Majors and Credential

ART

THE MAJOR: The California State University Channel Islands Art major focuses on interdisciplinary studies in fine art, digital art technology, design and art history, emphasizing an innovative approach to artistic process, technique and problem solving. Through the integration of traditional media and digital technologies, courses in studio art, art history and interdisciplinary studies focus on developing a solid artistic foundation, leading to advanced work in art media and theory. In-depth study is available in the areas of two-dimensional art, three-dimensional art, time-based digital media, and communication design technology.

This program is designed for students who wish to pursue:

- Specialized study leading to a Bachelor of Arts Degree in Art
- A Liberal Studies major with a concentration in Art
- A minor in Art
- Preparation for graduate study
- Preparation for professional and academic fields in the Arts
- Teaching credential program with an emphasis in Art

CAREERS: students prepare for a wide range of opportunities in today's professional and academic fields. Careers include positions in the visual arts, graphic design, Web design, multimedia, computer graphics, digital imaging, video art, computer animation, visual effects, galleries, museums, teaching and numerous other professions in the arts.

PROGRAMS OFFERED:

Bachelor of Arts in Art
Minor in Art

CONTACT INFORMATION:

Jack Reilly, MFA, Professor of Fine Arts
Phone: (805) 437-8863
E-mail: jack.reilly@csuci.edu

REQUIREMENTS FOR THE BACHELOR OF ARTS IN ART (120 Units):

LOWER DIVISION REQUIREMENTS (24 Units):

Students are required to complete a minimum of twenty-four units of lower division Art courses in preparation for upper division studies. Courses used to meet General Education requirements may not be double counted in the Art major.

STUDIO FUNDAMENTALS (12 units)

ART	105	Drawing and Composition	3
ART	106	Color and Design	3
ART	107	Life Drawing	3
ART	108	Visual Technologies	3

ART HISTORY (6 units)

Select two courses from the following:

ART	110	Prehistoric Art to the Middle Ages	3
ART	111	Renaissance to Modern Art	3
ART	112	Arts of the Eastern World	3

STUDIO ELECTIVES (6 Units)

In selecting lower division studio elective courses (100 and 200 level), students are encouraged to enroll in courses that satisfy prerequisites for upper division study in specific areas. Transfer students may substitute similar or additional courses, provided they meet the requirements for lower division articulation in the major.

Select a minimum of two courses from the following:

ART	201	Painting	3
ART	202	Sculpture	3
ART	203	Illustration	3
ART	204	Graphic Design	3
ART	205	Multimedia	3
ART	206	Animation	3

UPPER DIVISION REQUIREMENTS (33 units)

Art majors are required to complete a minimum of thirty-three units of upper division courses that include a minimum of eighteen units selected from at least two studio/media areas of study.

PROFESSIONAL PREPARATION COURSES (7-9 Units)

Upper division Professional Preparation courses provide an understanding of current issues in the arts, application of specialized studio work, field activities and service learning.

ART	489	Arts Seminar	3
ART	492	Internship in the Arts	1-3
ART	499	Arts Capstone Project	3

ART HISTORY/INTERDISCIPLINARY COURSES (6 units)

Upper division Interdisciplinary Art History courses integrate the academic study of Art with content from related disciplines. Courses used to meet CSUCI General Education requirements may not be double counted in the major.

Select a minimum of two courses from the following:

ART	330	Critical Thinking in a Visual World	3
ART	331	Art and Mass Media	3
ART	332	Multicultural Art Movements	3
ART	333	History of Southern California Chicana/o Art	3
ART	334	The Business of Art	3
ART	335	American Ethnic Images in Novels, Film and Art	3
ART	338	Psychology of Art and Artists	3
ART	430	Modern and Contemporary Art	3
ART	431	European Renaissance Literature and Art	3
ART	432	Arts of the Harlem Renaissance	3
ART	433	Women in the Arts	3

MEDIA AND PROCESSES COURSES (6 units)

Students are encouraged to pursue an integrated approach in the exploration of media and artistic processes by integrating traditional methods of art production with digital technologies in at least two areas of study. Assignments incorporate projects created with basic art materials working in conjunction with digital art technologies that lead toward development of artistic skills and computer literacy.

Select a minimum of two courses from the following:

ART	310	Two-Dimensional Media and Processes	3
ART	311	Three-Dimensional Media and Processes	3
ART	312	Time -Based Digital Media and Processes	3
ART	313	Communication Design Technology Media and Processes	3

STUDIO TOPICS COURSES (6 units):

Upon completion of prerequisite media and process courses, select studio topics courses from at least two areas of study. Assignments focus on the development of artistic concepts, visual continuity and increased competency with media and applied techniques that result in the creation of individual art projects. (3 units, repeatable one time for additional credit).

Select a minimum of two courses from the following:

ART	320	Studio Topics: Two-Dimensional Art	3-3
ART	321	Studio Topics: Three-Dimensional Art	3-3
ART	322	Studio Topics: Time-Based Digital Art	3-3
ART	323	Studio Topics: Communication Design Technology	3-3
ART	326	Digital Technologies: 3D Computer Animation	3-3

ADVANCED ARTISTIC PROBLEMS COURSES (6 units):
Advanced artistic problems courses provide students with the opportunity to continue in-depth investigations working with specific media, leading to the development of sound artistic concepts and proficiency in advanced artistic processes. Continued exploration into the integration of media and technologies lead students to the development of a congruent body of work. Creation and presentation of a professional portfolio is a required component of the course work. (3 units, repeatable one time for additional credit).

Select a minimum of two courses from the following:

ART	420	Advanced Artistic Problems: Two-Dimensional Art	3-3
ART	421	Advanced Artistic Problems: Three-Dimensional Art	3-3
ART	422	Advanced Artistic Problems: Time-Based Digital Art	3-3
ART	423	Advanced Artistic Problems: Communication Design Technology	3-3

REQUIRED SUPPORTING AND OTHER GE COURSES (63 units):

University Electives	9
American Institutions Requirement	6
General Education	48

Note: This program had not received final approval at the time this catalog went to press. Please visit our Website at www.csuci.edu for confirmation of its approval.

BIOLOGY

Biology is the study of life, its variety and processes. It emphasizes the relationship between structure and function in living systems and their interactions with the environment. The discipline is dynamic and rapidly advancing with the development of biotechnology and information technology. The major in biological sciences is designed for students who wish to enter graduate or health professional schools, the teacher credential program, or to seek careers in science education, business, industry or government. The minor will allow students in other majors to get a solid background in biology with further room to explore in-depth knowledge in a selected area. The Biology Program provides its students with a strong theoretical foundation in biology, combined with extensive, hands-on laboratory experiences using state-of-the-art technology. Students take a series of core courses augmented by upper-division electives selected from areas of special interest.

PROGRAMS OFFERED:

Bachelor of Science in Biology
Bachelor of Science in Biology with an Emphasis in Cell and Molecular Biology
Minor in Biology
Certificate in Biotechnology

CONTACT INFORMATION:

Ching-Hua Wang, PhD, Professor of Biology
Phone: (805) 437-8870
Email: Ching-Hua.Wang@csuci.edu

REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN BIOLOGY (120 units):

LOWER DIVISION REQUIREMENTS (31 units):

(12 units of the following will be counted toward lower division GE credits, 4 units in each of three different disciplines)

1. Biology
   - BIOL 200 Principles of Organismal and Population Biology....4
   - BIOL 201 Principles of Cell and Molecular Biology....4
   - BIOL 202 Biostatistics....3

2. Mathematics
   - MATH 150 Calculus I....4

3. Chemistry
   - CHEM 121 General Chemistry I....4
   - CHEM 122 General Chemistry II....4

4. Physics
   - PHYS 200 General Physics I....4
   - PHYS 201 General Physics II....4

For General Biology and Pre-Professional Students:

UPPER DIVISION REQUIREMENTS (32 units):

1. Organic Chemistry
   - CHEM 311 & 312 Organic Chemistry I....4
   - CHEM 314 & 315 Organic Chemistry II....4

(Organic Chemistry I & II taken at the 200 levels from community colleges are accepted as a year (8 units) of organic chemistry for the Biology major.)

