



Academic Departments and Programs



Comparative Religion

College of Humanities and Social Sciences

DEPARTMENT CHAIR

Paul J. Levesque

DEPARTMENT OFFICE/WEBSITE

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<http://hss.fullerton.edu/comparative>

PROGRAMS OFFERED

Bachelor of Arts in Religious Studies

Minor in Religious Studies

Minor in Christian Studies

Minor in Islamic Studies

Minor in Jewish Studies

FACULTY

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James Santucci, Jeanette Reedy Solano,
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INTRODUCTION

The mission of the Department of Comparative Religion is to describe and interpret the developments, worldviews and practices of religious traditions in a non-sectarian, academic manner for the benefit of students, faculty from other fields and the greater Orange County community.

Within a public university, religion must be approached with academic objectivity and without favoritism for any one tradition. Yet, religion must also be studied with sensitivity and empathy for the millions of believers whose lives are shaped by their faith.

Comparative Religion examines the spiritual quest of humankind, especially as it has manifested itself in the world's living religions. These include Hinduism, Buddhism, Sikhism, Judaism, Christianity, Islam and other less familiar traditions. No other academic field looks at the origins, sacred writings, rituals, beliefs and world views of the various religions for their own sake rather than as an aspect of another field of study.

The Bachelor of Arts in Religious Studies is designed for those who: (1) want a humanities undergraduate background focusing on religion as a preparation for further study in such fields as education, law, social work, counseling and government service; (2) wish to pursue graduate studies in religion with the aim of teaching and/or doing research in the subject; (3) are considering a career in various religious ministries or in religious education.

Because the major consists of 36 units of coursework (less than some other fields), it may be possible to add a second major in, for example, Communications, History or Philosophy. Such double majors may strengthen a student's job preparation or background for graduate studies.

Minors in religion are offered in four areas, depending on a student's particular interest: Religious Studies (comparative emphasis); Christian Studies; Jewish Studies; and Islamic Studies.

LEARNING GOALS AND STUDENT LEARNING OUTCOMES

The following goals and learning outcomes have been established for students pursuing a degree in Comparative Religion:

Ability to conduct research and interpret materials

- Analyze written materials related to the study of religion
- Acquired information literacy in the study of religion

Effective communication

- Write well-organized critical and analytical research papers related to the study of religion
- Speak clearly and effectively using relevant and adequate supporting evidence

Demonstrate an understanding of religious traditions

- Describe the basic teachings and practices of major religious traditions, and can compare and contrast the principal similarities and differences between them
- Identify the history and development of specific religions and their contemporary relevance
- Compare key theories and theorists in the study of religion
- Interpret key thinkers and figures within religious traditions

**BACHELOR OF ARTS IN RELIGIOUS STUDIES
(120 UNITS)**

The Bachelor of Arts in Religious Studies requires 36 units in the major, all of which must be completed with a grade of “C” (2.0) or higher.

Lower-Division Requirements (9 units)

Introduction to the Study of Religion (3 units)

CPRL 105 Religion and the Quest for Meaning (3)

CPRL 110 Religions of the World (3)

Introduction to Western Religious Traditions (3 units)

CPRL 200 Introduction to Christianity (3)

CPRL 201 Introduction to the New Testament (3)

CPRL 210 Introduction to Judaism (3)

CPRL 250 Introduction to Islam (3)

Introduction to Non-Western Religious Traditions (3 units)

CPRL 270T Introduction to the Asian Religions (3)

CPRL 280 Introduction to Buddhism (3)

Upper-Division Requirements (27 units)

Methods and Concepts (6 units)

CPRL 300 Methods of Studying Religion (3)

CPRL 485T Major Religious Thinkers and Concepts (3)*

Development of Western Religious Thought (6 units)

CPRL 350T Major Christian Traditions (3)

CPRL 351 History and Development of Early Christian Thought (3)

CPRL 352 History and Development of Modern Christian Thought (3)

CPRL 361 History and Development of Jewish Thought: Biblical and Rabbinical Eras (3)

CPRL 362 History and Development of Jewish Thought: Medieval and Modern Eras (3)

CPRL 371 History and Development of Islamic Thought: The Beginning to 1258 (3)

CPRL 372 History and Development of Islamic Thought: 1259 to Modern Times (3)

HIST/CPRL 412A History of the Christian Church to the Reformation (1517) (3)

HIST/CPRL 412B History of the Christian Church from the Reformation to the Present (3)

HIST/CPRL 412C History of the Jews (3)

HIST/CPRL 417B Roman Empire (3)

HIST 420 The Byzantine Empire (3)

HIST/CPRL 425B The Reformation (3)

HIST/CPRL 435A The Holocaust (3)

HIST/CPRL 466A Islamic Civilization: Arab Era (3)

HIST/CPRL 466B Islamic Civilization: Imperial Age (3)

*May be taken only after completing 15 units in Comparative Religion, including CPRL 105 or 110 and 300, and junior standing.

Development of Non-Western Religious Thought (6 units)

AFRO/CPRL 325 African American Religions and Spirituality (3)

AFRO/CPRL 337 American Indian Religions and Philosophy (3)

CPRL 341 Hindu Tradition to 400 B.C.E. (3)

CPRL 342 Hindu Tradition from 400 B.C.E. (3)

PHIL 350 Asian Philosophy (3)

CPRL/PHIL 354T Topics in Buddhism (3)

CPRL 370 New Religious Movements in the U.S.A. (3)

HIST/CPRL 465A History of India (3)

HIST/CPRL 465B History of India (3)

Experience of Religion (6 units)

CPRL 306 Contemporary Practices of the World's Religions (3)

CPLT/CPRL 312 The Bible as Literature (3)

CPRL 335 Judaism, Christianity, and Islam Compared (3)

PHIL/CPRL 348 Philosophy of Religion (3)

CPRL 358 Comparative Mysticism (3)

CPRL 367 Religion in Latino/a Life (3)

CPRL 375 Conceptions of the Afterlife (3)

CPRL 380 Religion and Violence (3)

CPRL/POSC 381 Religion and Politics in the United States (3)

CPRL 397 Religion and Science (3)

CPRL 400 Religion, the Media, and Contemporary Culture (3)

CPRL 411 Religion and Film (3)

SOCI/CPRL 458 Sociology of Religious Behavior (3)

Textual Studies (3 units)

CPRL 330T Hebrew Scriptural Studies (3)

CPRL 331T New Testament Studies (3)

CPRL 401T Studies in Religious Texts (3)

Writing Requirement

The course requirement of the university upper-division baccalaureate writing course is met through CPRL 485T. It is highly recommended that students majoring in Religious Studies pursue the study of classical languages such as Arabic, Greek, Hebrew, Latin, and Sanskrit when such languages are offered.

MINOR IN RELIGIOUS STUDIES (21 UNITS)

Lower-Division Requirements (9 units)

Introduction to the Study of Religion (3 units)

CPRL 105 Religion and the Quest for Meaning (3)

CPRL 110 Religions of the World (3)

Introduction to Western Religious Traditions (3 units)

CPRL 200 Introduction to Christianity (3)

CPRL 201 Introduction to the New Testament (3)

CPRL 210 Introduction to Judaism (3)

CPRL 250 Introduction to Islam (3)

Introduction to Non-western Religious Traditions (3 units)

CPRL 270T Introduction to the Asian Religions (3)

CPRL 280 Introduction to Buddhism (3)

Upper Division (12 units)

Core Requirements (3 units)

CPRL 300 Methods of Studying Religion (3)

Elective Courses (9 units)

Any nine units of upper-division courses in Comparative Religion. It is highly recommended that students minoring in Religious Studies pursue the study of classical languages such as Arabic, Greek, Hebrew, Latin, and Sanskrit when such courses are offered.

MINOR IN CHRISTIAN STUDIES (21 UNITS)

Required Courses (12 units)

CPRL 200 Introduction to Christianity (3)

CPRL 300 Methods of Studying Religion (3)

CPRL 351 History and Development of Early Christian Thought (3)

CPRL 352 History and Development of Modern Christian Thought (3)

Elective Courses (9 units), three of the following:

CPRL 201, 331T, 335, 350T, 358, 367, 375, 380, 381, 400, 401T*, 485T*, 499*

CPLT/CPRL 312

AFRO/CPRL 325

HIST 420

HIST/CPRL 412A, 412B, 417B, 425B

SOCI/CPRL 458

It is highly recommended that students minoring in Christian Studies pursue the study of classical languages such as Greek, Hebrew, and Latin when such courses are offered.

*When content pertains to the Christian tradition.

MINOR IN ISLAMIC STUDIES (21 UNITS)

Required Courses (12 units)

CPRL 250 Introduction to Islam (3)

CPRL 300 Methods of Studying Religion (3)

CPRL 371 History and Development of Islamic Thought:
The Beginning to 1258 (3)

CPRL 372 History and Development of Islamic Thought:
1259- Modern Times (3)

Elective Courses (9 units), three of the following:

AFRO/CPRL 325

CPRL 352T, 335, 380, 381, 400, 401T*, 485T*, 499*

HIST 468

HIST/CPRL, 466A, 466B

SOCI/CPRL 458

*When content pertains to the Islamic tradition

MINOR IN JEWISH STUDIES (21 UNITS)

Required Courses (12 units)

CPRL 210 Introduction to Judaism (3)

CPRL 300 Methods of Studying Religion (3)

CPRL 361 History and Development of Jewish Thought:
Biblical and Rabbinical Eras (3)

CPRL 362 History and Development of Jewish Thought:
Medieval and Modern Eras (3)

Elective Courses (9 units), three of the following:

CPLT/CPRL 312

CPRL 330T, 335, 358, 380, 381, 400, 401T*, 485T*, 499*

HIST 467, 468

HIST/CPRL 412C, 435A

SOCI/CPRL 458

*When content pertains to the Jewish tradition.

COMPARATIVE RELIGION COURSES

Courses are designated as CPRL in the class schedule.

105 Religion and the Quest for Meaning (3)

Nature of religious experience as the human pursuit of meaning and transcendence, exploring its central themes, phenomena, and questions; its principal types of figures and communities; and its major categories of sacred rituals, objects, seasons, and places.

110 Religions of the World (3)

Introduction to at least five religious world views from an historical and comparative perspective, with descriptive analysis of their belief system, moral code and symbolic rituals: Judaism, Christianity, Islam, Hinduism and Buddhism. One or more sections offered online. (Same as PHIL 110)

200 Introduction to Christianity (3)

Overview of the Christian tradition, including Orthodox, Roman Catholic and Protestant expressions. Foundational councils, creeds, scriptures, ideas and worship styles. One or more sections offered online.

201 Introduction to the New Testament (3)

Textual and historical study of the origins and content of the New Testament in the context of first-century Christianity.

210 Introduction to Judaism (3)

The Jewish tradition – its scriptures, laws, customs, holidays and world view in their historical setting.

246A Basic Hatha Yoga (2)

(Same as KNES 246A)

246B Intermediate Hatha Yoga (2)

(Same as KNES 246B.)

250 Introduction to Islam (3)

Religion of Islam, its background and main teachings: the rise of Islam; the caliphate; Islamic theology, teachings, mysticism and philosophy.

270T Introduction to the Asian Religions (3)

Main teachings of a major South Asian, Far Eastern or “Oriental” religion per semester. Such religions as Jainism, Hinduism, Taoism, Shintoism, and Zoroastrianism will be discussed. May be repeated for credit with different subject matter. One or more sections offered online.

280 Introduction to Buddhism (3)

Introduction to the origins and development of Buddhism. Discussion of the major teachings found in all traditions of Buddhism, the three major traditions of Buddhism and the position of Buddhism in the U.S. One or more sections offered online.

300 Methods of Studying Religion (3)

Prerequisite: CPRL 105 or 110. Academic study of religion to include the definition, functions and varieties of religion; the methods used to study it; and key figures who have shaped the development of this discipline.

301 Sanskrit (3)

(Same as LING 301)

306 Contemporary Practices of the World's Religions (3)

Prerequisite: completion of General Education (G.E.)

Category C.2. Comparative study of how the beliefs, practices and moral codes of the world's major religions influence the way nations and individuals behave in the spheres of daily life, culture, ethics, business and politics.

312 The Bible as Literature (3)

(Same as CPLT 312)

322 Asian Pacific Americans and Religion (3)

(Same as ASAM 322)

325 African-American Religions and Spirituality (3)

(Same as AFRO 325)

330T Hebrew Scriptural Studies (3)

Specific areas of Hebrew Scriptures, such as major and minor prophets, Psalms, values of wisdom writers, books of the Old Testament. May be repeated for credit with different subject content.

331T New Testament Studies (3)

Specific areas of the New Testament, such as the Synoptic Gospels, Pauline Corpus, Johannine Corpus, etc. May be repeated for credit with different subject matter.

335 Judaism, Christianity and Islam Compared (3)

Comparative study of the three great monotheistic traditions: Judaism, Christianity and Islam; their beliefs, practices, and structures.

337 American Indian Religions and Philosophy (3)

(Same as AFRO 337)

341 Hindu Tradition to 400 B.C.E. (3)

Prerequisite: completion of G.E. Category C.2. Hindu thought in its earliest period. Subjects will include an overview of Vedic literature, especially its religious content and the major rituals of the early Veda; philosophical developments in the Upanisads or later Veda; and related sacred writings. One or more sections offered online.

342 Hindu Tradition from 400 B.C.E. (3)

Prerequisite: completion of G.E. Category C.2. Hindu thought after the Vedic period. Subjects will include the beginnings of Hindu philosophies, classical Hindu practice, devotionalism, modern or neo-Hindu groups appearing in the 19th century, and the contributions of thinkers such as Ramakrishna and Gandhi.

348 Philosophy of Religion (3)

(Same as PHIL 348)

350T Major Christian Traditions (3)

Prerequisite: completion of G.E. Category C.2. Catholicism, Protestantism, Eastern Christianity or Post-Reformation Communities; historical development and self-understanding, liturgy, creeds, moral norms, canon laws and outstanding figures. May be repeated for credit with different content.

351 History and Development of Early Christian Thought (3)

Prerequisites: completion of the G.E. Category C.2. Historical study of the diversity of Christian beliefs, movements and key figures from New Testament times to the late Middle Ages, including such topics as important creeds and councils, spiritual movements, and central figures such as Augustine and Aquinas.

352 History and Development of Modern Christian Thought (3)

Prerequisites: completion of the G.E. Category C.2. Historical study of the diversity of Christian beliefs, movements and key figures from the late Middle Ages to the present, including such topics as the context and thinkers of the Reformation era, post-Reformation controversies, and recent debates and trends.

354T Topics in Buddhism (3)

Prerequisites: CPRL 105, 110 or 280. Historical survey of Buddhist doctrines, schools and practices in a particular region or regions, which are: South Asia, Tibet, China, Japan, Korea and Southeast Asia. May be repeated for credit with different content. (Same as PHIL 354T)

358 Comparative Mysticism (3)

Prerequisites: CPRL 105, 110 or equivalent. Comparative survey of mysticism as a recurring phenomenon within major religious traditions. Included are selected writings and representative male and female figures, analyzed from philosophical and psychological viewpoints. Definitions, terms, metaphors, techniques, and stages of the mystical experience.

361 History and Development of Jewish Thought: Biblical and Rabbinical Eras (3)

Prerequisites: completion of G.E. Category C.2. Hebrew Scriptures in their historical context, of the development of rabbinical Judaism and the Talmud, and of Judaism in the Christian and Muslim worlds down to the close of the Spanish "Golden Age" (1150).

362 History and Development of Jewish Thought: Medieval and Modern Eras (3)

Prerequisites: completion of G.E. Category C.2. Maimonides' legacy, the impact of mysticism, rise of anti-Semitism, emancipation of European Jews, the Holocaust, Israel's founding and history, and contributions of Jews to American culture.

367 Religion in Latino/a Life (3)

Prerequisite: completion of G.E. Category C.2. National and international expressions of Latino/a religiosity – from popular religion to Marian devotion to curanderismo – are explored through film, historical documents, poetry, theology, art, sociology and ethnic studies. (Same as CHIC 367)

370 New Religious Movements in the U.S.A. (3)

Beliefs, history, ritual and organizational make-up of non-traditional modern religions in America, such as Scientology, the Unification Church, Hare Krishna (ISKCON) and Rajneeshism as presented by guest speakers. Discussion of "cult," "sect" and the occult will comprise portion of course.

371 History and Development of Islamic Thought: The Beginning to 1258 (3)

Prerequisites: Completion of G.E. Category C.2. Islamic theology, law, culture and spirituality up to the close of the classical period in 1258. Interpretation of the Qur'an, formation of Hadith literature, development of Islamic law, divisions within Islam, rise of mysticism, contributions to science and art.

