.

201 Individual Leadership Studies (2)

Corequisite: Military Science 201L. Learn and apply leadership skills that develop individual abilities and contribute to the building of effective teams. Improve oral and written communication skills. Learn techniques to train others as an aspect of continued leadership development.

301 Leadership and Problem Solving (3)

Improve knowledge of senior noncommissioned officer duties and the officer's relationship to the NCO. Course content includes: principles of leadership, officer and NCO roles, training management, command climate, staff organization and functions.

301L, 302L, 401L, 402L Leadership Laboratory (1,1,1,1)

Build self-confidence and team-building leadership skills that can be applied throughout life. Learn basic skills then practice them through hands-on exercises. Different roles for students at different levels in the program. Required of all students in associated Military Science courses.

302 Leadership and Ethics (3)

Corequisite: Military Science 201L. Cadets will refine their leadership skills by planning and executing various exercises. Discussions will focus on dynamics of military organizations and how to ensure mission accomplishment. Emphasis will be on skills required to successfully complete Advances Camp.

401 Leadership and Management (2)

This course is intended to provide those skills necessary to transition from student and cadet to second lieutenant in the United States Army. Students will be responsible to gain knowledge level material through their readings and apply that knowledge in practical, hands-on exercises within the classroom and external settings. Kolb's experimental learning model provides the primary method/basis of instruction.

402 Officership (3)

Prerequisite: Cadet at Military Science Level IV (senior) status. Refine counseling and motivating techniques. Examine aspects of tradition and law as they relate to leading soldiers as an officer in the Army. Study the responsibilities of officer and officials. Prepare for a future as a successful Army lieutenant.

499 Military Science Independent Study (3)

Independent study provides the student with the opportunity to meet Army commissioning requirements when the normal course of study is not possible due to course sequencing. Students will be assigned special projects which will require the demonstration of military principles.