2. Biology
   - BIOL 300 Cell Physiology....4
   - BIOL 302 Genetics and Evolution....3
   - BIOL 330* Ecology and the Environment....4
   - BIOL 346* Scientific and Professional Ethics....3
   - BIOL 400 Molecular Biology and Molecular Genetics....4

3. Computing in Biology
   Select one of the following courses:
   - BIOL 410 Computer Applications in Biomedical Fields....3
   - BIOL 430* Research Design and Data Analysis....3

4. Service Learning
   A minimum of 2 units taken from the following:
   - BIOL 494 Independent Research....2
   - BIOL 497 Directed Study....2

5. Capstone
   - BIOL 499 Senior Capstone Colloquium....1

(Courses with * are double-counted toward UD GE credits.)

ELECTIVES IN BIOLOGY (15 UNITS):

A minimum of 15 units chosen from 300 to 400 level upper division biology courses, with at least one lab-based course and only one course that could be taken at 300 level (no courses from BIOL 331 to 333 would be counted toward the major). CHEM 318 or CHEM 400 could also be taken to satisfy the electives.

REQUIRED SUPPORTING AND OTHER GE COURSES (42 units):

- ENGL 330 Writing in the Disciplines....3
- American Institutions Requirement....6
- Other GE Courses in Categories A-E....33

For Biology Students in Cell and Molecular Biology Emphasis:

UPPER DIVISION REQUIREMENTS (40-41 units):

1. Organic Chemistry and Biochemistry (7 Units):

- CHEM 311 Organic Chemistry I....3
- CHEM 312 Organic Chemistry I Laboratory....1
- CHEM 318 Biological Chemistry....3

(Note: Students completing the following courses to satisfy this category will obtain a Minor in Chemistry in addition to a Major in Biology:

- CHEM 311 Organic Chemistry I....3
- CHEM 312 Organic Chemistry I Laboratory....1
- CHEM 314 Organic Chemistry II....3
- CHEM 315 Organic Chemistry II Laboratory....1
- CHEM 400 Biochemistry....4

Organic Chemistry I & II taken at the 200 levels from community colleges are accepted as a year (8 units) of organic chemistry for the Biology major.)

2. Biology (27 Units):

- BIOL 300 Cell Physiology....4
- BIOL 301 Microbiology....4
- BIOL 302 Genetics and Evolution....3
- BIOL 330* Ecology and the Environment....4
- BIOL 346* Scientific and Professional Ethics....3
- BIOL 400 Molecular Biology and Molecular Genetics....4
- BIOL 401 Biotechnology and Recombinant DNA Technologies....5

3. Computing in Biology (3-4 Units)
BIOL 430* Research Design and Data Analysis 3
BIOL 431* Bioinformatics.....4

4. Service Learning (2 Units)
BIOL 492 Biotech Internship.....2-3
BIOL 494 Independent Research.....2
BIOL 497 Directed Study.....2

5. Capstone (1 Unit):
BIOL 499 Senior Capstone Colloquium.....1

(Courses with * are double-counted toward UD GE credits.)

ELECTIVES IN BIOLOGY (10 UNITS):

A minimum of 10 units chosen from 400 level courses, excluding BIOL 410.

REQUIRED SUPPORTING AND OTHER GE COURSES (38-39 units):

ENGL 330 Writing in the Disciplines.....3
American Institutions Requirement.....6
Other GE Courses in Categories A-E.....29-30

REQUIREMENTS FOR THE CERTIFICATE IN BIOTECHNOLOGY (24-25 units):

(For students with a B.S. degree in biology pursuing a certificate in biotechnology)

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1. B.S. degree in biology (may be concurrent);
2. Completion of the following courses with C or better grades:
   CHEM 318 or 400 Biological Chemistry or Biochemistry I.....3-4
   BIOL 401 Biotechnology and Recombinant DNA Technology.....5
   BIOL 420 Cellular and Molecular Immunology.....3
   BIOL 431 Bioinformatics.....4
3. Complete another 6 units of UD biology courses in consultation with the program director;
4. Complete a Biotech Internship course;
5. Complete the Capstone course;
6. Approval by the program director.

Note: This program had not received final approval at the time this catalog went to press. Please visit our Website at www.csuci.edu for confirmation of its approval.

BUSINESS

The Business Program has a liberal arts and interdisciplinary focus. Students learn skills related to the practice of the business disciplines: analytical thinking, mathematics/logic, oral and written communication, and teamwork. Students also learn the fundamental principles of accounting, economics, finance, information systems, management, and marketing as applied in a variety of organizational settings. Several courses will involve students in service learning through community based research and participation projects. A distinguishing aspect of the Business Program is the requirement to take courses developed in conjunction with disciplines outside the traditional business curriculum. Examples include courses with Anthropology, Economics, English, Fine Arts, and History. In addition, a Capstone Course will provide students with the opportunity to integrate their knowledge through a Global Strategy Simulation exercise. An objective of the Business Program is to prepare students for working in a variety of organizations – both public and private. The degree can also prepare students for several types of graduate school and professional school studies: MBA, MPA, law school.

PROGRAMS OFFERED:

Bachelor of Science in Business
Option in Management
Minor in Business Management

CONTACT INFORMATION:

William P. Cordeiro, PhD, Professor of Management
Phone: (805) 437-8860 Fax: (805) 437-8864
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Email: william.cordeiro@csuci.edu

PROPOSED COURSE OF STUDY:

FRESHMAN YEAR (30 Units)

ECON 110 Principles of Microeconomics
ENGL 100 Composition & Rhetoric I
MATH 140 Calculus for Business & Economics (or)
MATH 150 Calculus
GE Section E
GE Section B-1

ECON 111 Principles of Macroeconomics
CIS 110 Business Computer Systems
American Institutions Requirement
GE Section B-2
GE Section C-1

SOPHOMORE YEAR (30 Units)

ACCT 210 Financial Accounting
BUS 110 Business Law
American Institutions Requirement
GE Section C-2
GE or Electives

ACCT 220 Managerial Accounting
GE or Electives
GE or Electives
GE or Electives
GE or Electives

JUNIOR YEAR (30 Units)

ACCT 300 Applied Managerial Accounting

ECON 310 Intermediate Microeconomics (or)
ECON 329 Managerial Economics

MATH 340 Statistics for Business & Economics
MGT 307 Management of Organizations
MGT 346 Scientific & Professional Ethics
CIS 310 Management Information Systems
ENGL 483 Technical Visual Communication
ECON 311 Intermediate Macroeconomics (or)
ECON 320 Money & Banking
FIN 300 Business Finance

GE Interdisciplinary can include any of the following:
BUS 340 Business & Money in the American Novel
BUS 341 Drug Discovery & Development
BUS 339 The Business of Art
BUS 343 Anthropology of Organizations
BUS 349 History of Business & Economics in North America
ECON 343 Capital Theory

SENIOR YEAR (30 Units)

MATH 440 Operations Research
MKT 310 Principles of Marketing
GE Interdisciplinary Outside Business Major
Electives
Electives