372 History and Development of Islamic Thought: 1259 to Modern Times (3)

Prerequisites: Completion of G.E. Category C.2. Islamic thought from the close of the classical period to the present, with emphasis on 20th century developments. Emergence of modern Middle East, reform movements, Islamic response to nationalism and modernity, recent Islamic resurgence.

375 Conceptions of the Afterlife (3)

Prerequisite: completion of the G.E. Category C.2; CPRL 110 recommended. How selected religious traditions have sought to answer the question "What happens when I die?" Resurrection, reincarnation, immortality of the soul, heaven and hell will be discussed.

380 Religion and Violence (3)

Prerequisite: completion of G.E. Category C.2 and D.1. Interdisciplinary exploration of major theories, developments and documents connected to the relationship between religious practices and motivations for engaging in, preventing or rejecting violent behavior.

381 Religion and Politics in the United States (3)

Prerequisite: completion of G.E. Category D.1. Relationship of politics and religion, especially in the U.S. The colonial and constitutional experience, Supreme Court decisions on religious issues, the principal theorists of moral discourse in the public forum, contemporary issues of concern. (Same as POSC 381)

397 Religion and Science (3)

Prerequisite: completion of the G.E. Category B.1 and B.2; C.2. Historical and contemporary interaction of religion and science through a study of religious thought and scientific method. Topics will include the scientific revolution, evolutionary theory and Quantum physics as these relate to religious faith.

400 Religion, the Media, and Contemporary Culture (3)

Prerequisite: AMST 201 or COMM 233 or HIST 180 or CPRL 105 or 110. Religion reporting in the secular media; the religious press in America; the influence of the media, both secular and religious, on the shaping of society's values; ethical dilemmas faced by reporters.

401T Studies in Religious Texts (3)

Prerequisite: CPRL 105 or 110. Study and interpretation of a selected portion of the scriptures of a particular religion, for example, the Hebrew Bible/Old Testament, the New Testament, the Qur'an, the Veda, the Pali Canon.

411 Religion and Film (3)

Prerequisites: CPRL 105, 110 or RTVF100. Religion and religious themes in film – a powerful medium through which we explore the meaning of life, relationships, moral quandaries and ontological issues.

412A History of the Christian Church to the Reformation (1517) (3)

(Same as HIST 412A)

412B History of the Christian Church From the Reformation to the Present (3)

(Same as HIST 412B)

412C History of the Jews (3)

(Same as HIST 412C)

417B Roman Empire (3)

(Same as HIST 417B)

425B The Reformation (3)

(Same as HIST 425B)

435A The Holocaust (3)

(Same as HIST 435A)

458 Sociology of Religious Behavior (3)

(Same as SOCI 458)

465A History of India (3)

(Same as HIST 465A)

465B History of India (3)

(Same as HIST 465B)

466A Islamic Civilization: Arab Era (3)

(Same as HIST 466A)

466B Islamic Civilization: Imperial Age (3)

(Same as HIST 466B)

485T Major Religious Thinkers and Concepts (3)

Prerequisites: 15 units in CPRL, including CPRL 105 or 110 and 300, and junior standing or approval of undergraduate adviser. Religious thinkers and concepts dealing with Western, Eastern and non-traditional religious ideas from ancient to modern times. Fulfills university upper-division baccalaureate writing requirement. May be repeated with different content.

499 Independent Study (1-3)

Supervised research projects in Comparative Religion to be taken with consent of instructor and the department chair. May be repeated for credit.

Computer Engineering

College of Engineering and Computer Science

PROGRAM COORDINATOR

Susamma Barua

PROGRAM OFFICE/WEBSITE

Engineering 100G

657-278-5987

<http://www.fullerton.edu/ecs/cpe>

PROGRAM OFFERED

Bachelor of Science in Computer
Engineering

PROGRAM FACULTY

Susamma Barua, Bin Cong, Kiranraj
George, Mohinder Grewal, Pradeep
Nair, Raman Unnikrishnan

INTRODUCTION

The undergraduate program in Computer Engineering at CSUF provides students with a strong theoretical and practical background in the computer hardware and software aspects of computer-based systems, along with the engineering analysis, design and implementation skills necessary to work between the two. The curriculum is based on an engineering philosophy, with emphasis on hardware more than software. Topics integrated into the curriculum include digital systems, computer organization and architecture, processor interfacing techniques, VHDL design, advanced electronics and embedded system design. Elective courses required by the program allow students to specialize in key engineering technology and computer science areas. The program also requires two semesters of multidisciplinary senior design project. The computer engineering program is designed to develop an ability to apply design and analysis knowledge to the practice of computer engineering in an effective and professional manner.

The proliferation of embedded systems in an increasing array of industrial products assures a ready market for graduates in the computer engineering discipline. Computer engineers are employed in a wide range of industries, including VLSI chip design and manufacturing, autonomous systems, consumer electronics, expert systems, smart devices, digital signal processing (DSP) systems, computer manufacturing from PDAs to super computers, and automatic controls. A majority of products, such as airplanes, automobiles, home appliances, consumer electronics, robots etc., use computers and employ computer engineers in their designs. Computer engineers are also needed in the design and implementation of computer networks for business, industrial and governmental institutions.

The Bachelor of Science degree in Computer Engineering is accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: 410-347-7700.

LEARNING GOALS AND STUDENT LEARNING OUTCOMES

The following learning goals and outcomes have been established for students pursuing a degree in Computer Engineering:

Program Educational Objectives

- A. Technical Growth – Graduates will be successful in modern engineering practice, integrate into the local and global workforce, and contribute to the economy of California and the nation
- B. Professional Skills – Graduates will continue to demonstrate the professional skills necessary to be competent employees, assume leadership roles, and have career success and satisfaction
- C. Professional Attitude and Citizenship – Graduates will become productive citizens with high ethical and professional standards, who make sound engineering or

managerial decisions, and have enthusiasm for the profession and professional growth

Program Outcomes

- (a) The ability to apply knowledge of mathematics, science and engineering
- (b) The ability to design and conduct experiments, as well as to analyze and interpret data
- (c) The ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) The ability to function on multi-disciplinary teams
- (e) The ability to identify, formulate, and solve engineering problems
- (f) An understanding of professional and ethical responsibility
- (g) The ability to communicate effectively
- (h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context
- (i) Recognize the need for and an ability to engage in life-long learning
- (j) A knowledge of contemporary issues
- (k) The ability to use the techniques, skills and modern engineering tools necessary for engineering practice

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (129 UNITS)

The Bachelor of Science degree in Computer Engineering includes 56 units of required courses in computer engineering/computer science/electrical engineering/general engineering, nine units of elective courses in computer engineering/computer science/electrical engineering, 34 units of foundation courses in mathematics and science, and 49 units of courses (30 unduplicated units) in General Education.

MATH 150A and MATH 270A must be completed with at least a "C" (2.0) grade. All other mathematics and physical science courses required for the degree must be completed with at least a "C minus" (1.7) grade to count as prerequisite courses to engineering courses or as credit towards the degree. All core courses in the major must be passed with a "C-" (1.7) or better.

Placement Examination

Students with a working knowledge of a high-level programming language such as C++ are encouraged to take the Computer Science placement examination to qualify for a CPSC 120 waiver.

Computer Engineering Core (56 units)

- CPSC 120 Introduction to Programming (3)
- CPSC 121 Programming Concepts (3)
- CPSC 131 Data Structures Concepts (3)

- CPSC 253U Workshop in UNIX (1)
- CPSC 332 File Structures and Database Systems (3)
- CPSC 351 Operating Systems Concepts (3)
- EGCP 180 Digital Logic and Computer Structures (3)
- EGCP/EGEE 280 Microcontrollers (3)
- EGCP/EGEE 281 Designing with VHDL (2)
- EGCP 371 Modeling and Simulation of Signals and Systems (3)
- EGCP 381 Computer Design and Organization (4)
- EGCP/EGCE/EGEE 401 Engineering Economics and Professionalism (3)
- EGCP 441 Advanced Electronics for Computer Engineers (4)
- EGCP 450 Embedded Processor Interfacing (4)
- EGCP 470 Multidisciplinary Projects in Computer Engineering - I (1)
- EGCP 471 Multidisciplinary Projects in Computer Engineering - II (2)
- EGEE 203 Electric Circuits (3)
- EGEE 203L Electric Circuits Laboratory (1)
- EGEE 303 Electronics (3)
- EGEE 303L Electronics Laboratory (1)
- EGEE 323 Engineering Probability and Statistics (3)

Technical Electives (9 units)

The electives shall constitute a coherent body of study consistent with the student's professional and educational objectives. Students take six units (nine units if student receives a waiver for CPSC 120) of adviser-approved elective courses. Students may choose the elective courses from a suggested list of courses in computer engineering, computer science and electrical engineering. The electives may also include an adviser-approved free elective.

Wireless Communication

- CPSC 433, 471
- EGEE 443, 460

Very Large Scale Integration (VLSI) and Optics

- EGEE 410, 455, 465, 480
- EGCP/EGEE 456

Microprocessors and Microcomputer Systems

- CPSC 459

Control Systems and Systems Engineering

- EGEE 416, 424, 425

Global Positioning Systems (GPS)

- EGEE 483, 483L

Software Engineering

- CPSC 362, 462, 463, 464, 466

Database System Design

- CPSC 431, 473, 474

Multimedia and Digital Game Development

CPSC 386, 484, 486, 487, 489

Intelligent Systems

CPSC 335, 481, 483

EGEE 430

Current Topics

EGCP 463

Free Elective

Adviser-approved upper division course (3)

Requirements in Related Fields (34 units)

Mathematics Requirement (19 units)

MATH 150A Calculus (4)

MATH 150B Calculus (4)

MATH 250A Multivariate Calculus (4)

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

MATH 270A Mathematical Structures I (3)

Science Requirement (15 units)

PHYS 225 Fundamental Physics: Mechanics (3)

PHYS 226 Fundamental Physics: Electricity and Magnetism (3)

PHYS 227 Fundamental Physics: Waves, Optics, and Modern Physics (3)

PHYS 225L, 226L, 227L Fundamental Physics: Laboratory (1, 1, 1)

BIOL 101 Elements of Biology (3)

General Education Courses

Area A: Core Competencies (9 units)

1. Oral Communication (3)

HONR 101B, HCOM 100, 102

2. Written Communication (3)

ENGL 101

3. Critical Thinking (3)

HONR 101A, HCOM 235, PHIL 105, 106, PSYC 110, READ 290

Area B: Scientific Inquiry and Quantitative Reasoning (18 units)

1. Physical Science (6)

PHYS 225 and 226

2. Life Science (3)

BIOL 101

3. Laboratory Experience (2)

PHYS 225L, 226L

4. Mathematics/Quantitative Reasoning (7)

MATH 150A, 270A

5. Implications and Explorations in Mathematics and Natural Sciences

Not applicable for engineering majors

Area C: Arts and Humanities (12 units)

1. Introduction to Arts (3)

ART 101, 201A, 201B, 311, 312, DANC 101, MUS 100, 101

2. Introduction to the Humanities (3)

Any lower-division course in this category listed in the current class schedule

3. Explorations in the Arts and Humanities (3)

Any upper-division course in this category listed in the current class schedule

4. Origins of the World Civilizations (3)

HIST 110A or 110B, 210A, 210B

Area D: Social Sciences (12 units)

1. Introduction to the Social Sciences (3)

EGCP/EGCE/EGEE 401

2. World Civilizations and Cultures

Not applicable for engineering majors

3. American History, Institutions and Values (3)

AFRO 190, AMST 201, CHIC 190, HIST 180, 190, HONR 201A

4. American Government (3)

HONR 201B, POSC 100

5. Explorations in Social Sciences (3)

Any upper-division course in this category listed in the current class schedule

Area E: Lifelong Learning and Self Development (3 units)

Not applicable for engineering majors

Area Z: Cultural (3 Units)

At least one star (*) course in Sections C.3 and D.5

Upper-Division Writing Requirement

In addition to the Examination in Writing Proficiency (EWP), completing both of the following courses fulfills the upper-division English writing requirement:

EGCP 441 Advanced Electronics for Computer Engineers (4)

EGCP 471 Multidisciplinary Projects in Computer Engineering – II (2)

Written work for the two courses must meet professional standards. Both courses must be passed with a grade of “C” (2.0) or better to satisfy the writing requirement.

COMPUTER ENGINEERING COURSES

Computer Engineering Courses are designated as EGCP in the class schedule.

180 Digital Logic and Computer Structures (3)

Prerequisites: CPSC 120. Binary number system and arithmetic, computer codes, Boolean algebra, logic gates, K-map minimization, sequential circuits, memory devices, state diagram and table, computer architecture, memory, Arithmetic Logic Unit, and control unit. (2 hours lecture, 2 hours laboratory)

280 Microcontrollers (3)

Prerequisite: EGEE 245 or EGCP 180. Microcontrollers, microcontroller programming model and instruction set, assembler directives, writing and debugging microcontroller assembly language routines, microcontroller memory system, microcontroller communication systems. (1 hour lecture, 4 hours laboratory) (Same as EGEE 280)

281 Designing with VHDL (2)

Prerequisites: CPSC 120 or 121; and EGEE 245 or EGCP 180. Introduction to various modeling methods, timings, events, propagation delays and concurrency, the language constructs, data representations and formats, and physical attributes. (1 hour lecture, 2 hours laboratory) (Same as EGEE 281)

371 Modeling and Simulation of Signals and Systems (3)

Prerequisites: EGEE 303 and MATH 250B. Modeling and simulation of physical systems, mathematical description of systems, transfer functions, poles and zeros, frequency response, continuous and discrete-time convolution, continuous and discrete Fourier transforms, Laplace and Z transforms, Fast Fourier Transforms, simulation using Matlab.

381 Computer Design and Organization (4)

Prerequisites: EGCP 281 and EGEE 303. Computer system, central processing unit (CPU) organization and design, instruction set and addressing modes, microprogrammed control unit design, cache memory, internal memory, virtual memory, input/output interfacing, parallel processors, superscalar processors (2 hours lecture, 4 hours laboratory).

401 Engineering Economics and Professionalism (3)

(Same as EGCE 401/EGEE 401)

441 Advanced Electronics for Computer Engineers (4)

Prerequisites: EGCP 281 and EGEE 303. High speed CMOS, biCMOS, CPLDs, FPGAs, A/D, D/A, transducers and optics; integration of these devices into complete systems. (2 hours lecture, 4 hours laboratory)

450 Embedded Processor Interfacing (4)

Prerequisites: EGCP 280, 381, 441, EGEE 323, CPSC 351, MATH 270A. Techniques of interfacing based on speed, timings, synchronization, noise, cross-talk, hazards and race conditions. Interfacing specifications of the processor data, address and control buses. (2 hours lecture, 4 hours laboratory)

456 Introduction to Logic Design in Nanotechnology (3)

Prerequisites: EGCP 180 or EGEE 245. Promising novel nanoelectronic technologies and logic primitives for such technologies, applicable basic logic design technique, design models for spatial dimensions, applicable world-level data structures, multilevel circuit design, testability and observability, tolerance and reliable computing. (Same as EGCP/EGEE 456)

463 Current Topics in Computer Engineering (3)

Prerequisites: junior/senior standing in computer engineering and consent of instructor. Topics of contemporary interest from the perspective of current research and development in computer engineering. Lectures by guest professionals.

470 Multidisciplinary Projects in Computer Engineering - I (1)

Corequisite: EGCP 450. First course in the two-course senior design sequence. Student teams develop a hardware/software project, from conception through implementation and testing, under an instructor's supervision. Teams first explore technology issues related to the projects and then prepare complete design proposals. (1 hour lecture)

471 Multidisciplinary Projects in Computer Engineering - II (2)

Prerequisite: EGCP 450 and 470. Second course in the two-course senior design course in which student teams develop a hardware/software project under the supervision of the instructor. Emphasizes development of design skill, based upon previous and current courses and laboratory experience. (4 hours laboratory)

499 Independent Study (1-3)

Prerequisite: application for independent study approved by the instructor and the Computer Engineering Program Coordinator. Independent study or research under the direction of a full-time faculty member. May be repeated for a maximum of three units of credit.

Computer Science

College of Engineering and Computer Science

DEPARTMENT CHAIR

Mariko Molodowitch

DEPARTMENT OFFICE/WEBSITE

Computer Science 522
657-278-3700
<http://cs.fullerton.edu>

PROGRAMS OFFERED

Bachelor of Science in Computer Science
Master of Science in Computer Science
Minor in Computer Science
Master of Science in Software Engineering

FACULTY

Susamma Barua, Ning Chen, James Choi, Bin Cong, Spiros Courellis, David Falconer, Floyd Holliday, Chang-Hyun Jo, Barbara Laguna, Demetrios Michalopoulos, Mariko Molodowitch, Christopher Ryu, Michael Shafae, Shawn Wang, Kevin Wortman

INTRODUCTION

The undergraduate computer science program at Cal State Fullerton offers students a comprehensive foundation that will permit them to adapt to new technologies and new ideas. The program spans a wide range, from its theoretical and algorithmic foundations to cutting-edge developments in bioinformatics, communications systems, databases, digital game design, intelligent systems, software engineering, and other exciting areas.

The program provides students with a comprehensive background to take on varied categories of work. They are offered the necessary theories, principles and practices to design and implement software that permits them to take on challenging programming jobs. They have the opportunity to become well-equipped to devise new ways to use computers. The theoretical foundations available in the program provide the background to help develop effective ways to solve computing problems. This background allows students to determine the best possible ways to store information in databases, send data over networks, and display complex images.

The Bachelor of Science degree in Computer Science is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: 410-347-7700.

LEARNING GOALS AND STUDENT LEARNING OUTCOMES

The following learning goals and student learning outcomes have been established for students pursuing a degree in Computer Science:

Program Educational Objectives

- A. Technical Growth – Graduates will be successful in modern computing practice, integrate into the local and global workforce, and contribute to the economy of California and the nation
- B. Professional Skills – Graduates will continue to demonstrate the professional skills necessary to be competent employees, assume leadership roles, and have career success and satisfaction
- C. Professional Attitude and Citizenship – Graduates will become productive citizens with high ethical and professional standards, who make sound technical or managerial decisions, and have enthusiasm for the profession and professional growth

Program Outcomes

- Able to apply knowledge of computing and mathematics appropriate to the discipline
- Able to analyze a problem, and identify and define the computing requirements appropriate to its solution
- Able to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices

- Able to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs
- Able to apply design and development principles in the construction of software systems of varying complexity
- Able to function effectively on teams to accomplish a common objective
- Able to communicate effectively with a range of audiences
- Recognize the need for and able to engage in continuing professional development
- Able to use current techniques, skills, and tools necessary for computing practice
- Able to analyze the local and global impact of computing on individuals, organizations, and society
- Demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities

BACHELOR OF SCIENCE IN COMPUTER SCIENCE (124 UNITS)

The degree program for the Bachelor of Science in Computer Science assumes that students have already obtained a working knowledge of personal computing fundamentals and applications, including word processing, spreadsheets, database systems, e-mail systems and presentation graphics.

Computer Science Placement Examination

A Computer Science student with non-academic experience in computer programming should take the Computer Science Placement Examination. This exam is given four times per year and is used to assess the student's background and assure proper enrollment in the appropriate course. Students new to programming should enroll in CPSC 120.

Computer Science Core (46 units)

Lower-Division Core (18 units)

- CPSC 120 Introduction to Programming (3)
- CPSC 121 Programming Concepts (3)
- CPSC 131 Data Structures Concepts (3)
- CPSC 223H Visual Basic Programming (3)
OR CPSC 223J Java Programming (3)
OR CPSC 223N C# Programming (3)
- CPSC 240 Computer Organization and Assembly Language (3)
- CPSC 254 UNIX and Open Source Systems (3)

Upper-Division Core (28 units)

Students must take and pass the Examination in Programming Proficiency (EPP) before taking most upper-division Computer Science courses. Students who do not pass the EPP will be required to take CPSC 301.

- CPSC 311 Technical Writing for Computer Science (3)
- CPSC 315 Social and Ethical Issues in Computing (1)

- CPSC 323 Programming Languages and Translation (3)
- CPSC 332 File Structures and Database Systems (3)
- CPSC 335 Problem Solving Strategies (3)
- CPSC 351 Operating Systems Concepts (3)
- CPSC 362 Foundations of Software Engineering (3)
- CPSC 440 Computer System Architecture (3)
- CPSC 471 Computer Communications (3)
- CPSC 481 Artificial Intelligence (3)

Elective Track Requirements (15 units)

Select an Elective Track to support specific career goals.

Multimedia and Digital Game Technologies

CPSC 386, 484, 486

Plus any six units of adviser-approved, upper-division CPSC courses

Internet and Enterprise Computing Technologies

CPSC 431, 473, 476

Plus any six units of adviser-approved, upper-division CPSC courses

Software Engineering

CPSC 462, 464; 463 OR 466

Plus any six units of adviser-approved, upper-division CPSC courses

Scientific Computing

Completing the Mathematics courses listed below also meets the requirements for a minor in Mathematics.

MATH 250A, 250B, 340, 370

Plus any three units of adviser-approved 400-level CPSC courses

Custom

With the approval of an academic adviser, students may develop a track based on their career goals or specific academic interests or specific themes. A custom track consists of upper-division Computer Science or related courses. At least nine units must be 400-level Computer Science courses with no more than three units selected from courses numbered 490-499. In addition to courses already listed in the other tracks, students may also include the following courses:

CPSC 303, 322L, 376, 433, 459, 477, 483, 485, 491T, 495, 499

Mathematics Requirements (18 units)

- MATH 150A,B Calculus (4,4)
- MATH 270A,B Mathematical Structures (3,3)
- MATH 338 Statistics Applied to Natural Sciences (4)

Science Requirements (12 units)

Physical Science (8 units)

Choose one of the following:

Physics

- PHYS 225/225L Fundamental Physics: Mechanics/Laboratory (4)
- PHYS 226/226L Fundamental Physics: Electricity and Magnetism/Laboratory (4)

Chemistry

CHEM 120A General Chemistry (5)

CHEM 125 General Chemistry for Engineers (3)

Geology

GEOL 101/101L Physical Geology/Laboratory (4)

GEOL 201/201L Earth History/Laboratory (4)

Biological Science (4 units)

BIOL 101 Elements of Biology (3)

BIOL 101L Elements of Biology Laboratory (1)

General Education

Because of high unit requirements for a major in Computer Science, there is a six-unit exemption in General Education (G.E.). Students are strongly urged to consult with an adviser in the Academic Advising Center, UH-123 to help develop their G.E. program.

Minimum Academic Requirements

A grade of "C-" (1.7) or higher is required in all courses applied to the core. Exception: up to six units of credit with grades in the range "D-" (0.7) through "D+" (1.3) may be earned in elective tracks, mathematics and science courses only. A mathematics course taken to satisfy GE category B.4 and the upper-division writing course (CPSC 311) must be passed with a minimum grade of "C".

MINOR IN COMPUTER SCIENCE (15 UNITS)

CPSC 120 Introduction to Programming (3)

CPSC 121 Programming Concepts (3)

CPSC 131 Data Structures Concepts (3)

CPSC 313 The Computer Impact (3)

Three units of adviser-approved, upper-division courses

MASTER OF SCIENCE IN COMPUTER SCIENCE (30 UNITS)

Admission to Graduate Standing – Conditionally Classified

A bachelor's degree from an accredited institution with a grade-point average of at least 2.5 is required. Any deficiencies must be made up as listed below.

Classified Graduate Standing

Achievement of this status requires the following:

1. approval of a formal study plan (see description below) by the Computer Science Graduate Committee and the Associate Vice President for Graduate Studies and Research (or designee);
2. satisfactory completion of no more than nine units on the study plan;
3. satisfactory completion of the following courses or equivalents, including prerequisites – CPSC 121, 131, 240, 323, 335, 351, 362 and MATH 270A,B, 338; and

4. competency in written communication in English must be demonstrated by a passing score on the California State University Examination in Writing Proficiency. The requirement must be satisfied before the student can be classified and before 500-level courses may be attempted. The student who fails to pass the EWP test may complete CPSC 311 with a "B" (3.0) or better as an alternative to the EWP requirement.

The courses provide an adequate basis for graduate work, while not unfairly precluding admission of persons without a bachelor's degree in computer science. These courses have prerequisites, and students without preparation in a closely related degree may have additional work to complete. Refer to the catalog descriptions for prerequisites of each course deficiency.

Students with knowledge equivalent to any or all of these prerequisite courses are encouraged to satisfy such prerequisites by advanced placement examinations. Consult a Computer Science graduate adviser for further information.

Study Plan

Prior to admission to classified graduate standing in Computer Science, each student, with the aid of a Computer Science graduate adviser, shall prepare and submit for approval by the Computer Science Department graduate committee a formal study plan consisting of 400-level and graduate coursework.

This shall include CPSC 440, 462, 589, 597 or 598; one of 541, 542, 543, 544, 545, 546, 547 or 548; and 15 units of electives (nine units must be at the 500 level). At least 15 units shall represent courses offered by the Department of Computer Science. Courses offered by other disciplines, not listed here, and related to the student's objectives in Computer Science may be approved by petition to the Department of Computer Science.

All coursework in the study plan must be completed with a GPA of at least 3.0.

Graduate Student Advisement

The graduate program adviser provides overall supervision of the graduate program. The individual student chooses an adviser for the thesis or project from the Computer Science Department's full-time faculty on the basis of the student's particular interests and objectives.

COMPUTER SCIENCE COURSES

Courses are designated as CPSC in the class schedule.

Prerequisites for Computer Science courses may be waived only by department petition.

103 Introduction to Personal Computer Applications (3)

Introduction to use and application of personal computers: word processing, spreadsheets, database systems, e-mail systems and World Wide Web. Evaluation of personal computers and software. (2 hours lecture, 2 hours laboratory)

120 Introduction to Programming (3)

Corequisite: MATH 125. Introduction to the concepts underlying all computer programming: design and execution of programs; sequential nature of programs; use of assignment, control, and input/output statements to accomplish desired tasks; design and use of functions. Structured and object-oriented methodologies. (1.5 hours lecture, 3.0 hours laboratory)

121 Programming Concepts (3)

Prerequisite: CPSC 120 or passing score on Computer Science Placement Exam. Introduction to programming of digital computers; subroutines, functions and structure of algorithms; elementary input/output; arrays; strings and data types; documentation. (2 hours lecture, 2 hours laboratory)

131 Data Structures Concepts (3)

Prerequisites: CPSC 121 or sufficient score on the Computer Science Placement Exam. Data structures: lists, stacks, queues, linked structures, binary search trees, hashing, graphs, sorting and searching. Implementation and use of basic data structures.

223H Visual BASIC Programming (3)

Prerequisite: CPSC 131. Elements of Visual BASIC, forms and controls, properties, mouse events, multiple-document interface, processing files, accessing databases, dynamic data exchange, object linking and embedding. (2 hours lecture, 2 hours laboratory)

223J Java Programming (3)

Prerequisite: CPSC 131. Characteristics of Java: portable, robust, secure, object-oriented, high performance; using the Java environment; server administration; types, expressions, and control flow; classes, interfaces, and packages; threads; exceptions; class libraries; Java for the Internet; tools, the Java Virtual machine. (2 hours lecture, 2 hours lab per week)

223N C# Programming (3)

Prerequisite: CPSC 131. Characteristics of C#, object-oriented design concepts, control structures, methods, arrays, classes, objects, inheritance, polymorphism, exception handling, graphical user interfaces, multithreading, characters, strings, files, streams. Rudiments of the Unified Modeling Language. Software development assignments. (2 hours lecture, 2 hours laboratory)

240 Computer Organization and Assembly Language (3)

Prerequisites: CPSC 131 and MATH 270A or 280. Digital logic and architecture of a computer system, machine level representation of data, memory system organization, structure of low-level computer languages; machine, assembly and macro language programming; principles of assembler operation, input-output programming, interrupt-exception handling. Laboratory programming assignments. (2 hours lecture, 2 hours laboratory)

253U Workshop in UNIX (1)

Prerequisite: CPSC 121 or EGGN 205. Workshop in the use of the UNIX operating system. Offered Credit/No Credit only. (2 hours activity)

254 UNIX and Open Source Systems (3)

Prerequisite: CPSC 131. UNIX operating systems, various open source applications and systems, open source programming languages and open source software development techniques.

301 Programming Lab Practicum (2)

Prerequisites: CPSC 131 and 253U or 254. Intensive programming covering concepts learned in lower-division courses. Procedural and object oriented design, documentation, arrays, classes, file input/output, recursion, pointers, dynamic variables, data and file structures. Credit/no credit only.

303 Multimedia Concepts (3)

Prerequisites: CPSC 121 and completion of the General Education (G.E.) critical thinking requirement. Components and issues associated with multimedia technology, applications of multimedia and its evolution. Laboratory activities include developing a multimedia application using a PC-based authoring tool. (2 hours lecture, 2 hours laboratory)

311 Technical Writing for Computer Science (3)

Prerequisite: ENGL 101 and CPSC 131. Practice in developing documentation skills as used in the computer field. Topics include proposals, feasibility studies, user guides and manuals, business communication and technical presentation. Case studies in professional ethics. Written and oral reports required.

313 The Computer Impact (3)

Prerequisites: upper-division standing and one course from G.E. Category B.4. Effect of computer use on individuals and organizations. Side effects of innovative technology and the resulting changes to organizations, social institutions, and human perceptions of events. Personal responsibility, legal ramifications and educational implications. Hands-on use of e-mail and the World Wide Web.

315 Social and Ethical Issues in Computing (1)

Prerequisite: CPSC 311. Relevant issues that responsible professionals will face in a complex technological society. Professional ethics, computer control, piracy, encryption, benefits and downside of computers, privacy and computer crimes. Written and oral reports required.

322L Introduction to Computer Aided Design (3)

(Same as EGME 322L)

323 Programming Languages and Translation (3)

Prerequisites: Examination in Programming Proficiency. Basic concepts of programming languages and principles of translation. Topics include history of programming languages, various programming paradigms, language design issues and criteria, development of practical translators for modern programming languages.

332 File Structures and Database Systems (3)

Prerequisite: CPSC 131. Fundamental theories and design of database systems, the Structured Query Language (SQL), basic concepts and techniques of data organization in secondary storage. Topics include introduction to database systems, ER model, relational model, index structures, and hashing techniques.

335 Problem Solving Strategies (3)

Prerequisites: Examination in Programming Proficiency, MATH 270B, 338. Complexity classes, including undecidable and NP-complete problems. Problem solving strategies applied to parallel and distributed processing, numerical computation, and artificial intelligence. Greedy methods, divide-and-conquer, dynamic programming, approximation and search methods.

351 Operating Systems Concepts (3)

Corequisite: Examination in Programming Proficiency or CPSC 301. Resource management, memory organization, input/output, control process synchronization and other concepts as related to the objectives of multi-user operating systems.

362 Foundations of Software Engineering (3)

Prerequisites: CPSC 311 and Examination in Programming Proficiency. Basic concepts, principles, methods, techniques and practices of software engineering. All aspects of the software engineering (CASE) tools are used.

376 Client/Server Systems with Java (3)

Prerequisites: CPSC 223J, 351. Concepts and architectures of client/server systems using Java. Techniques for building client/server systems, multi-threading and network programming.

386 Introduction to Game Design and Production (3)

Prerequisite: CPSC 131. Current and future technologies and market trends in game design and production. Game technologies, basic building tools for games and the process of game design, development and production.

431 Database Systems (3)

Prerequisites: CPSC 332 and Examination in Programming Proficiency. Database design and applications, database programming using SQL and other languages, query optimization, transaction management.

433 Data Security and Encryption Techniques (3)

Prerequisites: CPSC 311, 351, MATH 270B. System security and encryption. Current issues in security, encryption and privacy of computer based systems.

440 Computer System Architecture (3)

Prerequisite: CPSC 240. Computer performance, price/performance, instruction set design and examples. Processor design, pipelining, memory hierarchy design and input/output subsystems.

451 Advanced Operating Systems (3)

Prerequisite: CPSC 351. Internal structures of a modern operating system. Specific topics include processes, process communication, file systems, networking, and the I/O system. There will be several programming assignments which will utilize calls and other low-level interfaces.

459 Micro-Computer Software Systems (3)

Prerequisite: CPSC 351. Design and implementation of software. Analysis of a micro-computer operating system and working on a team to implement a significant programming assignment.

462 Software Design (3)

Prerequisite: CPSC 362. Concepts of software modeling, software process and some tools. Object-oriented analysis and design and Unified process. Some computer-aided software engineering (CASE) tools will be recommended to use for doing homework assignments.

463 Software Testing (3)

Prerequisite: CPSC 362. Software testing techniques, reporting problems effectively and planning testing projects. Students apply what they learned throughout the course to a sample application that is either commercially available or under development.

464 Software Architecture (3)

Prerequisite: CPSC 362. Basic principles and practices of software design and architecture. High-level design, software architecture, documenting software architecture, software and architecture evaluation, software product lines, and some considerations beyond software architecture.

466 Software Process (3)

Prerequisite: CPSC 362. Practical guidance for improving the software development and maintenance process. How to establish, maintain and improve software processes. Exposure to some common process models, such as CMM, CMMI, PSP and TSP.

471 Computer Communications (3)

Prerequisite: CPSC 351. Introduction to digital data communications. Terminology, networks and their components, common-carrier services, telecommunication facilities, terminals, error control, multiplexing and concentration techniques.