GE Interdisciplinary can include any of the following:
BUS 340 Business & Money in the American Novel
BUS 341 Drug Discovery & Development
BUS 339 The Business of Art
BUS 343 Anthropology of Organizations
BUS 349 History of Business & Economics in North America
ECON 343 Capital Theory

BUS 499 Capstone: Global Strategic Simulation
Electives
Electives
Electives

REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN BUSINESS (120 Units):

LOWER DIVISION REQUIREMENTS (24 Units):

ACCT 210 Financial Accounting....3
ACCT 220 Managerial Accounting....3
BUS 110 Business Law....3
CIS 110 Business Computer Systems....3
ECON 110 Principles of Microeconomics....3
ECON 111 Principles of Macroeconomics....3
ENGL 100 Composition & Rhetoric I....3
MATH 140 Calculus for Business & Economics (or)....3
MATH 150 Calculus....4

UPPER DIVISION REQUIRED MAJOR COURSES (36 Units):

ACCT 300 Applied Managerial Accounting....3
BUS 499 Capstone: Global Strategic Simulation....3
CIS 310 Management Info Systems....3

ECON 310 Intermediate Microeconomics (or)....3
ECON 329 Managerial Economics....3

ECON 311 Intermediate Macroeconomics (or) 3
ECON 320 Money & Banking 3

ENGL 483 Technical Visual Communication....3
FIN 300 Business Finance 3
MATH 340 Statistics for Business & Economics....3
MATH 440 Operations Research....3
MGT 307 Management of Organizations 3
MGT 346 Scientific & Professional Ethics 3
MKT 310 Principles of Marketing 3

UPPER DIVISION INTERDISCIPLINARY MAJOR COURSES (6 Units):

BUS 341 Drug Discovery & Development (CHEM) 3
BUS 343 Anthropology of Organizations (ANTH) 3
BUS 340 Business and Money in the American Novel (ENGL) 3
BUS 339 The Business of Art (ART)....3
BUS 349 History of Business & Economics in North America (HIST) 3
ECON 343 Capital Theory (FIN)....3

ELECTIVES (6 Units):

BUS 410 Special Topics in Business 3
BUS 420 Cases in Strategy 3
BUS 424 Business in Its Social Setting 3
MGT 310 Management of International Businesses....3
MGT 325 Entrepreneurial Management 3
MGT 425 Management of Educational Organizations 3
MGT 426 Management of Healthcare Organizations 3
MGT 427 Management of Not-for-Profit Organizations 3

REQUIRED SUPPORTING AND OTHER GE COURSES (48 units):

Upper Division Interdisciplinary courses outside Business Major....3
American Institutions Requirement 6
Other GE Courses in Categories A-E....39

REQUIREMENTS FOR THE OPTION IN MANAGEMENT (15 units):

Management Option requires 15 units from the following courses, which will reduce available electives:

All four of the following courses:
MGT 310 Management of International Businesses....3
MGT 325 Entrepreneurial Management 3
BUS 420 Cases in Strategy 3
BUS 424 Business in Its Social Setting 3

One of the following courses:
MGT 421 Human Resource Management 3
MGT 425 Management of Educational Organizations 3
MGT 426 Management of Healthcare Organizations 3
MGT 427 Management of Not-for-Profit Organizations 3

Note: This program had not received final approval at the time this catalog went to press. Please visit our Website at www.csuci.edu for confirmation of its approval.

COMPUTER SCIENCE

The Computer Science degree offers latest, cutting edge education for various industrial and applied fields. The program will prepare students for careers in high-tech, computer and Internet driven industries, where interdisciplinary, dynamic and innovative professionals trained in latest technologies are increasingly sought. Students will be given a strong background in computer hardware and software, as well as a substantial amount of experiential learning. The program will stress interdisciplinary applications in other sciences and business.

PROGRAMS OFFERED:

Bachelor of Science in Computer Science
Minor in Computer Science

CONTACT INFORMATION:

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Phone: (805) 437-8868 Fax: (805) 437-8864
Web Page: http://www.csuci.edu
Email: ivona.grze@csuci.edu

PROPOSED COURSE OF STUDY:

FRESHMAN YEAR (30 Units)

ENGL 100	Composition and Rhetoric	3 (G.E. A1)
MATH 150	Calculus 1	4 (G.E B3)
COMP 150	Object Oriented Programming	4
Gen. Ed.	Section A, C, D, or E	3
MATH 151	Calculus 2	4
MATH 230	Logic	3 (G.E. A3 or C3)
COMP 151	Data Structures and Program Design	3
COMP 162	Comp. Architecture and Assembly Language	3
Gen. Ed.	Section A, C, D, or E	3

SOPHOMORE YEAR (28-31 Units)

MATH 240	Linear Algebra	3
COMP 232	Programming Languages	3
COMP 262	Computer Organization and Architecture	3
MATH 300	Discrete Mathematics	3
MGT 346	Scientific and Professional Ethics	3 (G.E. D)
Select one 2 semester science sequence and an additional science course (one lab section required) in Physics, Biology, or Chemistry		13-16 (G.E. B1 and B2)

JUNIOR YEAR (18 Units + G.E.)

MATH 344	Analysis of Algorithms	3
COMP 344	Automata, Languages and Computation	3
COMP 362	Operating Systems and System Architecture	3
MATH 342	Probability and Statistics	3 (G.E. A3
COMP 350	Software Engineering	3

SENIOR YEAR (20-21 Units + Electives)

COMP 420	Database Theory and Design	3
COMP 447	Societal Issues in Computing	3 (G.E. D)
MATH 451	Numerical Analysis	3
COMP 464	Computer Graphics I	3
COMP 499	Senior Colloquium	1

Choose at least 3 Computer Science Electives from the following list:

COMP 430	Design of Compilers	3
COMP 431	Bioinformatics	3
COMP 466	Computer Graphics II	3
COMP 469	AI/Neural Nets	3
MATH 440	Operation Research	3
ENGL 434	Technical Writing	3
COMP 485	Human Comp. Interaction	3
COMP 424	Security	3
COMP 429	Networks	3
COMP 432	Advanced Object Oriented Programming	3
COMP 490	Topics in Computer Science	3
COMP 492	Internship	3
COMP 494	Independent Research	3
COMP 497	Directed Study	3
COMP 499	Senior Colloquium	1

The choice of electives should reflect student specialization and requires approval by the student's advisor. Students are cautioned against assuming that courses taken before such approval will be acceptable.

General Education Included in Major Requirements (24 Units):

MATH 150	Calculus 1	4 (G.E. B3)
MATH 230	Logic	3 (G.E. A3)
MGT 346	Scientific and Professional Ethics	3 (G.E. D)
COMP 344	Automata, Languages and Computation	3 (G.E. C3)
COMP 450	Societal Issues in Computing	3 (G.E. D)
Misc. Sciences		8 (G.E. B1, B2)

REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN COMPUTER SCIENCE (125 Units):

LOWER DIVISION REQUIREMENTS (43-46 units):

MATH 150	Calculus 1	4
MATH 151	Calculus 2	4
MATH 230	Logic	3 (G.E. A3 or C3)
COMP 150	Object Oriented Programming	4
COMP 151	Data Structures and Program Design	4
COMP 162	Comp. Architecture and Assembly Language	3
MATH 240	Linear Algebra	3
COMP 232	Programming Languages	3
COMP 262	Computer Organization and Architecture	3
Select one 2 semester science sequence and an additional science course (one lab section required) in Physics, Biology, or Chemistry		12-15 (G.E. B1 and B2)

UPPER DIVISION REQUIREMENTS (34 Units):