473 Web Programming and Data Management (3)

Prerequisite: CPSC 332. Various techniques for developing Web-based database applications using software engineering methodology. Introduce concept and architecture of Web servers, Web database design techniques, client/server side programming, and Web applications tools and techniques.

474 Distributed Computing Using Web Service and .NET Remoting (3)

Prerequisite: CPSC 473. Concepts of distributed computing and Web services, the applications of XML and Web services, distributed applications development techniques with Web services and .NET Remoting.

476 Java Enterprise Application Development (3)

Prerequisites: CPSC 223J, 351. Concepts and architecture of the J2EE platform, component technologies, platform roles, platform services, services technologies, communication technologies, Enterprise Java Beans (EJBs) and Java enterprise application development using Web logic or Web sphere.

477 Introduction to Grid Computing (3)

Prerequisite: CPSC 351. Introduction to various aspects of grid computing emphasizing integration of homogeneous and inhomogeneous computational resources to provide high-performance computing seamlessly, efficiently and securely; using Globus toolkit as the integration framework for demonstrating and implementing various aspects of grid computing.

481 Artificial Intelligence (3)

Prerequisite: CPSC 335. Use of computers to simulate human intelligence. Topics include production systems, pattern recognition, problem solving, searching game trees, knowledge representation and logical reasoning. Programming in AI environments.

483 Data Mining and Pattern Recognition (3)

Prerequisite: CPSC 335. Classification techniques, discriminant functions, training algorithms, potential function theory, supervised and unsupervised learning, feature selection, clustering techniques, multidimensional rotations and rank ordering relations.

484 Principles of Computer Graphics (3)

Prerequisites: Examination in Programming Proficiency and MATH 150B, 270B. Examination and analysis of computer graphics; software structures, display processor organization, graphical input/output devices, display files. Algorithmic techniques for clipping, windowing, character generation and viewpoint transformation.

485 Computational Bioinformatics (3)

Prerequisites: upper-division standing, BIOL 101, CPSC 131. Algorithmic approaches to biological problems. Specific topics include motif finding, genome rearrangement, DNA sequence comparison, sequence alignment, DNA sequencing, repeat finding and gene expression analysis.

486 Game Programming (3)

Prerequisite: CPSC 386; corequisite, CPSC 484. Principles of game programming (2D game development techniques) and multimedia entertainment techniques (sound, animation, etc.).

487 Advanced Game Programming (3)

Prerequisite: CPSC 486. Building on the techniques learned from the previous game development course (2D Game Development, sound, animation), students learn more advanced game programming techniques (3D Game Development, real-time rendering, physics simulation).

489 Game and Development Project (3)

Prerequisite: CPSC 487; corequisite: CPSC 481. Develop realistic games based on the theories and techniques learned from the previous classes. Work independently (or by teams). Students will present and demonstrate their work regularly.

491T Variable Topics in Computer Science (1-3)

Prerequisites: junior or senior standing and consent of instructor. Lectures and/or workshop covering various current Computer Science topics. Course may be repeated for up to 3 units. Course topics may be taken only once.

495 Internship in Computer Science (1-3)

Prerequisites: Computer Science or related major and consent of instructor. Practical experience relevant to computer science in government or private agencies. Written and oral reports required.

499 Independent Study (1-3)

Prerequisite: approval by the computer science chair. Special topic in Computer Science, selected in consultation with and completed under the supervision of instructor.

531 Advanced Database Management (3)

Prerequisite: CPSC 431. Implementation techniques for query analysis, data allocation, concurrency control, data structures, and distributed databases. New database models and recent developments in database technology. Student projects directed to specific design problems.

541 Systems and Software Standards and Requirements (3)

Prerequisite: CPSC 362 or equivalent work experience. SESC framework and the IEEE Software Engineering Standards. Covers establishing the following standards: Software Life Cycle Processes, Work Product Standards, Process Standards, Requirement Analysis and Management and System Integration. Framework of CMMI introduced, and a number of practical lessons discussed.

542 Software Verification and Validation (3)

Prerequisite: CPSC 362 or equivalent work experience. How to ensure that a high quality software product is developed. Theory and practice of software verification and validation (V&V), such as Software integrity levels, Minimum V&V tasks for each software integrity level, walkthroughs, inspections and Cleanroom. Software testing topics: white- and black-box testing, boundary value analysis, equivalence class partitioning, unit testing, functional testing and how to create test plans.

543 Software Maintenance (3)

Prerequisite: CPSC 362 or equivalent work experience. Theory and practice of maintaining large-scale software and how to construct maintainable software. Maintenance framework, along with maintenance process, process management and maintenance measures. Topics include fundamentals of software change, implications of software change, maintenance process models, program understanding, reusability for maintenance, reverse engineering, maintenance testing, software configuration management and tools in maintenance.

544 Advanced Software Process (3)

Prerequisite: CPSC 362 or equivalent work experience. Advanced guidance for defining and improving the software development process. Concepts of software maturity framework, principles of process improvement and software process assessment. Current topics such as CMMI and SCAMPI.

545 Software Design and Architecture (3)

Prerequisite: CPSC 362 or equivalent work experience. Advanced software design and architecture principles focusing a software engineering approach to the development process. Topics include architecture business cycle, quality attributes, attribute-driven design method, architectural styles, design patterns, software product lines and component-based design.

546 Modern Software Management (3)

Prerequisite: CPSC 362 or equivalent work experience. Modern project management methodologies and techniques. Software development process. Planning, estimating, organizing, directing, monitoring, controlling software projects and managing risks. Other related software management issues, such as infrastructure, quality software development, project and product metrics, and external factors.

547 Software Measurement (3)

Prerequisite: CPSC 362 or equivalent work experience. Current software measurement practices. Topics include: how to establish an effective software metrics program in a software organization; how to measure software product, project and process; how to apply Statistical Process Control and other statistical techniques in software development process. High maturity concepts defined in CMMI model will be discussed. Stresses a practitioner-based approach.

548 Professional, Ethical and Legal Issues for Software Engineers (3)

Prerequisite: CPSC 362 or equivalent work experience. Professional, legal and ethical issues pertaining to software engineering. Topics include professional codes of ethics, intellectual property laws, computer privacy and human-computer interaction. Relevant regulatory documents and their applications.

551 Operating Systems Design (3)

Prerequisite: CPSC 351. Design and evaluation techniques for controlling automatic resource allocation, providing efficient programming environments and appropriate user access to the system, and sharing the problem solving facilities.

558 Advanced Computer Networking (3)

Prerequisite: CPSC 471. System-oriented view of computer network design, protocol implementation, networking, high-speed networking, network management, computer network performance issues.

566 Advanced Computer Graphics (3)

Prerequisite: CPSC 484. Three-dimensional: reflection models, shading techniques, rendering process, parametric representation, ray tracing, radiosity, texture, anti-aliasing, animation, color science.

572 Survey of Pharmaceutical and Medical Devices Technology (3)

Prerequisites: enrollment in the Master of Biotechnology (MBt) degree program or consent of instructor, and MGMT 540. Corequisites: BIOL/CHEM 570) BIOL/MATH 571. Technologies involved in developing drug and medical devices, factors considered in designing medical devices, characteristics of good drug manufacturing practices and validation processes necessary to meet regulatory requirements. Students will work collaboratively to solve problems. (Same as BIOL 572)

583 Expert Systems Design Theory (3)

Prerequisite: CPSC 481. Knowledge representation and search strategies for expert systems; logic programming; expert system tools. Project.

585 Artificial Neural Networks (3)

Prerequisite: CPSC 481. Principles of neural networks; neural networks paradigms, software implementations, applications, comparison with statistical methods, use of fuzzy logic; project.

589 Seminar in Computer Science (3)

Prerequisites: one 400-level course in Computer Science and passing score on the Examination in Writing Proficiency. Research methods in computer science. Student presentations covering current topics, research advances, updating of concepts and verifications of principles of computer science. (Examples: large-scale parallelism, Internet security, design for user interfaces, computers in instruction).

597 Project (3)

Prerequisites: classified graduate standing, approval of the computer science graduate adviser and CPSC 589.

598 Thesis (3)

Prerequisites: classified graduate standing, approval of the computer science graduate adviser and CPSC 589.

599 Independent Graduate Research (1-3)

Prerequisites: classified graduate standing, approval of the computer science department chair and CPSC 589. Special topic in computer science, selected in consultation with and completed under supervision of a full-time faculty member.



Counseling

College of Health and Human Development

INTRODUCTION

The Department of Counseling offers a Master of Science in Counseling, emphasizing community counseling, which leads to eligibility for state licensure as a Licensed Marriage and Family Therapist (LMFT) and Licensed Professional Clinical Counselor (LPCC).

LMFT Licensure: Our program is approved by the California State Board of Behavioral Sciences (BBS) to meet the educational requirements for MFT licensure. By completing this degree, students have met the curricular requirements for the degree for pre-2012 (pre-Senate Bill 33) and the new 2012 requirements (SB33). **LPCC Licensure:** Graduates of the program are eligible to pursue licensure as a Licensed Professional Clinical Counselor. The degree program is designed to meet the requirements of the BBS as set forth in Business and Professional Code Section 4999.32 (or 4999.33, which takes effect Aug. 1, 2012).

The Council for Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the Council for Higher Education Accreditation (CHEA), has granted accreditation until March 31, 2015, to the following program in the Department of Counseling at California State University, Fullerton: Community Counseling (M.S.).

We emphasize training clinicians who can serve the needs of individuals, couples, families and groups in their communities. We train students to provide counseling to adults, children, adolescents, couples and families. Our students learn to diagnose and design treatment plans, provide short-term and long-term counseling, conduct group therapy, work with addictions, provide crisis intervention, provide career counseling and maintain a professional identity as a counselor and marriage and family therapist in the community. The program strongly emphasizes a multicultural perspective. We are a culturally diverse faculty that specializes in working with students from different backgrounds. We prepare culturally competent counselors who will be sensitive to the diverse cultural heritages, lifestyles and special needs of individuals and families living in our community.

LEARNING GOALS AND STUDENT LEARNING OUTCOMES

The following learning goals and learning outcomes have been established for students pursuing an M.S. degree in Counseling:

Clinical Skills

- Demonstrate effective individual (adults and children), couples, families, and group counseling skills which facilitate client growth
- Demonstrate the ability to evaluate progress toward treatment goals during practicum experiences

DEPARTMENT CHAIR

Leah Brew

DEPARTMENT OFFICE/WEBSITE

Education Classroom 405

657-278-8444

<http://hhd.fullerton.edu/counsel>

PROGRAMS OFFERED

Master of Science in Counseling

FACULTY

Leah Brew, Joseph M. Cervantes, Sapna Batra Chopra, Matt Englar-Carlson, Jeffrey Kottler, Olga L. Mejía, Thuy Nguyen, Mary Read, David S. Shepard, and Rebekah Smart

- Develop an awareness of and appreciation for social and cultural influences on human behavior and to recognize the impact of individual differences on the counseling process
- Recognize client issues in the context of lifespan development
- Recognize counter-transference that may be interfering with the client's process, minimize counter-transference through personal work, and understand how counter-transference can be used in therapy
- Identify ethical and legal issues, and apply them appropriately using the decision model

Conceptualization and Treatment Planning Skills

- Gain significant knowledge of major counseling theories in the context of individual, couple, family and group counseling, and apply this knowledge to the actual counseling process
- Understanding and application of the DSM-IV-R, psychopharmacology, and various psychological assessment instruments
- Recognition and treatment of clients with addictive behaviors

Professional Identity

- Demonstrate an understanding of the counseling profession, develop an identity as a counselor and demonstrate a willingness to provide counseling and consultation services with the ethical guidelines of the counseling profession
- Use physical, cognitive, social and emotional counseling strategies which include principles of wellness, human development, and prevention in addressing clinical issues
- View clients from a systemic (micro system) perspective

Critical Thinking and Problem Solving

- Become critical consumers of professional research and literature
- Formulate sound conceptualizations, recognizing bias and misattribution, and reflecting on ways in which therapeutic or research conversations are influenced through language
- Collect and organize random or incomplete information for clinical hypotheses, and systematically inquire about the multiple and varied perspectives of a client
- Integrate prior learning, create a formal system of inquiry, and apply it in a "practicum of research" which connects the work of researchers and clinicians
- Draw from theoretical and empirical literature, field interviews, and personal experience to develop a knowledge base about unique issues relevant to Californians served by marriage and family therapists and counselors

Write Effectively

- Write about various kinds of texts so as to articulate the dimensions of the work
- Demonstrate an awareness of audience, purpose and various rhetorical forms as well as a high level writing within APA format

MASTER OF SCIENCE IN COUNSELING (60 UNITS)

Admission Requirements

The Department of Counseling welcomes applicants from diverse academic, social and cultural backgrounds. Preparation for the counseling profession is rigorous and multifaceted, necessitating the student's development in interpersonal, self-reflective and academic realms. Admission is based upon indicators of the applicant's potential for becoming an effective counseling practitioner including, but not limited to grade point average (GPA), letters of reference, personal statement and departmental interview. Admission is not based on any single factor, but on a composite assessment of all factors and is at the sole discretion of the Counseling Department's Admissions Committee.

For information on admission, including deadlines and the admissions process, please visit our website: <http://hhd.fullerton.edu/counsel>.

Classification and Advancement to Practicum

All students begin the program as conditionally classified students. During the first semester of graduate coursework, students meet with the New Student Adviser to write their study plans. After the study plan has been approved by the Office of Graduate Studies, students are considered classified.

Each student undergoes a comprehensive evaluation in the semester prior to his or her first Practicum (COUN 530). This evaluation determines advancement to practicum. Advancement to practicum requires: 3.0 GPA for graduate courses; B (3.0) or better in COUN 526; and successfully passing the faculty's ongoing assessment of the student's aptitude and suitability for the counseling profession, progress in skill development, interpersonal and cultural sensitivity, readiness to see clients, and ethical and professional conduct. A student may be: (a) advanced to practicum; (b) required to postpone practicum and complete remedial steps required by the faculty; or (c) disqualified from the program. Students in practicum (COUN 530, 590 or 584) and who are seeing clients at their agency site are designated as Trainees by the BBS.

Probation and Disqualification

Students may be placed on academic or administrative probation. Students may also be disqualified for a variety of reasons. See the "Graduate Regulations" section of the catalog for university policies and the Student Handbook for departmental policies on our website: <http://hhd.fullerton.edu/counsel>.

Curriculum

The curriculum comprises 60 units (plus an optional one-unit child abuse workshop required for licensure).

COUN 500 The Counseling Profession (3)

COUN 502 Career Counseling (3)

COUN 511 Pre-Practicum (Basic Counseling Skills) (3)

COUN 518 Human Development and Functioning (3)

COUN 520 Modes of Individual Counseling (3)

- COUN 521 Research in Counseling (3)
(first half of the final research project)
- COUN 522 Techniques of Brief Treatment and Assessment (3)
- COUN 523 Counseling and Culture (3)
- COUN 524 Child and Adolescent Counseling (3)
- COUN 525 Psychopharmacology for Counselors (3)
- COUN 526 Professional, Ethical and Legal Issues in Counseling (3)
- COUN 527 Systems of Family Counseling (3)
- COUN 528 Groups: Process and Practice (3)
- COUN 530 Beginning Practicum (3)
(fieldwork in a community agency)
- COUN 535 Addictions (3)
- COUN 560 Appraisal in Counseling (3)
- COUN 562 Couples Counseling (3)
- COUN 584 Advanced Practicum (3)
- COUN 590 Advanced Counseling Techniques (3)
- COUN 597 Final Project (3)
(second half of the final research project)

COUNSELING COURSES

Courses are designated as COUN in the class schedule.

252 Career and Life Planning (3)

Prerequisite: introductory course in Oral Communication and English Composition. Career, personal and educational awareness. Strategies include integrating skills, abilities, interests and values into the career search. Decision-making and goal setting.

350 Leadership Skills and Personal Development (3)

(Same as HUSR 350)

380 Theories and Techniques of Counseling (3)

(Same as HUSR 380)

449 Seminar on Child Abuse (1)

Prerequisite: HUSR 201 or CAS 301. Characteristics of child abuse and a review of current laws, appropriate procedures for intervention and methods of community networking and referral.

500 The Counseling Profession (3)

Prerequisite: graduate standing. Counseling as a mental health professional, including its history, current functions and future directions. The counselor as a professional, including educational goals, personal values and cultural understandings. Opportunity to observe master counselors at work.

502 Career and Lifestyle Development (3)

Pre- or corequisite: COUN 500. Survey of career and lifestyle development throughout the lifespan. Major theories and strategies in career counseling. Integrating knowledge of career development with the practice of counseling.

511 Pre-Practicum (3)

Pre- or corequisite: COUN 500; or admission to the Concentration in School Nursing. Basic counseling skills, including establishing a therapeutic relationship, facilitating client self-exploration and understanding how one's values influence the counseling process. Crisis intervention also will be addressed. Extensive role play practice.

518 Human Development and Functioning (3)

Pre- or corequisites: COUN 500, 511. Human development from infancy to old age, and its effect on individuals, couples and family relationships. Implications for counseling; role of cultural/social contexts and social stressors; role of human sexuality in development.

520 Modes of Individual Counseling (3)

Prerequisite: COUN 511. Advanced study of major theoretical frameworks in counseling, including models of personality, definitions of individual dysfunction and approaches to treatment. Practice in case conceptualization and application of theories to counseling.

521 Research in Counseling (3)

Pre- or corequisite: COUN 530 or consent of faculty. Applied research methods and program evaluation. Comparative review and synthesis of inquiry approaches. Completion of literature review for anticipated COUN 597 project.

522 Techniques of Brief Treatment and Assessment (3)

Prerequisites: COUN 511, 518. Advanced study of the latest edition of the Diagnostic and Statistical Manual of Mental Health Disorders (DSM) with emphasis on detection and assessment of alcohol and substance, spousal or partner, elder, and child abuse, and human sexual dysfunction. Review of brief treatment models.

523 Counseling and Culture (3)

Prerequisites: COUN 500, 511. Culturally competent counseling with people from diverse cultural backgrounds. Effects of socioeconomic status on treatment, and available resources.

524 Child and Adolescent Counseling (3)

Prerequisites: COUN 500, 511, 518. Corequisite, 520. Overview of child/adolescent development theories and counseling frameworks, with emphasis on utilizing strategies, examination of ethical issues, and explores assessment techniques to evaluate the range of disruptive behaviors.

525 Psychopharmacology for Counselors (3)

Prerequisites: COUN 500, 511, 518. Corequisite, 522. Introduces biochemical basis of behavior and a general knowledge of the effects and side effects of the major classes of psychotropic drugs. Such knowledge is to make appropriate referrals and a comprehensive approach to treatment.

526 Professional, Ethical and Legal Issues in Counseling (3)

Prerequisite: COUN 522. Pre- or corequisite, COUN 523. Current ethical and legal standards in practicing counseling and marriage and family therapy. Issues related to child/partner/elder abuse and substance abuse. Role of counselor values, work contexts and client-centered perspective in ethical decision-making. Licensing laws and process. Must pass with a "B" (3.0) or better to advance to COUN 530.

527 Systems of Family Counseling (3)

Prerequisite: COUN 511. Survey of family systems models, including Adler, Satir, Bowen, Haley, Minuchin, and others.

528 Groups: Process and Practice (3)

Prerequisites: COUN 500, 511. Basic issues and concepts related to group process. Demonstration of group leadership skills with an emphasis on self-reflection.

530 Practicum (3)

Prerequisites: COUN 520, 523, 524, 526 (with a "B" or better), 527. Pre- or corequisite: COUN 528. Classified standing; consent of Fieldwork Coordinator; supervised clinical practice with adults, families and children in approved community agencies. Practice in case management, documentation, use of community resources. Emphasizes dysfunction and healthy functioning. Hours accrued towards 280 required for year-long practicum experience.

535 Addictions Counseling (3)

Prerequisites: COUN 500, 511. Etiology and treatment of addictive behaviors, (e.g., substance abuse, gambling). Biological, psychological and systemic factors. Current approaches to assessment, intervention, prevention programs and relapse prevention, including Motivational Interviewing. Role of co-occurring disorders. Use of community resources in helping client and client's family.

560 Appraisal in Counseling (3)

Prerequisite: COUN 522. Theories and applications of psychological testing and other means of appraisal, as they relate to the practice of community-based counseling and marriage and family therapy.

562 Couples Counseling (3)

Prerequisite: COUN 527. The treatment of couples, including overview of current theories, assessment, goal-setting, interventions, ethical issues, and diversity issues. Assessment and treatment of spousal abuse. Study of sexual dysfunctions and sex therapy.

584 Advanced Practicum (3)

Prerequisites: COUN 530 and consent of Fieldwork Coordinator. Advanced supervised clinical practice with adults, families and children in approved community agencies. Emphasizes diagnosis, treatment planning, applied use of theory and techniques. Hours accrued towards 280 required for year-long practicum experience.

590 Advanced Counseling Techniques (1-3)

Prerequisite: COUN 530. Advanced interventions, such as disaster and trauma response with attention to resilience, helping issues with the severely mentally ill, case management and evidence-based practice. Required as part of year-long practicum experience. Hours may be accrued towards 280 minimum. May be taken four times for credit.

597 Research Project (3)

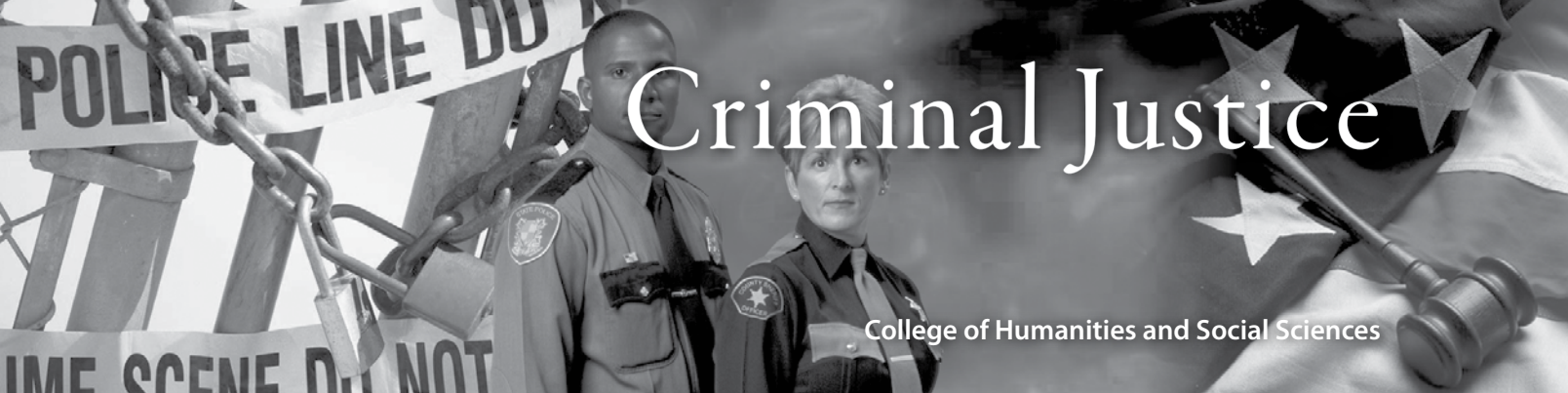
Prerequisites: COUN 521 and consent of faculty adviser. Capstone program experience; taken final semester. Student conducts original research relevant to the counseling field.

598 Thesis (1)

Prerequisites: COUN 530; consent of graduate program adviser. Independent research culminating in a thesis. Recommended for pre-doctoral students. May be repeated for credit.

599 Independent Study (1-3)

Prerequisite: consent of instructor or graduate program adviser. Research and development in counseling pursued independently with periodic conference with instructor. May be repeated for credit.



Criminal Justice

College of Humanities and Social Sciences

INTRODUCTION

Criminal Justice is the study of the causes, consequences and control of crime. Like other new and developing fields, criminal justice is difficult to define, as it draws from a number of different disciplines, including psychology, public administration, philosophy, political science, sociology and law.

The program leading to the Bachelor of Arts in Criminal Justice is designed to acquaint pre-service and in-service students with the principles and practices of criminal justice in America. Although the department's curriculum allows for the development of depth in one of the subject's substantive subsystems (i.e., law enforcement, courts or corrections), the overriding objective is to familiarize students with activities in all the above areas.

The department is both academic and professional in that it is an interdisciplinary attempt to relate intellectual issues and practitioner perspectives to the challenge of crime in a free society. In this regard, the department provides preparation for employment with a related agency and/or further study (e.g., law school).

LEARNING GOALS AND STUDENT LEARNING OUTCOMES

The following goals and learning outcomes have been established for students pursuing a degree in Criminal Justice:

Knowledge

- Understand the nature and extent of crime, including its legal, social, and economic dimensions
- Understand the major theories of the causes of crime, including types of criminal behavior and the characteristics of victims and offenders
- Understand how crime is measured and how criminal justice research is conducted, including the skills needed to be a knowledgeable consumer of criminal justice research
- Understand the goals, organization, and processes of the agencies comprising the criminal justice system
- Understand criminal law, its application, and related legal processes
- Understand the major policies and approaches designed to control or reduce crime, their effectiveness, and the processes by which they are created and implemented

Experience

- Be provided with the opportunity through internships to experience the criminal justice system directly

Skills

- Be able to think and write clearly, critically and intelligently about the criminal justice system

DIVISION OF POLITICS, ADMINISTRATION, AND JUSTICE

DIVISION CHAIR

Raphael J. Sonenshein

DIVISION OFFICE/WEBSITE

University Hall 511

657-278-3521

<http://hss.fullerton.edu/polisci>

PROGRAMS OFFERED

Bachelor of Arts in Criminal Justice

Minor in Criminal Justice

FACULTY

Gregory (Chris) Brown, W. Garrett Capune, Amy Cass, Rob Castro, George M. Dery, III, Christine Gardiner, Dixie Koo, James Lasley, Jarret Lovell, Stacy Mallicoat, Kevin Meehan, Jill Rosenbaum, Georgia Spiropoulos

Advisement

Students are urged to attend a New Major Advisement Session prior to their first semester at the university as a Criminal Justice major. This is particularly important for community college transfers. Failure to do so may delay graduation. The department's New Major Advisement Sessions are regularly and frequently scheduled. See the bulletin board or call the division office for details.

BACHELOR OF ARTS IN CRIMINAL JUSTICE (120 UNITS)

The Criminal Justice degree requires 45 units in the major, including core courses, electives and correlated curriculum. Effective Fall 2005, new Criminal Justice majors must achieve a grade of "C" (2.0) or better in all 15 courses in the curriculum to earn their bachelor's degree.

For additional information regarding the Criminal Justice program and its courses, check with the Division office in University Hall 511.

Core Courses (21 units)

CRJU 300 Introduction to Criminal Justice (3)
CRJU 310A Criminal Law: Substantive (3)
CRJU 315 The Enforcement Function (3)
CRJU 320 Introduction to Public Management and Policy (3)
CRJU 330 Crime and Delinquency (3)
CRJU 340 Criminal Justice Research Methodology (3)
CRJU 345 Corrections (3)

Electives (12 units)

CRJU courses

Correlated Curriculum (9 units)

Courses in the related fields shall be selected by the student in consultation with an adviser. This allows for an awareness of the disciplines contributing to the creation of "criminal justice" as a separate subject. Upper-division courses in such fields as philosophy, political science, psychology and public administration are included. For a list of courses that can count in this regard, check with the division office.

Writing Requirement (3 units)

CRJU 350 Writing for Criminal Justice (3)
ENGL 301 Advanced College Writing (3)
ENGL 365 Legal Writing (3)

For further information on these alternatives, please see a Criminal Justice adviser.

MINOR IN CRIMINAL JUSTICE (18 UNITS)

The Minor in Criminal Justice consists of three required and three elective courses from the Criminal Justice curriculum. The required courses are:

CRJU 300 Introduction to Criminal Justice (3)
CRJU 310A Criminal Law: Substantive (3)
CRJU 330 Crime and Delinquency (3)

CRIMINAL JUSTICE COURSES

Courses are designated as CRJU in the class schedule.

300 Introduction to Criminal Justice (3)

Underlying ideological issues confronting America's system of criminal justice, with an emphasis on key concepts in conflict (law and order, rehabilitation vs. retribution, etc.) One or more sections offered online.

303 Controlling Crime (3)

Prerequisite: CRJU 300. Crime control and prevention. Common criminal justice tactics such as imprisonment, capital punishment, camera surveillance, electronic monitoring, restorative justice and situational crime prevention.

310A Criminal Law: Substantive (3)

Prerequisite: CRJU 300. General doctrines of criminal liability in the United States and the classification of crimes as against persons, property and the public welfare. Concept of governmental sanction of the conduct of the individual.

310B Criminal Law: Procedural (3)

Prerequisite: CRJU 300. Legal problems associated with the investigation of crime, acquisition of evidence, commencement of a criminal proceeding, prosecution and defense of charges, sentencing and appeal. Development of existing procedures and examination of current efforts for reform.

315 The Enforcement Function (3)

Prerequisite: CRJU 300. Historical and philosophical development of the enforcement function at federal, state and local levels; community controls, political pressures and legal limitations pertaining to law enforcement agencies at each level of government; police policies and problems vis-à-vis the administration of justice as a system.

320 Introduction to Public Management and Policy (3)

(Same as POSC 320)

322 Leadership for Public Service (3)

(Same as POSC 322)

330 Crime and Delinquency (3)

Prerequisite: CRJU 300. Evolving and conflicting purposes and practices associated with the topics of criminology, crime and delinquency, with an emphasis on contemporary strategies for preventing, remediating and controlling crime and delinquency.

340 Criminal Justice Research Methodology (3)

Prerequisite: CRJU 300. Elementary statistics including descriptives, measurements and tests; data collection methods for effort evaluation and program prediction; systems analysis techniques.

345 Corrections (3)

Prerequisite: CRJU 300. Evolving and conflicting purposes and practices associated with the adult corrections systems, with an emphasis upon contemporary strategies for treating/punishing offenders while incarcerated, as well as while in the community.

350 Writing for Criminal Justice (3)

Prerequisite: CRJU 300. Principles of research and writing in criminal justice, including framing and clarifying research questions, using and assessing research resources and developing writing skills for criminal justice research. Meets upper-division writing requirement for Criminal Justice majors, or concentration elective. One or more sections offered online.

385 Minorities and the Criminal Justice System (3)

Prerequisite: completion of General Education Categories B and D.1; CRJU 300 recommended. Issues surrounding the charges of overt and indirect institutionalized racism in the criminal justice system. Patterns of criminal behavior among minority groups in the U.S. will be discussed.

404 Capital Punishment (3)

Prerequisites: CRJU 300 and upper division standing. Issues relating to the use of capital punishment in the U.S., and arguments in support of and opposition to the death penalty. (Same as POSC 404)

405 Criminal Justice Policy (3)

Prerequisites: CRJU 300, 330. Not open to students who have studied Criminal Justice policy as CRJU 475T. Evolving purposes and practices associated with the development of criminal justice policies, principally in the United States. Topics include sentencing legislation, illustrate the development, adoption and impact of public policy on criminal justice systems.

406 Crime and Popular Culture (3)

Prerequisites: CRJU 300, 330. How the prevalence of crime and violence in popular culture reflects on contemporary society. Materials and readings argue that images of crime are not only entertaining; they also perform deep social and political functions.

422 Human Resources Management (3)

(Same as POSC 422)

425 Juvenile Justice Administration (3)

Prerequisite: CRJU 300. Definitions of "delinquency" and the related responses of the interested institutions (police, courts and correction); the juvenile court (past and present), and prevention and correction programs (practicing and proposed).

430 Women and Crime (3)

Prerequisite: CRJU 300 or PHIL 302. Women as criminals and victims, gender differences in criminal behavior and the role of women as professionals in the criminal justice system.

440 Correctional Rehabilitation (3)

Prerequisites: CRJU 300, 345. Theories and techniques of correctional treatment. Current state of correctional rehabilitation, focusing on the "What Works!" literature and the value of proper programmatic evaluation and correctional classification.

450 Organized Crime and Intelligence Analysis (3)

Prerequisite: CRJU 300. History and development of organized crime. Current criminological strategies of control of organizational crime. Systems theories and other analytical techniques of police intelligence.

455 Gangs and the Criminal Justice System (3)

Prerequisites: CRJU 300. Causal factors of, and legal solutions to, gang-related crime in the United States. Relevance of sociological, psychological, economic and educational deviance theories to justice intervention strategies.

462 Crime Analysis (3)

Prerequisites: CRJU 300, 340. Crime analysis function within the law enforcement organization; how to develop, implement and operate a crime analysis unit, and discuss the nexus between crime analysis, field and investigative operations, and administrative bureaus.

465 Law, Punishment and Justice (3)

Prerequisite: CRJU 300. Theoretical scholarship in criminal justice is increasingly concerned with law in relation to delivery of justice and practices of punishment. Examines rule of law, questions whether justice is different from law and reviews the role punishment plays.

470 Sex, Crime and Culture (3)

Prerequisite: CRJU 300. Rationale for law's concern with sexual conduct, developed via discussion of selected offenses and offenders. Lectures and guest speakers also present opposing perspectives regarding the role of law enforcement, courts and correction. Research and reform will be reviewed.