MATH 300	Discrete Mathematics	3
MGT 346	Scientific and Professional Ethics	3
MATH 344	Analysis of Algorithms	3
COMP 362	Operating Systems and System Architecture	3
MATH 342	Probability and Statistics	3
COMP 350	Software Engineering	3
COMP 420	Database Theory and Design	3
COMP 444	Automata, Languages and Computation	3
COMP 447	Societal Issues in Computing	3 (G.E. D)
MATH 451	Numerical Analysis	3
COMP 464	Computer Graphics I	3
COMP 499	Senior Colloquium	1

MAJOR ELECTIVES (9-10 Units)

COMP 430	Design of Compilers	3
COMP 431	Bioinformatics	4
COMP 466	Computer Graphics II	3
COMP 469	AI/Neural Nets	3
MATH 440	Operation Research	3

ENGL	482	Technical Writing 3
COMP	449	Human Computer Interaction 3
COMP	424	Security 3
COMP	429	Networks 3
COMP	462	Advanced Object Oriented Programming 3
COMP	490	Topics in Computer Science 3
COMP	492	Internship 3
COMP	494	Independent Research 3
COMP	497	Directed Study 3
COMP	499	Senior Colloquium 1

REQUIRED SUPPORTING AND OTHER GE COURSES (42 Units):

Electives 6
American Institutions Requirement 6
General Education 30

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ENGLISH

The major in English at California State University Channel Islands focuses on the study of Literature, Writing and Criticism in an interdisciplinary context. Students develop a sound foundation in all three areas while developing analytical and critical skills, and the ability to explore, organize, and articulate ideas through writing. Literature and language are significant cultural phenomena that shape and are shaped by particular contexts; therefore, this program addresses the historical and cultural significance of English as a language and as a body of texts.

Course work in the English program is completed in three areas. Foundation courses provide the tools for intellectual discussion of materials. Interdisciplinary courses provide the student an opportunity to make connections with different ideas, different approaches and different ways of knowing. The required sequence provides for more in-depth investigation in a specialized field of Multicultural Literature, Writing or Education. In addition, the student may choose to pursue an emphasis in Creative Writing or Multicultural Literature, or a certificate in Technical Writing. A minor in English is also available.

English majors will keep a portfolio of work produced in each of their required courses and electives. The student will work closely with his or her advisor in developing the portfolio, which will be reviewed by the instructor as a prerequisite to the capstone/service learning course. At the end of the capstone, when all course requirements have been fulfilled for the major, there will be a review of the final portfolio.

PROGRAMS OFFERED:

Bachelor of Arts in English
Bachelor of Arts in English with an emphasis in Creative Writing
Bachelor of Arts in English with an emphasis in Multicultural Literature
Minor in English
Certificate in Technical Writing

CONTACT INFORMATION:

N. Jacquelyn Kilpatrick, PhD, Associate Professor of English
Phone: (805) 437-8865,
E-mail: j.kilpatrick@csuci.edu

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN ENGLISH (120 Units):

LOWER DIVISION REQUIREMENTS (12 Units):

Students seeking the Bachelor of Arts in English must have fulfilled the lower division writing requirement (at CSUCI ENGL 100 Composition and Rhetoric). In addition, four courses in literature survey courses (or the equivalent) are required in preparation for upper division studies.

ENGL 120 American Literature I 3
ENGL 150 British and European Literature I 3
ENGL 220 American Literature II 3
ENGL 250 British and European Literature II 3

UPPER DIVISION REQUIREMENTS (42 Units):

The upper division English core is designed to provide students with a broad background in literature, solid foundations in theory and criticism, and experience in writing to learn. (English majors may not use courses in this section to fulfill General Education requirements.)

ENGL 310 Research Methods 3
ENGL 315 Introduction to Linguistics 3
ENGL 326 Major British and European Authors 3
ENGL 327 Major American Authors 3
ENGL 328 Mythology 3
ENGL 330 Writing in the Disciplines 3
ENGL 410 Shakespeare 3
ENGL 430 Literary Theory 3
ENGL 449 Perspectives on Multicultural Literature 3
ENGL 499 Capstone Project/ Senior Seminar 3

Required Interdisciplinary Courses (6 units):
The rationale behind these courses is interdisciplinarity. Each course has been designed to interest students from across the university and to allow students to experience content, methodologies, and "ways of knowing" from more than one discipline area. Courses may be cross-listed and possibly co-taught with various programs and majors. These courses are suitable as upper division general education, interdisciplinary courses and may count for GE content and English major units. (See General Education requirements for details on double-counting.)

ENGL 333 Multicultural Drama in Performance/Production 3
ENGL 334 Narratives of Southern California 3
ENGL 335 American Ethnic Images in Novels and Film 3
ENGL 337 Literature of the Environment 3
ENGL 339 Psychopathology in Literature 3
ENGL 340 Business and Money in the American Novel 3
ENGL 431 European Renaissance Literature and Art 3
ENGL 432 Arts of the Harlem Renaissance 3

Required Sequence (6 units):
The sequence requirement allows students to explore an area of interest in more depth. Students choose one of the following: ENGL 449, ENGL 460, ENGL 475 or ENGL 482, and at least one of the courses listed below the chosen course. Or, the student may choose two courses in a culturally-based literature (ENGL 450, 451, 452, or 453) after completing the ENGL 449 requirement.

ENGL 449 Perspectives on Multicultural Literature 3
  ENGL 450 Native American Literature 3
  ENGL 451 African/African American Literature 3
  ENGL 452 Asian/Asian American Literature 3
  ENGL 453 Hispanic/Hispanic American Literature 3

ENGL 460 Perspectives on Creative Writing 3
  ENGL 461 Fiction Writing 3
  ENGL 462 Poetry Writing 3
  ENGL 463 Writing for the Stage and Screen 3
  ENGL 464 Creative Non-Fiction 3

ENGL 475 Language in Social Context 3
  ENGL 476 Language Development and Assessment 3
  ENGL 477 Literature for English Secondary Education 3
  ENGL 478 Writing for English Secondary Education 3

ENGL 482 Technical Writing* 3
  ENGL 483 Technical Visual Communication 3
  ENGL 484 Technical Writing for the Sciences 3

*The Technical Writing sequence for English majors requires ENGL 482 and one other course in Technical Writing. However, unless undertaken as part of the sequence requirement, ENGL 482 is not a prerequisite for 483 or 484.

EMPHASIS IN CREATIVE WRITING (18 Units):

The Creative Writing Emphasis gives the English major an opportunity to pursue his or her interests in creative writing of various forms. The

culmination of the emphasis is the Creative Writing project, which the student chooses in consultation with her or his advisor. The product of that course will be a completed work of publishable quality in one of the genres addressed in the course work. Courses may fulfill the "required sequence" requirement as well as counting toward the emphasis. The emphasis requires completion of all English major requirements, plus each of the following:

ENGL 460 Perspectives on Creative Writing 3
ENGL 461 Fiction Writing 3
ENGL 462 Poetry Writing 3
ENGL 463 Writing for the Stage and Screen 3
ENGL 464 Creative Non-Fiction 3
ENGL 465 Creative Writing Project 3

EMPHASIS IN MULTICULTURAL LITERATURE (18 Units):

The Multicultural Literature Emphasis gives the English major an opportunity to pursue his or her interests in studying the literature of various cultures and ethnic groups. The culmination of the emphasis is the Multicultural Literature project, which the student chooses in consultation with his or her advisor. The product of that course will be a completed work which addresses the literature (broadly defined as fiction, non-fiction, poetry, drama and film) addressed in the course work. Courses may fulfill the "required sequence" and core requirement as well as counting toward the emphasis. The emphasis requires completion of all English major requirements, plus each of the following:

ENGL 449 Perspectives on Multicultural Literature 3
ENGL 450 Native American Literature 3
ENGL 451 African/African American Literature 3
ENGL 452 Asian/Asian American Literature 3
ENGL 453 Hispanic/Hispanic American Literature 3
ENGL 454 Multicultural Literature Project 3

REQUIRED SUPPORTING AND OTHER GE COURSES (66 Units):

Electives 12
American Institutions Requirement 6
General Education 48

REQUIREMENTS FOR THE CERTIFICATE IN TECHNICAL WRITING (18 Units):

The Certificate in Technical Writing provides an opportunity for students from various disciplines to pursue interests in Technical Writing, and the certificate will prove valuable in a variety of career choices. The culmination of the certificate is the Special Topics course, which may be an internship or may be a project the student chooses in consultation with his or her advisor. Courses may not fulfill the "required sequence" requirement as well as count toward the certificate. The certificate requires each of the following:

ENGL 330 Writing in the Disciplines 3
ENGL 310 Research Methods 3
ENGL 482 Technical Writing 3
ENGL 483 Technical Visual Communication 3
ENGL 484 Technical Writing for the Sciences 3
ENGL 485 Technical Writing Project 3

Note: This program had not received final approval at the time this catalog went to press. Please visit our Website at www.csuci.edu for confirmation of its approval.

ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT

THE MAJOR: Today's environmental problems call for individuals who are educated in more than one discipline, highly trained in technical skills, and aware of the political, economic, and social dimensions of environmental decisions. The Bachelor of Science in Environmental Science and Resource Management provides solid training in basic physical, biological, and social sciences, and application of management science to reduce adverse impacts of human activity on the environment and to maximize the benefits that accrue from environmental resources. This curriculum prepares students for professional careers in Environmental Science and Resource Management and for subsequent graduate study.

In the narrowest sense, environmental science is the study of the impact of human systems on physical and biological systems, and the dependence on natural resources by human systems. In a broader sense, environmental science is the study of the interaction and co-evolution of human, physical, and biological systems. Natural science is the study of physical and biological systems. Social science is the study of human systems – economic systems, political systems, human perceptions, and human interactions. Environmental science requires integral knowledge of both natural and social science. Resource management is concerned with the most effective means of avoiding damage to environmental assets and extracting beneficial uses of environmental resources, within the context of social institutions. Effective resource management considers benefits and costs, uncertainties and risks, limits of knowledge, institutional constraints, and social and political forces.

The B.S. program has two emphases: environmental science and resource management. This program prepares graduates specializing in environmental science who understand basic principles of resource management, and graduates specializing in resource management who understand basic principles of environmental science. Most required courses are those offered in related disciplines. The curriculum fosters cross-disciplinary communication in the several required courses common to both degree programs and particularly in the Environmental Science and Resource Management courses.

CAREERS: For graduates completing the program of study required for the BS degree in Environmental Science and Resource Management, there are ample career opportunities working on environmental problems in industry, government, and non-profit organizations. The degree will also prepare students for graduate programs in either Environmental Science or Resource Management. For example, students could pursue a Ph.D. in Environmental Science at UCLA or in Environmental Science and Policy at U.C. Santa Barbara.

PROGRAM OFFERED:

Bachelor of Science in Environmental Science and Resource Management
- Emphasis in Environmental Science
- Emphasis in Resource Management

CONTACT INFORMATION:

Philip Hampton, PhD, Associate Professor of Chemistry
Phone: (805) 437-8869
E-mail: phampton@csuci.edu

PROPOSED COURSE OF STUDY

FRESHMAN YEAR (31 Units)

BIOL	200	Principles of Organismal and Population Biology	4
BIOL	201	Principles of Cell and Molecular Biology	4
CHEM	121	General Chemistry I	4
CHEM	122	General Chemistry II	4
ECON	110	Principles of Microeconomics	3
ECON	111	Principles of Macroeconomics	3
ENGL	100	Composition and Rhetoric I	3
American Institutions Requirement			3
GE course			3

SOPHOMORE YEAR (29 Units)

ANTH 102, 103, 120, or 332			3
GEOL 121 or PHYS 200			4
MATH	150	Calculus I	4
MATH 202, 340, or 342			3
American Institutions Requirement			3
Elective			3
Elective			3
Elective			3
GE course			3

JUNIOR YEAR (31 Units)

BIOL	330	Ecology and the Environment	4
ECON	310 or 329		3
ENGL	330	Writing in the Disciplines	3
ENGL	337	Literature of the Environment	3
ESRM	328	Introduction to Geographical Information Systems	3
ESRM	330	Environmental Institutions, Law and Regulation	3
Elective in the emphasis			3
Elective			3
GE course			3
GE course			3

SENIOR YEAR (29 Units)

ESRM	499	Capstone	3
ECON	362	Introduction to Environmental Economics	3
GEOL	321	Environmental Geology	3
Required course in the emphasis			3
Required course in the emphasis			4 or 2+2
Elective in the emphasis			3
Elective in the emphasis			3
Elective			4
Elective			3

REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT (120 Units):

LOWER DIVISION REQUIREMENTS (36 Units):

BIOL	200	Principles of Organismal and Population Biology	4
BIOL	201	Principles of Cell and Molecular Biology	4
CHEM	121	General Chemistry I and Laboratory	4
CHEM	122	General Chemistry II and Laboratory	4
ECON	110	Principles of Microeconomics	3
ECON	111	Principles of Macroeconomics	3
MATH	150	Calculus I	4

(MATH 151 Calculus II is also recommended)

Select one course from each of the following sets of courses:

1. ANTH 102 Cultural Anthropology 3
   ANTH 103 Human Beginnings: Biological and Cultural ..... Evolution 3
   ANTH 120 The World Eaters: Co-evolution of Human and Natural Systems 3
   ANTH 322 World Cultures: North America 3

2. GEOL 121 Physical Geology 4
   PHYS 200 General Physics I 4
   (PHYS 201 General Physics II is also recommended)

3. MATH 202 Biostatistics 3
   MATH 340 Statistics for Business and Economics 3
   MATH 342 Probability and Statistics 3

UPPER DIVISION REQUIREMENTS (28 Units):

BIOL 330 Ecology and the Environment 4
ECON 362 Introduction to Environmental Economics 3
ENGL 330 Writing in the Disciplines 3
ENGL 337 Literature of the Environment 3
ESRM 328 Introduction to Geographical Information Systems 3
ESRM 330 Environmental Institutions, Law, and Regulation 3
ESRM 499 Capstone 3
GEOL 321 Environmental Geology 3

ECON 310 Intermediate Microeconomics 3
Or
ECON 329 Managerial Economics 3

All students must select either the Environmental Science Emphasis or the Resource Management Emphasis and take the associated coursework.