471 Moot Court: Legal Practicum (3)

(Same as POSC 471)

472 The Judicial Process (3)

Prerequisites: CRJU 300 or POSC 375. Nature, functions and roles of courts. Roles of major participants in the American legal system, including judges, attorneys and citizens. Administration of justice as a system. (Same as POSC 472)

475T Topics in Administration of Justice: A Seminar (3)

Prerequisite: CRJU 300. Current social, legal and practical problems confronting police, courts and corrections. Variable topic class with specific subjects to be announced each semester. May be repeated for credit with different content up to a maximum of 9 units.

480 Courtroom Evidence (3)

Prerequisite: CRJU 300. Rules of evidence in the context of a criminal trial in a California court. Rules, their application and rationale. Lecture, discussion and simulated courtroom situations.

485 Search, Seizure and Interrogation I (3)

Prerequisite: CRJU 300. Analyzes laws that apply in common street search-and-seizure and interrogation situations in California; how they have evolved, and what developments are anticipated.

486 Search, Seizure and Interrogation II (3)

Prerequisite: CRJU 300. Analyzes laws that apply in some search-and-seizure and interrogation situations, such as those involving the border patrol and college officials.

492 Pre-law Internship (3)

(Same as POSC 492)

495 Internships (3)

Prerequisites: senior standing and consent of instructor. Criminal justice professions; eight to 20 hours per week as a supervised intern in a public agency or related organization. In addition to the job experience, interns meet in a weekly three-hour seminar.

499 Independent Study (1-3)

Prerequisites: at least 12 units of criminal justice and consent of adviser. Student selects an individual research project, either library or field. Conferences with adviser as necessary, culminating in one or more papers. May be repeated for credit.



Economics

Mihaylo College of Business and Economics

INTRODUCTION

As a scholarly discipline, economics is over two centuries old. The nature of economic analysis has been described by John Maynard Keynes as "... a method rather than a doctrine, an apparatus of the mind, a technique of thinking which helps its possessors to draw correct conclusions."

Economic issues are powerful enough to shape the world. Slowly but surely, economic issues make their way to your pocketbooks. Many pressing social issues have their roots in economics. Microeconomic principles set the foundation for business. Macroeconomic policies shape the destinies of nations. Keynes put it a little more eloquently when he said, "The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else."

Economics is a fascinating major that helps you develop analytical skills that are applicable to a wide range of jobs. Economists work in Wall Street; banking, finance and insurance, all aspects of business; multinational corporations; real estate; utility companies; non-profits; regulation, city, state and federal government agencies; international agencies like the International Monetary Fund and the World Bank; sports, health and aging; and in academia.

According to the National Association of Business Economists (NABE), "The key skills of the economic analyst compared to other business analysts is the ability to link industry/market developments to the overall economy, i.e., to see the forest as well as the trees. The broad training of economists provides a flexibility that allows them to turn their hand to a broad range of analytical problems – a critical attribute in a company experiencing a redirection of industry interests."

Students pursuing graduate degrees in many other fields, such as the social sciences, business, public administration, public health, environmental studies, urban studies, law, and journalism find that economics is their best choice for an undergraduate major or minor, given the extensive economic content of these programs. Several studies have shown that lawyers with undergraduate degrees in business economics earn more than other lawyers.^{1,2}

¹ Black, D., S. Seth, and L. Taylor. "The Economic Reward for Studying Economics." *Economic Inquiry*, V41, n3, July 2003, 365-77

² Craft R.K., and J.G. Baker. "Do Economists Make Better Lawyers? Undergraduate Degree Field and Lawyer Earnings." *Journal of Economics Education*, Summer 2003, 263-281.

DEPARTMENT CHAIR

Morteza Rahmatian

DEPARTMENT OFFICE/WEBSITE

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www.business.fullerton.edu/economics

PROGRAMS OFFERED

Bachelor of Arts in Business

Administration

Concentration in Business Economics

Bachelor of Arts in Economics

Minor in Economics

Master of Arts in Economics

Master of Business Administration

Concentration in Business Economics

FACULTY

Radha Bhattacharya, Rokon Bhuiyan, Victor Brajer, Nek Buzdar, James Dietz, Ying Ying Dong, Emira Farka, Adrian Fleissig, Andrew Gill, Chiara Gratton-Lavoie, Jane Hall, Larry Howard, Sherif Khalifa, Kristin Kleinjans, Emmanuel Lartey, Robert Mead, Evelina Mengova, Robert Michaels, Howard Naish, Huiran Pan, Dipankar Purkayastha, Morteza Rahmatian, Jared Rubin, Denise Stanley, David Wong, Feng Xiao

LEARNING GOALS AND STUDENT LEARNING OUTCOMES

The following goals and learning outcomes have been established for students pursuing a degree in Economics:

Understand critical concepts

- Understand the economic challenge of allocating limited resources among competing uses in a global economy and across different market structures under conditions of limited information
- Understand the behavior of consumers and producers in product and factor markets and the concept of efficient allocation of resources as a maximizing mechanism
- Understand the role of government in the economy in the context of business activity, income distribution, economic growth, globalization and market failure

Engage in policy oriented analysis

- Understand the theory used to analyze economic variables and how they are affected by public policy and other factors
- Critically evaluate and compare alternative schools of thought and expected policy outcomes
- Understand the interaction between goods, factors and financial markets

Operate professionally

- Understand how to access, use and interpret economic data and apply theory to analyze and discuss economic issues and events
- Understand how to access existing economic literature and analyze economic problems using theoretical, statistical, and quantitative methods

BACHELOR OF ARTS IN ECONOMICS (120 UNITS)

Admission to the Economics major involves two steps. Students who apply to the major are initially classified as Pre-economics. After completing the lower-division core requirements with grades of at least “C” (2.0), students may apply to the Economics major. Pre-economics students may take lower-division business and economics courses, but most upper-division courses are not open to Pre-economics students.

The Bachelor of Arts in Economics requires 54 units in the major. Students must earn a grade of at least “C” (2.0) in each course listed below. However, a “C” (2.0) average will be acceptable in the upper-division economics electives.

Lower-Division Requirements

ACCT 201A Financial Accounting (3)
ACCT 201B Managerial Accounting (3)
OR MATH 150B Calculus (4)
BUAD 201 Business Writing (3)
ECON 201 Principles of Microeconomics (3)
ECON 202 Principles of Macroeconomics (3)

ISDS 265 Introduction to Information Systems and Applications (3)

MATH 135 Business Calculus (3)

OR MATH 130 Short Course in Calculus (4)

OR MATH 150A Calculus (4)

Upper-Division Requirements

BUAD 301 Advanced Business Communication (3)

ECON 310 Intermediate Microeconomic Analysis (3)

ECON 320 Intermediate Macroeconomic Analysis (3)

ECON 340 Economic Research Methods (3)

ECON 490 Economics Capstone

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

Electives

15 units of upper-division economics electives (six units must be 400-level).

No more than three units of independent study may be used to meet the 400-level electives requirement.

BACHELOR OF ARTS IN BUSINESS ADMINISTRATION

See “Business Administration, Business Economics Concentration.”

MINOR IN ECONOMICS (24 UNITS)

The economics minor covers the basics in the discipline of economics and gives students the opportunity to explore personal interests through electives. A course in calculus (MATH 135 or equivalent) is prerequisite to ECON 310, 315 and 320. Students must earn a grade of at least “C” (2.0) in each required course below.

Lower-Division Requirements (6 units)

ECON 201 Principles of Microeconomics (3)

ECON 202 Principles of Macroeconomics (3)

Upper-Division Requirements (9 units)

BUAD 301 Advanced Business Communications (3)

OR equivalent

ECON 310 Intermediate Microeconomics Analysis (3)

OR ECON 315 Intermediate Business Microeconomics (3)

ECON 320 Intermediate Macroeconomics Analysis (3)

AND nine units of upper-division economics electives

MASTER OF BUSINESS ADMINISTRATION

See “Business Administration, MBA.”

MASTER OF ARTS IN ECONOMICS (30-33 UNITS)

The master’s degree in economics provides preparation for professional careers in private industry and government, and provides a foundation for further graduate work at the doctoral level.

The curriculum is designed for students with an undergraduate degree in business administration or economics.

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

Admission

Minimum requirements for admission to the MA program are the following:

1. a baccalaureate from an accredited institution;
2. good standing at the last college attended;
3. minimum grade point average of 2.5 in the last 60 semester units (or 90 quarter units) attempted;
4. a GPA of at least 3.0 in the following courses or their equivalents (corresponding CSUF courses are in parenthesis)– Business Calculus (MATH 135), Principles of Microeconomics (ECON 201), Principles of Macroeconomics (ECON 202), Intermediate Microeconomics (ECON 310 or 315), Intermediate Macroeconomics (ECON 320), Probability and Statistics (ISDS 361A or ECON 340), and one advanced undergraduate elective in economics;
5. for international students, a score of 570 on the TOEFL paper exam or 88 on the IBT is required;
6. 1000 points in verbal and quantitative sections in the Graduate Record Examination (GRE); and
7. three confidential letters of recommendation, a résumé and a Statement of Purpose from the applicant sent directly to the Graduate Adviser in Economics. Persons who have known the candidate professionally should write the letters of recommendation. There are no forms. The letters should be written on official letterhead, and the letters should discuss both the strengths and the weaknesses of the applicant. The statement of purpose should not exceed 750 words.

An applicant who does not meet one or more of the requirements above (including international students who score between 550 and 570 on TOEFL), may still be considered for admission, depending on the evaluation of the entire application file (the students must, however, have a GPA of 2.5 in the last 60 semester units at the time of admission). If admitted, an applicant with one or more deficiencies may be asked to take specified deficiency courses and exams. Students admitted with deficiencies are called "conditionally classified" students. Conditionally classified students can take a limited number of courses at the graduate level, subject to the approval of the graduate adviser of the department. Students are expected to advance promptly to classified standing. Classified students are eligible to take graduate courses for which they are qualified.

Study Plan

Within one semester of admission, the students are advised to prepare a study plan. A study plan reflects a selection of approved courses that have been taken or will be taken by the student to earn the graduate degree.

Students are urged to meet as soon as possible with the graduate adviser in the Department of Economics to file a study plan and advance to classified standing.

Any study plan course in which a "C-" (1.7) or below is received must be repeated with at least a "C" (2.0) grade, regardless of the overall grade-point average of the students. A minimum 3.0 GPA is required for graduation. Students are also required to graduate in a timely manner.

Required Courses (18 units)

ECON 441 Introduction to Mathematical Economics (3)

ECON 502 Advanced Microeconomic Analysis (3)

ECON 503 Advanced Macroeconomic Analysis (3)

ECON 504 Econometric Analysis (3)

ECON 505 Economic Models and Forecasting

ECON 595 Current Research in Economics (3)

OR approved 500-level substitute

Note: ECON 440, Introduction to Econometrics, is a prerequisite to ECON 504.

Area and Electives Courses (12–15 units)

Students may choose to focus on one of the following elective tracks:

- Financial and monetary economics
- Health, aging and labor economics
- Public economics, law and industrial organization
- International, environmental and development economics

In addition to ECON 441, only two more 400-level courses are allowed on the Study Plan.

Terminal Evaluation (0–3 units)

ECON 598 Thesis Research (3)

OR Comprehensive Examinations

These examinations are given at the end of each semester.

ECONOMICS COURSES

Courses are designated as ECON in the class schedule.

100 The Economic Environment (3)

Application of economics to the problems of unemployment and inflation, the distribution of income, competition and monopoly, the role of government in the economy, other policy issues. Not open to pre-business, business administration majors or minors, economics majors or minors or international business majors.

201 Principles of Microeconomics (3)

Principles of individual consumer and producer decision-making in various market structures, the price system, market performance and government policy.

202 Principles of Macroeconomics (3)

Prerequisite: ECON 201. Principles of macroeconomic analysis and policy, unemployment and inflation, financial institutions, international trade, economic growth, comparative systems. One or more sections offered online.

310 Intermediate Microeconomic Analysis (3)

Prerequisites: ECON 202, MATH 135. Corequisites: BUAD 301, ISDS 361A or equivalent. Rational decision-making behavior of consumers and firms, price and output determination in markets. Primarily for economics majors, but open to all students who qualify.

315 Intermediate Business Microeconomics (3)

Prerequisites: ECON 202, MATH 135. Corequisites: BUAD 301, ISDS 361A or equivalent. Business decisions in alternative market structures with special emphasis on problem-solving in a business context using economic concepts and methods. Not open to economics majors. Students may not receive credit for both ECON 310 and 315. One or more sections offered online.

320 Intermediate Macroeconomic Analysis (3)

Prerequisites: ECON 202, MATH 135. Corequisites: BUAD 301, ISDS 361A or equivalent. Determinants of the level of national income, employment and prices, and monetary and fiscal policies.

330 Comparative Economic Systems (3)

Prerequisite: ECON 100 or 201. Alternative economic systems; their theoretical foundations, actual economic institutions, and achievements and failures. Contrast between socialist and capitalist systems.

332 Economies of the Pacific Rim (3)

Prerequisite: ECON 100 or 201. Dimensions of industrialization, agriculture, investment, human resources and trade in economies of the Far East (including Japan and China), India and related nations of the Pacific Rim.

333 Economic Development: Analysis and Case Studies (3)

Prerequisite: ECON 100 or 201. Processes of economic growth with references to developing areas. Capital formation, resource allocation, relation to the world economy, economic planning and institutional factors, with case studies. One or more sections offered online.

334 Economics of Latin America and the Caribbean (3)

Prerequisite: ECON 100 or 201. Corequisite: BUAD 301. Regional economic problems within an international context: dependence, industrialization and the international corporation; agriculture; regional cooperation; inflation; trade and debt problems.

335 The International Economy (3)

Prerequisite: ECON 100 or 201. Theory, practice and institutions of the international economy. International trade and investment, balance of payments, foreign exchange rates, multinational enterprise, international economic policy. Current trade issues: European Community, trade with developing countries, Eastern Europe, and the states of the former Soviet Union; General Agreement on Tariffs and Trade (GATT) and other major trade agreements.

336 Economies of the Middle East (3)

Prerequisite: ECON 100 or 201. Economic circumstances and challenges in the Middle East. Topics include population and education, dependence on oil exports, state control of the economy, and the potential for economic growth and stability in the region.

340 Economic Research Methods (3)

Prerequisites: ECON 202, ISDS 361A or equivalent. Basics of applied economic research. How to access existing economic knowledge, locate and compile economic data, and analyze economic problems using theory and quantitative methods.

350 American Economic History (3)

Prerequisite: ECON 100 or 201. Development of American economic institutions; economic problems, economic growth and economic welfare.

351 European Economic History (3)

Prerequisite: ECON 201. Evolution of European economic institutions and development of industry, commerce and finance, from the fall of the Roman Empire to the Industrial Revolution. Traces historical path that culminated in European economic hegemony.

355 Economics of Gender and Work (3)

Prerequisites: completion of General Education Category D.1 and junior or senior standing. Economic analysis of demographic trends and changing gender roles and experiences in paid and unpaid work, education, earnings and market discrimination using economic theory. International comparisons. (Same as WMST 355.)

361 Urban Economics (3)

Prerequisite: ECON 100 or 201. Theory and analysis of the urban economy, urban economic problems and policy.

362 Environmental Economics (3)

Prerequisite: ECON 100 or 201. Economic analysis of environmental problems and related issues: externalities, property rights, social costs and benefits, user cost, rent and decision making under uncertainty.

410 Industrial Organization (3)

Prerequisites: BUAD 301, ECON 310 or equivalent. Business organization, conduct and performance; rationale and impact of public policy on business and business activities, including the regulated industries, sick industries and antitrust policy.

411 International Trade (3)

Prerequisites: BUAD 301, ECON 310 or 315 or equivalent. Theories of international trade. Gains from trade, effects of tariff and non-tariff barriers, and conduct of commercial policy. Balance of payments, theories of exchange rate determination and other international economic issues.

412 Labor Economics (3)

Prerequisites: BUAD 301, ECON 310 or equivalent. Labor supply and demand, labor force participation, employment, unemployment, human capital, wage differentials, disadvantaged labor market groups, discrimination and wage-related income transfers.

413 Law and Economics (3)

Prerequisites: BUAD 301; ECON 310 or 315. Economic analysis of the common law – property, contract and tort – focusing on the use of microeconomic theory to study the economic efficiency characteristics and effects of these laws. Analysis of specific legal cases.

415 Economics of Health (3)

Prerequisites: ECON 340 or equivalent. Application of economic reasoning to the analyses of health-related issues, markets, practice, education, research, and policy within social and political contexts.

416 Benefit Cost and Microeconomic Policy Analysis (3)

Prerequisites: BUAD 301; ECON 310 or equivalent. Application of microeconomic models and welfare economics to public policy. Concepts of economic efficiency, economic surplus and equity. Measurement of policy effects, including benefit-cost analysis, with applications to selected policy areas such as education and environmental programs.

417 Public Finance (3)

Prerequisites: BUAD 301; ECON 310 or equivalent. Government finance at the federal, state and local levels; impact of taxation and spending on resource allocation, income distribution, stabilization and growth.

420 Money and Banking (3)

Prerequisites: BUAD 301; ECON 320 or equivalent. Money supply process and impact of monetary policy on economic activity.

421 Monetary and Fiscal Policy (3)

Prerequisites: BUAD 301; ECON 320 or equivalent. Techniques of monetary and fiscal policy and their relative roles in promoting economic stability and growth.

431 International Macroeconomics and Growth (3)

Prerequisites: BUAD 301 and ECON 320. Macro-economic analysis of the open economy: impact of stabilization policies in a global economy, role of the balance of payments, international monetary system and growth in less developed countries.

433 The Less Developed Countries and the World Economy (3)

Prerequisites: ECON 310, 315 or 515, and ECON 320 or 521. Development and underdevelopment in the poorer countries in the context of a changing international economic order. Neo-classical and political economy approaches. Includes case studies from Asia, Africa and Latin America.

440 Introduction to Econometrics (3)

Prerequisites: BUAD 301, ECON 340, ISDS 361A or equivalent. Economic measurement: specification and estimation of econometric models; statistical methods in economic research.

441 Introduction to Mathematical Economics (3)

Prerequisites: BUAD 301, ECON 202 and MATH 135 or equivalent. Economic theory from microeconomics and macroeconomics. Content varies; constrained optimization problems and rational decision-making.

450 History of Economic Thought (3)

Prerequisites: BUAD 301; ECON 310 or 320. Major schools of thought and of leading individual economists as they influenced economic thought and policy.

461 Ecological Economics (3)

Prerequisites: BUAD 301 and ECON 310 or 315 or equivalent. Application of economic concepts and methods to understanding the ways in which human economic behavior contributes to environmental and ecosystem degradation; the use of economic approaches to evaluate and manage these impacts; the design of sustainable economic policies.

462 Natural Resource Economics (3)

Prerequisites: BUAD 301 and ECON 310 or 315 or equivalent. Concepts and principles in the application of economics to issues in natural resource economics. Issues include uncertainty and risk in investment, depletion over time, cartelization, the role of technological innovation and government intervention related to fuels, water, land, etc.

490 Economics Capstone (3)

Prerequisites: ECON 310, 320, 340. Capstone experience for Economics majors. Students demonstrate facility with economic theory and quantitative methods by presenting teaching topics, summarizing news reports and scholarly journal articles, writing policy briefs on selected economic topics and replicating empirical findings from economics literature.

495 Internship (1-3)

Prerequisites: Economics major, BUAD 301, ISDS 361A, ECON 310 or 320; international business major, ECON 202 and 335, ISDS 361A; consent of the 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 a total of six units of credit. Credit/No Credit grading only.

499 Independent Study (1-3)

Prerequisites: Economics major or concentration, BUAD 301, ECON 310 and 320 or the equivalents, senior standing, and consent of department chair. Directed independent inquiry. May be repeated for credit. Not open to students on academic probation.

502 Advanced Microeconomic Analysis (3)

Prerequisite: ECON 441. Advanced treatment of rational decision-making behavior of consumers and firms, the price system, and resource allocation in partial and general equilibrium settings. Topics include preference theory, welfare economics, gains from trade, monopoly power, external costs and benefits, public goods, factor markets, intertemporal decisions, risk and uncertainty.

503 Advanced Macroeconomic Analysis (3)

Prerequisites: ECON 320 or equivalent and classified graduate status in Economics. Determination of employment, fluctuations of real and money income, and the forces underlying economic growth.

504 Econometric Analysis (3)

Prerequisites: ECON 440 or equivalent and classified graduate status in economics. Contemporary methods for analyzing micro-economic data, focusing on instrumental variables estimation, probit, logit and tobit models, models of sample selection and panel data methods.

505 Economic Models and Forecasting (3)

Prerequisites: ECON 440 and classified graduate status in economics. Statistical methods of econometric estimation and forecasting. Practical solutions to problems in model specification, estimation by regression, time series analysis and forecasting.

506 Economics of Aging (3)

(Same as GERO 506)

515 Microeconomic Perspective for Managers (3)

Prerequisites: classified MCBE status and MATH 135 or the equivalent. Individual economic agents – demand side consumers and supply side producers. Market structures ranging from perfect competition to monopoly. Features of organizational architecture: the assignment of decision rights within organizations; the reward system; and the performance-evaluation system. (Not open to M.A. Economics candidates.)

516 Economics and Benefit-Cost Analysis (3)

Prerequisites: ECON 201 and classified graduate status in Economics or Environmental Studies or Public Administration. Economics and benefit-cost analysis of public projects. Consumer demand and the estimation of benefits; the nature of cost in a market economy; price controls, unemployment and inflation; and criteria for choice, for multi-year projects. For elective credit in the M.S. Environmental Studies or Master of Public Administration.

521 Macroeconomic Perspective for Managers (3)

Prerequisites: ECON 310 or 515 or equivalent and classified MCBE status. Managerial use of local, national and global macro-economic trends and data to make decisions. Impact that changes in taxes, government spending and Federal Reserve Bank monetary policy have on business, real estate and financial markets. (Not open to M.A. Economics candidates or students with credit for ECON 320.)

528 Financial Economics (3)

(Same as FIN 528)

531 International Economics (3)

Prerequisites: ECON 310, 315, 515 or equivalent, and classified MCBE status, and ECON 320 or 521. Theories and current issues in international trade, finance, macroeconomics and growth, with an emphasis on business applications.

590 Topics in Economic Analysis and Policy (3)

Prerequisites: ECON 310 and 320 or equivalent; classified graduate status in economics. Contemporary research in areas such as resource economics; history of economic thought; international monetary systems; forecasting; economics of planning; trade and development; human resource economics. May be repeated for credit.

595 Current Research in Economics (3)

Prerequisites: ECON 502, 503, 504 or 505. Students read, present and replicate scholarly research published in peer-reviewed journals covering a variety of topics in economics. They receive guidance as to research methodology, composition of a research paper and professional presentation. Attendance at departmental research seminars required.

598 Thesis Research (3)

Prerequisites: ECON 502, 503, 504 and classified graduate status in economics. Corequisite: ECON 505. Selection and approval of topic; outline; methodology; literature survey; data collection and analysis; presentation of results. Award of the grade is contingent upon the completion and acceptance of the thesis.

599 Independent Graduate Research (1-3)

Prerequisites: ECON 440, 502, 503; classified graduate status; and consent of instructor and Department Chair (or designee). Directed advanced independent inquiry. May be repeated for credit. Not open to students on academic probation.



Educational Leadership

College of Education

LEARNING GOALS AND STUDENT LEARNING OUTCOMES

Educational Administration

The following goals and learning outcomes have been established for students pursuing a master's degree in Educational Administration:

Strategic Leadership

- Ability to develop with others vision and purpose, utilize information, frame problems, exercise leadership processes to achieve common goals and act ethically for educational communities¹
- Promote the success of all students by facilitating the development, development, articulation, implementation and stewardship of a vision of learning that is shared and supported by the school community²
- Promote the success of all students by modeling a personal code of ethics and developing professional leadership capacity²

Instructional Leadership

- Ability to design appropriate curricula and instructional programs, develop learner-centered school cultures, assess outcomes, provide student personnel services and plan with faculty professional development activities aimed at improving instruction¹
- Promote the success of all students by advocating, nurturing and sustaining a school culture and instructional program conducive to student learning and staff professional growth²

Organizational Leadership

- Ability to understand, initiate and/or improve the organization, implement operational plans, manage financial resources and apply effective management processes and procedures¹
- Promote the success of all students by ensuring management of the organization, operations and resources for a safe, efficient and effective learning environment²

Political Leadership

- Ability to act in accordance with legal provisions and statutory requirements, to apply regulatory standards, develop and apply appropriate policies, understand and act professionally regarding the ethical implications of policy initiatives and political actions, relate public policy initiatives to student welfare, understand schools as political systems¹
- Promote the success of all students by understanding, responding to and influencing the larger political, social, economic, legal and cultural context²

Community Leadership

- Collaborate with parents and community members; work with community agencies, foundations and the private sector; respond to community interests and needs in

DEPARTMENT CHAIR

Louise Adler

DEPARTMENT OFFICE/WEBSITE

College Park 520

657-278-3187

<http://ed.fullerton.edu/edleadership>

PROGRAMS OFFERED

Master of Science in Education

Concentration in Educational
Administration

Concentration in Higher Education
Preliminary Administrative Credential
Professional Administrative Credential
Graduate Professional Certificate in
Community College Studies
School Business Management

Certificate (University Extension)

Doctor of Education in Educational
Leadership

PreK-12 Leadership Concentration

Community College Leadership
Concentration

FACULTY

Louise Adler, Leigh Barton, Daniel
Choi, Keni Cox, Eugene Fujimoto,
John Hoffman, Jerome Hunter, Joyce
Lee, Ron Oliver, Linda Orozco, Dawn
Person, Ronni Sanlo, Ken Stichter

performing administrative responsibilities; develop effective staff communications and public relations programs; and act as mediators for the various groups and individuals who are part of the school community

- Promote the success of all students by collaborating with families and community members, responding to diverse community interests and needs, and mobilizing community resources²

¹ NCATE-Approved Curriculum Guidelines for Advance Program in Educational Leadership 1995.

² California Professional Standards for Educational Leaders 2001.

Higher Education

The following goals and learning outcomes have been established for students pursuing a master's degree in Higher Education:

Leadership

- Ability to apply fundamental leadership and organization theories along with core management skills to student affairs practice as reflected in case study analysis, as well as in practicum and fieldwork experiences

Social Justice and Advocacy

- Ability to draw upon a deepened understanding of their own cultures, the cultures and characteristics of college students, and institutional structures in order to develop educational programs that promote educational access and success for all students, especially those from historically underrepresented populations of students

Education

- Ability to draw upon an analysis and evaluation of the historical and philosophical foundations of the student affairs profession, as well as major student development theories in order to develop educational programs that promote student development and learning

Assessment and Evaluation

- Ability to demonstrate their understanding of student affairs scholarship in the analysis, synthesis and evaluation of current research, who can design processes to assess student learning and development in the cocurriculum, and who can plan and implement formative and summative program evaluations and research projects

Personal Development

- Ability to articulate a clear philosophy of student affairs, and who systematically draw upon personal reflection regarding their strengths and weaknesses, as well as upon feedback from mentors to enhance their personal and professional development

Educational Leadership

The following goals and learning outcomes have been established for students pursuing a doctorate degree in Educational Leadership:

Experts in educational leadership

- Possess a deep understanding of the complex nature of learning and teaching so that they are able to guide and assist instructional practice
- Understand the needs of adult learners and can apply the theories found in the andragogy literature to the process of educational reform
- Skilled users of techniques for forecasting, planning and managing change processes in education, including use of technology as a resource
- Aware of cutting-edge technologies and how they can be used to enhance teaching, learning and leadership of the educational enterprise

Professionals Whose Practice is Informed by Scholarly Literature

- Critique informal ideas about best practice on the basis of the literature
- Have a sense of the limits of the literature, as to its applicability to the work of educational professionals, its fundamental validity and reliability, and as to questions of which groups are empowered or marginalized by what is implied in the literature
- Foster and encourage best practices within their organizations based on critical analysis of scholarly literature
- Develop with their colleagues and subordinates the ability to participate in communities of learning based on reflective practice and critique of the scholarly literature
- Define, contrast and evaluate the multiple perspectives presented in the scholarly literature regarding education
- Critique proposals for research and/or program implementation
- Broker consultants and researchers in pursuit of organizational goals, independently assessing organizational needs and matching consultant/researcher skills and proposals to those needs

Reflective Practitioners

- Professional experience is systematically engaged, compared and critiqued in classroom and other learning experiences
- Professional experience will be brought to bear on the areas of their study, finding relevance and application for principles derived from the literature

Critical Thinkers

- Thinking is probabilistic, recognizing the indeterminacy of educational and social contexts
- Professional thinking is marked by hypothetical reasoning, meaning that conclusions are remorselessly yet robustly tentative, open to falsification on the basis of new valid and reliable data

- Exhibit a bias for evidence in decision-making, preferring strongly evidence that is systematic and gathered from multiple sources and via sound means of collection, which are tested against the scholarly literature and the realities of changing circumstances

Change Agents

- Knowledge of research enables them to interpret findings, make judicious applications of research and advise others in policy positions
- Able to undertake first-hand investigations of local problems using applied research and appropriate methods for generating valid and reliable results
- Able to select applied research that addresses significant questions and ground it within the general framework of the scholarly literature
- Use research results and a sophisticated understanding of organizational structures, cultures and institutional networks to foster positive reform efforts within their organizations and across educational institutions

Self-Aware and Ethical Professionals

- Seek contexts and means for professional life-long learning and connections with scholarly literature
- Demand sophisticated feedback on their own performance and that of others, informed by scholarly understandings
- Understand that education is embedded in a network of social and political structures that can be influenced and also will exert powerful influences on the educational process at all levels
- Understand and support the ethical expectations of the education profession and strive to make their professional practice serve the needs of students and the community

Professionals Who Value Diversity

- Understand how their life histories shapes their views about the literature, organizations and groups, and understand how to create collaborative environments that welcome and serve diverse members—cultural/linguistic diversity, gender, able-ness and age-span differences
- Work to shape learning communities at their sites that are more humane and responsive to all students and are open to the wider community

Policies of the Department

Candidates for our programs will be selected on the basis of leadership potential and commitment to the improvement of education, and will engage in a rigorous course of study.

The courses offered by the department are arranged in a specific order, which must be followed by all students. Cohorts of students are formed and move through the courses as a group.

ADMINISTRATIVE SERVICES CREDENTIAL

The Administrative Services Credential programs of the Department of Educational Leadership are approved by the California Commission on Teacher Credentialing. Because regulations governing these programs change, students should contact the department office for current information and requirements.

Credential Requirements

Students who wish to apply for credential programs must complete a separate applicant portfolio. The requirements and information are available at <http://ed.fullerton.edu/edleadership/admissions.htm>.

Students applying for the Preliminary Administrative Credential Program are required to have three years teaching experience when entering the program. Waiver requests for 1-2 years of experience are considered for those starting a second career or under unusual circumstances.

The minimum GPA required to be recommended for a certificate of eligibility or a credential is an average of 3.0 for all classes taken in the credential program.

Preliminary Credential

The Preliminary Administrative Services Certificate/Credential is the “Tier I” administrative credential in California, requiring a total of 26-30 units of work (which may be incorporated into the master’s degree program). Upon receipt of the Preliminary credential, one is eligible for employment as an administrator in California public schools. A master’s degree is required for California State University to recommend a candidate for this credential.

Professional Credential

The Professional Administrative Services Credential is the “Tier II” administrative credential.

Candidates with strong administrative experience and a strong professional portfolio can complete the Demonstration of Mastery Program at CSUF in one semester. Candidates must hold a Master’s Degree in Educational Administration and/or completed an accredited Preliminary Administrative Credential Program.

Students enrolled in the Ed.D. program complete the standards-based program requiring a total of 26 semester hours. Holding a job as administrator and the Preliminary Credential are prerequisites to entry to the program for the Professional Credential.

MASTER OF SCIENCE IN EDUCATION (30 UNITS) (EDUCATIONAL ADMINISTRATION)

The principal objective of the curriculum is to prepare carefully selected individuals for leadership positions in public schools. The program is designed to help these individuals gain the technical knowledge and scholarship requisite to high achievement in these positions.

Admission to Graduate Standing – Conditionally Classified

University requirements include a baccalaureate degree from an accredited institution and a grade-point average of at least 3.0 in the last 60 semester units attempted (see “Graduate Regulations” section of this catalog for complete statement and procedures). In addition, an applicant should have a successful teaching experience in an elementary or secondary school. (If such experience is not available, other experience in related fields is an alternative if approved by a graduate adviser before starting the program.) A candidate portfolio is also required.

Graduate Standing – Classified

A student who meets the admission requirements and has a minimum 2.5 GPA in previous academic work may be granted classified graduate standing upon approval of a study plan.

Study Plan

The study plan requirements include field experience and a project. No more than nine units of postgraduate work taken prior to classified standing may be applied to a student’s master’s degree program.

Core Coursework (10 units)

EDAD 503 Organizational Leadership (3)
EDAD 505A K-12 Instructional Leadership (4)
EDAD 510 Introduction to Educational Research (3)

Concentration Coursework (17 units)

EDAD 561 Policy, Governance, Community Relations (2)
EDAD 563 Human Resource Administration (2)
EDAD 564 School Law and Regulatory Process (3)
EDAD 565 School Finance (3)
EDAD 566 Leadership in Public Schools (3)
EDAD 567 K-12 Fieldwork (1,1,1)

Project (3 units)

EDAD 597 Project (1,1,1)

MASTER OF SCIENCE IN EDUCATION (30 UNITS) (HIGHER EDUCATION)

The purpose of this concentration is to prepare students with the practical skills, knowledge and experience to become entry and mid-level professionals and leaders in higher education institutions, national/international professional associations and organizations, and government agencies. The program provides a strong foundation for career advancement.