ENVIRONMENTAL SCIENCE EMPHASIS REQUIREMENTS (16 Units):

BIOL 432 Principles of Epidemiology and Environmental Health 3
CHEM 250 Quantitative Analysis 2
CHEM 251 Quantitative Analysis Laboratory 2

A total of nine units from the following courses:

BIOL 301 Microbiology 4
BIOL 310 Animal Biology and Ecology 4
BIOL 311 Plant Biology and Ecology 4
BIOL 312 Marine Biology 4
BIOL 331 Biotechnology in the 21st Century 2
BIOL 333 Emerging Public Health Issues 2
BIOL 402 Toxicology 3
BIOL 427 Developmental Biology 3
BIOL 428 Biology of Cancer 2
CHEM 311 Organic Chemistry I 3
CHEM 312 Organic Chemistry I Laboratory 1
CHEM 314 Organic Chemistry II 3
CHEM 315 Organic Chemistry II Laboratory 1
CHEM 318 Biological Chemistry 3
CHEM 333 Energy and Society 3
ESRM 481 Topics in Environmental Pollution 3
MATH 430 Research Design and Data Analysis 3
PHYS 201 General Physics II 4

RESOURCE MANAGEMENT EMPHASIS REQUIREMENTS (16 Units):

ECON 486 Introduction to Econometrics 3
ECON 488 Quantitative Methods in Environmental Economics 4

A total of nine units from the following courses:

ECON 443 Capital Theory 3
ECON 462 Environmental Economics 3
ECON 463 Energy Economics 3
ECON 464 Natural Resource Economics 3
ESRM 332 Population and Resource Constraints 3
ESRM 410 Environmental Impact Analysis 3
ESRM 482 Topics in Environmental Planning and Resource Management 3
ESRM 483 Topics in Global Resource Management 3
MGT 307 Management of Organizations 3
MGT 428 Management for Science/ Technology Organizations 3

REQUIRED SUPPORTING AND OTHER GE COURSES (40 units):

University Electives 16
American Institutions Requirement 6
Other GE Courses 18

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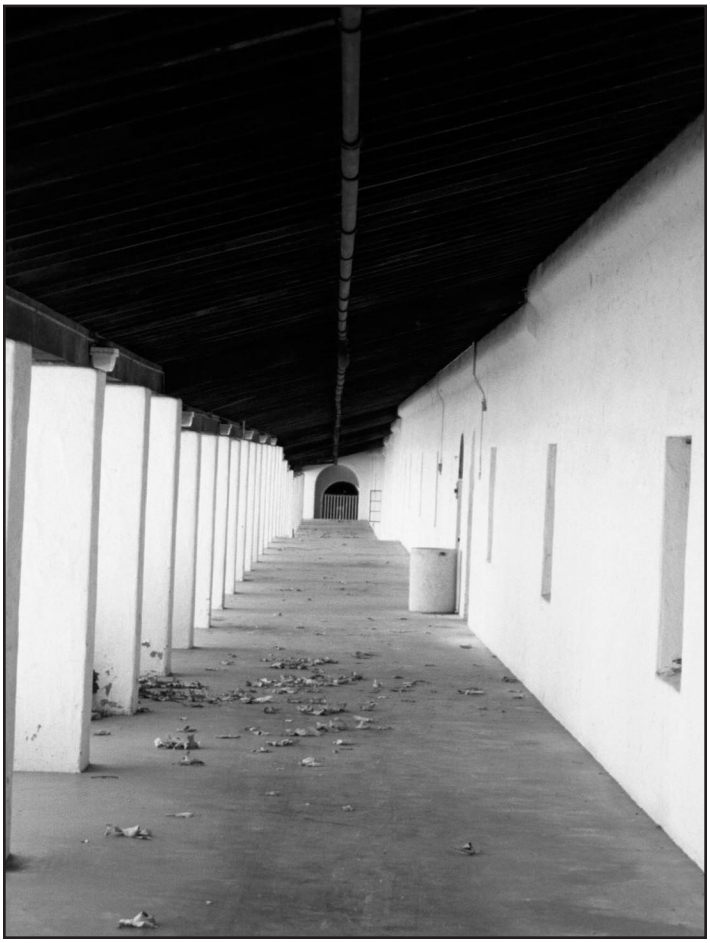

LIBERAL STUDIES

The Liberal Studies program provides an education that allows students the opportunity to experience knowledge residing at the intersection of traditional areas of study. Students choose from three options; Interdisciplinary Program, Concentrated Studies, or Teaching and Learning.

Liberal Studies Interdisciplinary Option students will be in demand by corporations as well as non-profit and government organizations. These graduates will have flexible problem solving skills and breadth of knowledge allowing them to excel in positions that require rapid on-the-job acquisition of knowledge and experience.

Students in the Concentrated Studies Option will have an opportunity to study in-depth with a specific faculty member. This option will appeal to students who want greater flexibility in designing their course of study or students who need the greater flexibility this degree offers in order to complete their education. It is also expected that some students in the Concentrated Studies Option will use the Liberal Studies program to 'test the waters' of other degree programs. This major will provide a jumping off point into the traditional majors.

Liberal Studies majors have traditionally gone on to teaching careers. The need for teachers who can draw from many areas of knowledge is especially acute and it is expected that graduates from the Teaching and Learning option will be in high demand.

All Liberal Studies options will provide an excellent broad-based background for entry into professional and/or graduate programs.

In addition to the program options, all Liberal Studies students will choose from core courses in the following areas: Reading, Literature & Language, History & Social Science, Math, Science, Visual Arts, Physical Education, Human Development, Humanities, Multicultural Studies, Performing Arts, and Computer Literacy.

PROGRAMS OFFERED:

Bachelor of Arts in Liberal Studies with an Option in:
- Interdisciplinary Studies
- Concentrated Studies
- Teaching and Learning

CONTACT INFORMATION:

Frank P. Barajas, PhD, Assistant Professor of History
Phone: (805) 437-8862 Fax: (805) 437-8864
Web Page: http://www.csuci.edu
Email: frank.barajas@csuci.edu

CREDENTIAL INFORMATION:

The Liberal Studies Teaching and Learning Option has been designed to meet the state-approved Multiple Subject Subject-Matter Preparation Program. Completion of the Liberal Studies Teaching and Learning Option, a passing score on the MSAT, and completion of pre-requisite courses are required for entrance into CSUCI's Multiple Subject Credential Program. State-approval of the Multiple Subject-matter Preparation Program is pending. For more information about credential programs see Teaching Credential and contact Professors Lillian Vega-Castaneda or Joan Karp in the Education Program.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN LIBERAL STUDIES (120 Units):

INTERDISCIPLINARY AND CONCENTRATED STUDIES OPTIONS:

REQUIRED CORE COURSES (33 Units):

Reading, Literature & language 3
History & Social Sciences 3
Mathematics 3
Science 3
Visual Arts 3
Physical Education 3
Human Development 3
Humanities 3
Multicultural Studies 3
Performing Arts 3
Computer Literacy 3

Students must have 3 units from some combination of these courses:

LS	492	Individual Research	1-3
LS	494	Service Learning/Internship	1-3
LS	497	Directed Studies	1-3
LS	499	Capstone Project	1-3

REQUIRED OPTION COURSES (21 Units):

For the Interdisciplinary Studies Option:
Interdisciplinary courses 21
(Interdisciplinary courses are numbered 330-349 or 430-449)

For the Concentrated Studies Option:
Students must contract a course of study with a selected full time faculty member. Contact the Liberal Studies program for more information.... 21

REQUIRED SUPPORTING AND OTHER GE COURSES (63 Units):

University Electives 9
American Institutions Requirement 6
General Education 48
General Education courses may not be double counted.

TEACHING AND LEARNING OPTION:

There are 90 total units of subject matter preparation for the credential. These units include General Education, Liberal Studies Core, Teaching and Learning Option, and Capstone Courses. The following courses fulfill the California Commission on Teacher Credentialing standards for the subject matter preparation of teachers, Kindergarten to Grade 8 (subject matter). Core courses and options have been specified so that all of the California teacher preparation standards will be met. In addition to the listed courses, students must select nine units in a specified area of emphasis and a capstone course. Courses meeting both General Education and the Teaching and Learning Option may be counted as meeting both requirements.

REQUIRED CORE COURSES (80 Units):

1. Reading, language and literature (15 units)

COMM	210	Interpersonal Communication	3
ENGL	100	Composition and Rhetoric	3
ENGL	312	Children's Literature	3
ENGL	315	Introduction to Language Structure and Linguistics	3
ENGL	475	Language in Social Context	3

2. History and social science (24 units):

HIST 211 World History Origins to 1500 3
Or ANTH 333 Civilizations of an Ancient Landscape: .... World Archeology 3
HIST 212 World History Since 1500....3
HIST 270 The United States to 1877....3
HIST 369 California History and Culture....3
Or ANTH 323 World Cultures: California to 1850s....3
ECON 111 Principles of Macroeconomics....3
Or ECON 300 Fundamentals of Economics 3
ANTH 102 Cultural Anthropology 3
EDUC 101 Introduction to Education 3
EDUC 320 Education in Modern Society....3

3. Mathematics (6 units):

MATH 208 Modern Math for Elementary Teachers Numbers and ... Problem Solving 3
MATH 308 Modern Math for Elementary Teachers Geometry, ... Probability and Statistics....3

4. Science (15 units):

GEOL 300 Foundations of Earth Science 4
BIOL 201 Principles of Cell and Molecular Biology 4
CHEM 170 Physical Sciences for the Elementary School Teacher .4
COMP 101 Computer Literacy 3

5. Visual and Performing Arts (6 units):

ART 100 Understanding Fine Art Processes 3
Or ART 102 Children's Art Media and Methods 3
MUS 333 Varieties of Musical Experiences....3
Or TH 333 Multicultural Drama 3
Or TH 410 Shakespeare 3

6. Physical education and Health (5 units):

PHED 302 Motor Learning, Fitness and Development in . Children....3
HLTH 322 Health for Educators 2

7. Human development, learning and cognition (9 units):

PSY 200 Introduction to Psychology....3
PSY 210 Learning, Cognition and Development....3
SPED 345 Individuals with Disabilities in Society 3

REQUIRED EMPHASIS: (9 Units):

Select 9 additional units from one of the following areas:

Reading, language and literature
History and Social Science
Mathematics
Science
Visual and Performing Arts
Physical Education and Health
Human Development and Psychology

REQUIRED SUPPORTING AND OTHER GE COURSES (31 Units):

American Institutions Requirement 6
General Education....25

LIBERAL STUDIES COURSE LIST

Anthropology

ANTH 102 Cultural Anthropology....3
ANTH 103 Human Beginnings: Biological and Cultural Evolution...3
ANTH 110 Who Done it? An Introduction to Forensics....3
ANTH 120 The World Eaters: Co-evolution of Human and Natural Systems....3
ANTH 320 World Cultures: Peoples, Places, and Things....3
ANTH 321 World Cultures: Ethnicity in the United States 3
ANTH 322 World Cultures: North America 3
ANTH 323 World Cultures: California to the 1850s....3
ANTH 324 World Cultures: African-American Culture History 3
ANTH 330 Ecology and the Environment 3-4
ANTH 331 Wars and Conflicts in the Modern World 3
ANTH 332 Population and Resource Constraints....3
ANTH 333 Civilizations of an Ancient Landscape World Archaeology 3
ANTH 335 American Ethnic Images in Novels and Film 3
ANTH 341 Culture and Personality 3
ANTH 343 Anthropology of Organizations....3
ANTH 345 Bioanthropology: Human Evolution and Diversity....3
ANTH 346 Scientific and Professional Ethics 3
ANTH 441 Space and Time: Cross-cultural Perspectives....3
ANTH 443 Medical Anthropology: Cross-Cultural Perspectives on Health and Healing....3

Art

ART 100 Understanding Fine Arts Processes 3
ART 102 Children's Art Media and Methods 3
ART 110 Prehistoric Art to the Middle Ages....3
ART 111 Renaissance to Contemporary Art....3
ART 112 Arts of the Eastern World 3
ART 330 Critical Thinking in a Visual World....3
ART 331 Art and Mass Media 3
ART 332 Multicultural Art Movements....3
ART 333 History of Southern California Chicana/o Art....3
ART 334 The Business of Art 3
ART 335 American Ethnic Images in Novels and Film 3
ART 337 Psychology of Art and Artists....3
ART 430 Modern and Contemporary Art 3
ART 431 European Renaissance Literature and Art 3
ART 432 Arts of the Harlem Renaissance 3
ART 433 Women in the Arts....3

Biology

BIOL 100 General Biology 4
BIOL 200 Principles Of Organismal and Population Biology 4
BIOL 201 Principles Of Cell and Molecular Biology....4
BIOL 210 Human Anatomy and Physiology I 4
BIOL 211 Human Anatomy and Physiology II....4
BIOL 301 Microbiology....4
BIOL 302 Genetics and Evolution 3
BIOL 310 Animal Biology and Ecology....4
BIOL 311 Plant Biology and Ecology....4
BIOL 312 Marine Biology....4
BIOL 330 Ecology and The Environment....4
BIOL 346 Scientific and Professional Ethics 3

Business

BUS 339 The Business of Art 3
BUS 340 Business and Money in the American Novel 3
BUS 343 Anthropology of Organizations 3
BUS 349 History of Business & Economics in North America 3
BUS 424 Business in Its Social Setting 3

Chemistry

CHEM 100 Chemistry and Society 4
CHEM 105 Introduction to Chemistry 3
CHEM 110 Who Done it? An Introduction to Forensics 3
CHEM 121 General Chemistry I and Laboratory 4
CHEM 122 General Chemistry II and Laboratory 4
CHEM 170 Physical Sciences for the Elementary School Teacher 4
CHEM 341 Drug Discovery and Development 3
CHEM 343 Forensic Science 3
CHEM 344 Energy and Society 3
CHEM 346 Scientific and Professional Ethics 3

Communication

COMM 210 Interpersonal Communication 3

Computer Science

COMP 100 Computers: Their Impact and Use 3
COMP 101 Computer Literacy 3
COMP 102 Introduction to Algorithms 2
COMP 103 Computer Programming 1
COMP 150 Object Oriented Programming 3

Economics

ECON 111 Principles of Macroeconomics 3
ECON 300 Fundamentals of Economics 3
ECON 340 Business and Money in the American Novel 3
ECON 342 History of Business and Economics in North America 3

Education

EDUC 101 Introduction to Education 3
EDUC 320 Education in Modern Society 3

English

ENGL 100 Composition and Rhetoric 3
ENGL 120 American Literature I 3
ENGL 150 British and European Literature I 3
ENGL 220 American Literature II 3
ENGL 250 British and European Literature II 3
ENGL 310 Research Methods 3
ENGL 312 Introduction to Children's Literature 3
ENGL 315 Introduction to Language Structure and Linguistics 3
ENGL 328 Mythology 3
ENGL 330 Writing in the Disciplines 3
ENGL 333 Multi-Cultural Drama in Performance/Production 3
ENGL 334 Narratives of Southern California 3
ENGL 335 American Ethnic Images in Novels and Film 3
ENGL 337 Literature of the Environment 3
ENGL 339 Psychopathology in Literature 3
ENGL 340 Business and Money in the American Novel 3
ENGL 400 Contemporary Literature 3
ENGL 410 Shakespeare's Plays 3
ENGL 420 Literary Theory 3
ENGL 431 European Renaissance Literature and Art 3
ENGL 432 Arts of the Harlem Renaissance 3
ENGL 449 Perspectives on Multi-Cultural Literature 3
ENGL 450 Native American Literature 3
ENGL 451 African/African American Literature 3
ENGL 452 Asian/Asian American Literature 3
ENGL 453 Hispanic/Hispanic American Literature 3
ENGL 475 Language in Social Context 3
ENGL 476 Language Development and Assessment 3
ENGL 477 Literature for English Secondary Education 3
ENGL 478 Writing for English Secondary Education 3