Application Deadlines

To assure full consideration, please complete the online applications before March 1 for the fall semester (<http://www.csumentor.edu>).

Application deadlines change depending on demand and enrollment allocations. Check with the department for current information.

Admission to Graduate Standing – Conditionally Classified

University requirements include a baccalaureate degree from an accredited institution and a grade-point average of at least 3.0 in the last 60 semester units attempted (see “Graduate Regulations” section of this catalog for complete statement and procedures). In addition, an applicant should have a successful teaching experience in an elementary or secondary school. (If such experience is not available, other experience in related fields is an alternative if approved by a graduate adviser before starting the program.) A candidate portfolio is also required.

Graduate Standing – Classified

A student who meets the admission requirements and has a minimum 2.5 GPA in previous academic work may be granted classified graduate standing upon approval of a study plan.

Study Plan

The study plan requirements include field experience and a comprehensive exam. No more than nine units of postgraduate work taken prior to classified standing may be applied to a student’s master’s degree program.

Core Coursework (9 units)

EDAD 503 Organizational Leadership (3)
EDAD 505B Instructional Leadership in Higher Education (3)
EDAD 510 Introduction to Educational Research (3)

Concentration Coursework (18 units)

EDAD 521 History and Philosophy of Higher Education (3)
EDAD 522 College Students’ Characteristics and Cultures (3)
EDAD 523 Student Learning and Development (3)
EDAD 524 Diversity Access and Equity (3)
EDAD 568 Higher Education Fieldwork (400 hours) (3,3)

Culminating Experience-Comprehensive Exam

EDAD 595 Professional Seminar in Higher Education (3)

For advisement and further information, consult the graduate program adviser, Dr. Dawn Person (dperson@fullerton.edu).

DOCTOR OF EDUCATION (ED.D.) IN EDUCATIONAL LEADERSHIP

Admissions Requirements

Minimum requirements for admission include:

- An earned baccalaureate degree and master’s degree from accredited institutions of higher education with a GPA in upper division and graduate study of 3.0 or above
- Sufficient preparation and experience pertinent to educational leadership to benefit from the program
- Submission of Graduate Record Examination (GRE) scores on the three GRE tests, taken within the last five years

- Demonstrated educational leadership potential and skills, including successful experience in school, postsecondary, community and/or policy leadership
- Demonstrated academic excellence, problem-solving ability and an interest in critically assessing and bringing about improvements within current educational policies and practices
- Three confidential recommendation forms attesting to the leadership ability and scholarship of the candidate
- A written statement of purpose reflecting understanding of the challenges facing the public schools or community colleges/ institutions of higher education in California
- Professional resume
- Examples of professional writing
- Response to a writing prompt administered on-campus prior to the interview
- Interview with the Admissions Committee

Meeting the minimum requirements qualifies an individual for consideration, but does not guarantee admission to the Program. Admission will be granted on a competitive basis. The Ed.D. in Educational Leadership will not include a foreign language requirement.

Specializations

Two concentrations will focus on the development of leaders in education: PreK-12 Educational Leadership and Community College Leadership.

Program of Study

The program includes two summers and two complete academic years of coursework, followed by a period during which the candidate advances to candidacy and undertakes the dissertation. Classes will be held in the late afternoons and evenings and occasionally on weekends to accommodate the schedules of working professionals.

All candidates are required to be enrolled at CSUF for a minimum of six terms.

The courses offered throughout the program are expected to be taken by individuals who also hold full-time positions. Their full-time employment is viewed as an asset and as providing important opportunities to apply theoretical and empirical material covered in their coursework. The program of study distributed over 12 months will facilitate: (a) integration of graduate studies and practice; (b) periods of intensive study among candidates; and (c) opportunities to work with faculty from CSUF.

Dissertation

All students in the CSUF Ed.D. program will complete a rigorous research-based dissertation that integrates theory and research in the study of educational practice. The dissertation will include the results of the candidate's independent research and will typically focus on examination of: (a) an educational problem; (b) a practice or program; or (c) an educational policy or reform. Most

dissertations will be studies undertaken in the local context, having the potential to contribute to solutions of local educational problems. Dissertations will utilize a range of qualitative and quantitative research and evaluation methodologies. The dissertation will present the results of the candidate's independent investigation in a manner that contributes both to professional knowledge in education and to the improvement of educational practice. Examples might include studies examining and/or evaluating reforms in curriculum and instruction, professional development, assessment and applications of technology.

Each Ed.D. student's dissertation must conform to the CSU regulations and specifications with regard to format and method of preparation as described in CSUF Doctoral Dissertation Manual.

Defense of Dissertation

During a final oral examination the candidate defends the dissertation. The dissertation defense will address the theoretical and conceptual background, relevant literature, data collection techniques, data analysis strategies and results and implications concerning the question(s) studied.

EDUCATIONAL ADMINISTRATION COURSES

Courses are designated as EDAD in the class schedule.

Students who desire only isolated courses from the M.S. and Ed.D programs are normally denied admission to such courses.

364 Justice and Equity in California Education (3)

Prerequisite: completion of General Education Category D.1. Themes such as justice, equity, fairness, equal protection and duty of care are reflected in the laws that govern California public education and how those laws are used to deal with the social problems that beset our schools.

501A,B,C Collaborative Professional Portfolio Assessment of Competence for School Leaders (4)

Prerequisite: one year of experience as a school administrator. Comprehensive course for Professional Administrative Services (Tier II) credential candidates. Candidates will demonstrate mastery of fieldwork performance standards by preparing a professional portfolio of work-embedded artifacts, evidences and documentation. A collaborative assessment process (student, university faculty, mentor, colleagues in the course) will establish the candidate's competency in each of the California Standards for Educational Leaders adopted by the California Commission on Teacher Credentialing. Successful completion of the course provides for university-approval and recommendation to the CTC for Professional Administrative Services Credential (Tier II). This course is a post-master's credential course, offered credit/no credit only.

503 Organizational Leadership (3)

Prerequisite: admission to Preliminary Credential and/or master's program. Using organizational theory and leadership studies to understand schools and how to bring about change in schools. Organization, structure and cultural context of schools and the study of techniques used to guide, motivate, delegate, build consensus and lead others in the achievement of goals.

505A K-12 Instructional Leadership (4)

Prerequisite: admission to credential and/or M.S. program. Approaches for advocating, nurturing and sustaining a school culture and instructional program conducive to student learning and professional growth.

510 Introduction to Educational Research (3)

Prerequisites: admission to Preliminary Credential and/or master's program and a "B-" (2.7) or better in EDAD 505A or 521. Introduction to major forms of quantitative and qualitative research used in education. How to select an appropriate research method and the characteristics of sound research. Making reasoned judgments as consumers of research, as well as selecting appropriate information collection strategies as school leaders.

520 History and Function of Community Colleges (3)

Overview of American and California community colleges, including history, administration and contemporary issues such as student development and learning outcomes, student diversity, access and equity.

521 History and Philosophy of Higher Education (3)

Evolution of US higher education, considering the diversity of the system, internal and external influence, and the evolution and development of student affairs and student learners

522 College Student's Characteristics and Cultures (3)

Students in postsecondary education in the United States. Major demographic groups (race, class, ethnicity, age, ability, sexual orientation, gender, etc.) and their experiences with access, equity, campus cultures and retention at two- and four-year institutions.

523 Student Learning and Development (3)

Student development theory in college, considering traditional and non-traditional students and learning outcomes. Theoretical assumptions and the practical application of theory to diverse student learners and the role of theory in student affairs practice.

524 Diversity Access and Equity (3)

Diversity, access, equity, multiculturalism, pluralism as concepts in education. From an historical lens, students will gain an understanding of these concepts and their applications to student affairs/higher education.

561 Policy, Governance, Community Relations (2)

Prerequisite: EDAD 503. Factors that determine public policy with regard to education, the roles of the various levels of government in controlling public education, how to identify various interest groups and how to communicate effectively about school programs.

563 Human Resource Administration (2)

Prerequisite: EDAD 503. Importance and dimensions of human resource administration and the need to attract, retain, develop and motivate school personnel in ways that enhance learning and professional development that lead to positive and productive school settings. Collective bargaining and employee evaluation in public schools.

564 School Law and Regulatory Process (3)

Prerequisite: EDAD 503. Federal, state and local educational laws, regulations and other policies that govern schools and the requirements that administrators act in accordance with these laws and regulations in ways that are ethically and legally defensible.

565 School Finance (3)

Prerequisite: EDAD 503. Effective management of fiscal resources and business services. Sources of income to public schools: federal, state, local and private (including grants and foundations). Reviews sound budgetary and business procedures for schools.

566 Leadership in Public Schools (3)

Leadership roles of principals, co-administrators and supervisors in public schools. Leadership, reflective practice, human relations, the administrator's role in group process, site-based decision-making, school climate change agent roles and planning models. Violence and school safety issues such as gangs will be studied.

567 K-12 Fieldwork (1,2)

Prerequisite: admission to credential and/or master's program. Directed fieldwork in administrative areas in school. May be repeated for up to 4 units.

568 Higher Ed Fieldwork (3,3)

At least 200 hours at two different sites demonstrating competence in applying theory to practice, assessment, evaluation, and program design and implementation, supervised by an approved educational leader who provides feedback for learning and growth as a student affairs educator/leader.

595 Professional Seminar in Higher Education (3)

Application of technology for effective communication, verbal and written, and individual and group interactions on-line and face to face. Application of computers to work in student affairs/higher education settings.

597 Project (1-2)

Prerequisites: EDAD 510. Individual research on a graduate project, with conferences with a faculty adviser, culminating in a project.

599 Independent Graduate Research (1-3)

Prerequisite: consent of instructor. Independent inquiry for qualified students.

DOCTORAL COURSES

Courses are designated as EDD in the class schedule.

600 Organizational Theory and Challenges for Leadership (3)

Organizational theories and their application to the role of educational leaders. Theories from leadership and management literatures, which predicate the conceptual development of the role of educational leadership. Implications of these theories for effective performance as educational leaders.

601 Methods of Research: Quantitatively Based Methods (3)

Introduction to the conceptual and methodological bases of quantitative analysis in educational leadership. Topics include issues of research design, measurement and statistical analysis.

602 Methods of Research: Qualitatively Based Methods (3)

Students acquire the knowledge, dispositions and critical thinking skills necessary for conducting field research, and apply these skills to design and implement applied research projects that create knowledge for solving dilemmas related to educational leadership.

603 Research Elective: Specialization in Qualitatively Based Tools (3)

Prerequisite: EDD 602. Develops advanced skills in identifying, conducting, analyzing and interpreting field research in education toward the purpose of improving education.

604 Applications of Research: Forecasting and Planning (3)

Theories and methods that promote accurate forecasting of the impact of social, economic, political, cultural, academic and demographic trends as they affect educational institutions. Emphasizes how these indicators can be used to engage effective planning.

605 Applications of Research: Collection and Analysis of Assessment Data (3)

Methods of system-level data collection and analysis of outcomes of education. Complexity and efficacy of using various types of data for making judgments at the system level about the effectiveness of instruction across classrooms and schools.

606 Specialization in Quantitatively Based Tools (3)

Prerequisites: Admission to the Ed.D. Program and EDD 601. Statistics, exploratory data analysis, sampling, survey and experimental design; and interview and questionnaire design in the context of using research in planning, change management, policy analysis and program management.

620 Ethical and Legal Dimensions of Leadership (3)

Concepts of ethics (e.g., self-interest, free will, social responsibility, duty) as the basis for legal standards (protection of individual rights, fair treatment, equality of opportunity, duty of care, public trust) through the study of education case law.

621A Leadership of Curricular and Instructional Practices (3)

Current issues in curriculum design and implementation. Explores: forces affecting the curriculum; curriculum continuity and articulation; content trends in the subject areas; appropriate curriculum for students from diverse backgrounds; curriculum censorship; and effective instructional leadership for school curriculum improvement.

621B Higher Education/Community College Systems, Structures and Cultures (3)

Higher education, from Egyptian Era to the diversity of current postsecondary instructions, philosophies and orientations. Organizational development and structures of higher educational systems and the impact of faculty, student and administrative cultures on higher education leaders.

622A Human Dimensions of Education Change (3)

Issues associated with change. Topics include change as a sociopolitical process; sources and purpose of change; coping with multiple reform efforts; decision-making processes; reform implementation; problems of resistance to change in curriculum and instruction; and change as a continuous process.

622B Resource Management and Development (3)

Prerequisite: EDD 600. Practical applications and skills for college resource management in personnel, structures, facilities, technologies, finances, programs and services. Optimizing resources through management and creative leadership that encourage and support collaboration across divisions.

623 The Politics of School Reform (3)

Prerequisite: admission to Joint Doctoral Program and consent of program adviser are required. Theoretical and practical aspects of school reform politics with particular attention to curricular and instructional reform. Topics include: history of school reform; role of city government in school reform; racial and ideological divisions over school reform; and the political challenge of building coalitions for sustainable reform.

624A Social Context of Education Politics, Policy and Governance (3)

Prerequisite: admission to the EDD program. In-depth study of topics relevant to instructional leadership and educational policy cycles. Topics include policy-making process, role of values and interest groups, policy analysis, equality of educational opportunity, how policy efforts are reshaped and systemic reform. Policy issues, such as high-stakes testing, curricular mandates and accountability are used as exemplars.

624B Student Learning and Development (3)

Prerequisite: admission to the program and EDD 600. Student development and learning theories based on cognitive, psychosocial, typology and person-environment perspectives. Role of faculty and others in the collaborative development and implementation of responsive curricula and co-curricula at two- and four-year institutions.

626A Transforming Teaching and Education through Resource Optimization (3)

Perspectives for how optimization of resources can transform education through multidisciplinary approach. Topics include identification of economic, social and political resources, innovative ways to develop new streams of resources and policies and procedures that increase highly productive ways to use resources.

626B Integrative Seminar in Higher Education/Community College Issues (3)

Prerequisites: admission to the program and EDD 600.

Current issues in higher education/community colleges from local to global perspectives reinforcing a multilens view of higher educational studies. Opportunities for interactions with experts and for student to engage in questions/challenges and data-driven, solution-focused discussions.

627 Epistemology, History and Structure of Contemporary Education (3)

Epistemological and historical trends that have shaped the structure of contemporary education. Influence of major schools of thought, such as rationalism, empiricism, pragmatism, behaviorism and constructivism, and how modern education structure, curriculum and pedagogy have been influenced by these various perspectives.

630 Leadership for Change and Collaboration (3)

Prerequisites: admission to the program and EDD 600. Leadership and organizational change in higher education, multicultural organizational development, forecasting, planning and change analyzed. Community relations needed to develop programs responsive to workforce and community needs. Educational codes, laws, policies and practices impacting higher education.

637 Emerging Developments in Subject Areas (2)

Team-taught elective course focusing on: cutting-edge developments in reading/English language arts, math, science and social studies curricula; the critical connection between staff development program and instructional leadership; and methods for engaging parents and the community in support of instructional improvements.

670A Linking Research to Problems of Practice (2)

Identifying complex problems of educational practice appropriate for doctoral research. Small-group instruction provides coaching that enables students to initiate the research cycle by linking research to problems of practices.

670B Connecting Research Questions to Scholarship in the Discipline (2)

Assists in writing a critical review of the professional literature pertaining to the research problem each has identified.

670C Written Qualifying Examination (2)

Preparation for the Ed.D. Qualifying Examination, a prerequisite for advancing to candidacy in the doctoral program.

670D Refining Research Questions (2)

Prerequisites: admission to EDD, EDD 670A,B,C, passing EDD Qualifying Examination. Students further refine research questions or hypotheses, select the research method to investigate their research question, design a research study that specifies methods to be implemented for data collection and analysis.

670E Proposal Defense Preparation (2)

Prerequisites: admission to EDD, EDD 670A,B,C, passing EDD Qualifying Examination. Assists students to write a defensible dissertation research proposal reflecting high quality scholarship.

670F IRB Approval and Proposal Defense (2)

Prerequisites: admission to EDD, EDD 670A,B,C,D,E, passing EDD Qualifying Examination. Students obtain CSUF IRB approval and submit a revised and completed dissertation research proposal in preparation for the dissertation proposal defense.

698 Dissertation Research (6)

Prerequisite: EDD670F. Individual research on a dissertation. Conferences with faculty adviser and committee members, culminating in publishing a dissertation. May be repeated once.

699 Independent Study (6)

Prerequisite: consent of department. Independent doctoral-level inquiry for qualified students.