Geology

GEOL 101 Physical Geology 3
GEOL 102 Historical Geology 3
GEOL 300 Foundations of Earth Science 4
GEOL 321 Environmental Geology 3
GEOL 327 Oceans and the Global Environment 3

History

HIST 211 World History: Origins to 1500 3
HIST 212 World History: Since 1500 3
HIST 270 The United States to 1877 3
HIST 271 The United States since 1865 3
HIST 331 History of Mathematics 3
HIST 333 History of Southern California Chicana/o Art 3
HIST 334 Narratives of Southern California 3
HIST 335 American Ethnic Images in Novels, Film, and Art 3
HIST 350 Chicano History and Culture 3
HIST 365 Themes in World Civilization Before 1500 3
HIST 366 Themes in World Civilization Since 1500 3
HIST 369 California History and Culture 3
HIST 370 United States Colonial History 3
HIST 371 The Founding of the United States 3
HIST 372 United States Industrialization and Progressivism 3
HIST 401 United States Immigration History, 1840-1945 3

Health

HLTH 322 Health for Educators 2

Liberal Studies

LS 101 Learning in the University, Learning for Life 3
LS 492 Independent Research 1-3
LS 494 Service Learning/Internship 1-3
LS 497 Directed Studies 1-3
LS 499 Capstone Project 1-3

Mathematics

MATH 108 Mathematical Thinking 3
MATH 140 or 150/151 Calculus 3
MATH 208 Modern Math for Elementary Teachers 1: Numbers and Problem Solving 3
MATH 230 Logic 3
MATH 233 Biostatistics 3
MATH 300 Fundamentals of Mathematics 3
MATH 308 Modern Math for Elementary Teachers 2: Geometry, Probability and Statistics 3
MATH 330 Mathematics for Artists 3
MATH 331 History of Mathematics 3

MATH 346 Scientific and Professional Ethics 3

Management

MGT 346 Scientific & Professional Ethics 3

Music

MU 333 Varieties of Musical Experiences 3

Physical Education

PE 101 Walking for Health 1
PE 102 Seminar in Traditional Asian Martial Arts – Tai Ji 1
PE 103 Yoga 1
PE 105 Zen of Surfing 1
PE 302 Motor Learning, Fitness and Development in Children 2

Physics

PHYS 200 General Physics I 4
PHYS 201 General Physics II 4

Psychology

PSY 100 Introduction to Psychology 3
PSY 200 History and Systems of Psychology 3
PSY 210 Learning, Cognition and Development 3
PSY 212 Neurobiology and Cognitive Science 3
PSY 215 Cognition and Learning 3
PSY 220 Human Sexual Behavior 3
PSY 310 Developmental Psychology 3
PSY 320 Cognitive Psychology 3
PSY 335 Psychology of Art and Artists 3
PSY 341 Culture and Personality 3
PSY 344 Health Psychology 3
PSY 370 Clinical Psychology 3
PSY 441 Space and Time: Cross-cultural Perspectives 3
PSY 450 Neural Science 3

Special Education

SPED 345 Individuals With Disabilities in Society 3

Theatre

TH 333 Multi-Cultural Drama in Performance/Production 3
TH 410 Shakespeare's Plays 3

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MATHEMATICS

Mathematics can be pursued as a scholarly discipline of an especially elegant kind -- a creative art form -- or it can be treated as a valuable tool in an applied discipline. Our program will address both needs: it will prepare students for teaching careers, studies in graduate programs (in pure mathematics, applied mathematics, mathematics education, or the mathematical sciences) or for employment in high-tech and bio-tech industries, where mathematics-trained professionals with interdisciplinary expertise (sciences and business) are in high demand. Students will be given a strong background in mathematics and statistics as well as a substantial amount of interdisciplinary applications in physics, computational biochemistry, biostatistics, business, computer and information sciences, computer imagining or artificial intelligence.

DEGREES AND PROGRAMS OFFERED:

Bachelor of Science in Mathematics
Minor in Mathematics

CONTACT INFORMATION:

Ivona Grzegorczyk, PhD, Associate Professor of Mathematics
Phone: (805) 437-8868 Fax: (805) 437-8864
Email: ivona.grze@csuci.edu

PROPOSED COURSE OF STUDY:

FRESHMAN YEAR (31 Units)

ENGL 100 Composition and Rhetoric ..... 3 (G.E. A1)
MATH 150 Calculus 1 ..... 4 (G.E B3)
COMP 150 Object Oriented Programming 4
G.E. Section A, C, D, or E 3

MATH 151 Calculus 2 4
MATH 230 Logic ..... 3 (G.E. A3 or C3)
COMP 151 Data Structures and Program Design 3
PHYS 200 General Physics I 4
G.E. Section A, C, D, or E 3

SOPHOMORE YEAR (28-31 Units)

MATH 250 Calculus III 3
MATH 240 Linear Algebra 3
MATH 300 Discrete Mathematics 3
MATH 350 Differential Equations and Dynamical Systems 3
MGT 346 Scientific and Professional Ethics ..... 3 (G.E. D)
Select one 2 semester science sequence and an additional science course (one lab section required) in Physics, Biology, or Chemistry ..... 13-16 (G.E. B1 and B2)

NOTE: By the sophomore year students should decide on an emphasis to plan their electives

JUNIOR YEAR (18 Units + G.E)

MATH 342 Probability and Statistics ..... 3 (G.E. A3)
MATH 351 Real Analysis 3
MATH 452 Complex Analysis 3
Emphasis courses 6-9

SENIOR YEAR (20-21 Units+ G.E.)

Math 499 Senior Colloquim 1
Electives in Major 9-10
Other Electives 13

REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN MATHEMATICS (120 Units):

LOWER DIVISION REQUIREMENTS (37 Units):

MATH 150 Calculus I ..... 4(G.E B3)
MATH 151 Calculus II 4
MATH 250 Calculus III 3
COMP 150 Object Oriented Programming 4
COMP 151 Data Structures and Program Design 4
MATH 230 or PHIL 230 Logic ..... 3 (G.E. A3)
MATH 240 Linear Algebra 3
PHYS 200 General Physics I ..... 4 (G.E. B2)
Two Additional Sciences courses ..... 8 (G.E. B2)

UPPER DIVISION REQUIREMENTS (46 Units):

MATH 300 Discrete Mathematics 3
MGT 346 Scientific and Professional Ethics ..... 3 (G.E. D)
MATH 342 Probability and Statistics ..... 3 (G.E. A3)
MATH 350 Differential Equations and Dynamical Systems 3
MATH 351 Real Analysis 3
MATH 452 Complex Analysis 3
MATH 499 Senior Colloquium 1

EMPHASIS REQUIREMENTS (6-9 Units):

Biomathematics (6 Units):

Students selecting this emphasis should take BIOL 200 and 201 (8) as the science sequence.

MATH 430 Scientific experimental design and Data Analysis 3
COMP 431 Bioinformatics 3

Computational Chemistry (6 Units):

Students selecting this emphasis should take CHEM 121 and 122 General Chemistry I and II (8) as the science sequence.

MATH 349 Symmetry Groups and Science 3
MATH 430 Research Design and Data Analysis 3

Computer Science (9 Units):

COMP 350 Software Engineering 3
MATH 451 Numerical Analysis 3
MATH 344 Analysis of Algorithms 3

Physics (6 Units):

Students selecting this emphasis should take PHYS 200 and 201 (8) as the science sequence.

MATH 350 Partial Differential Equations and Mathematical Physics 3
MATH 452 Complex Analysis 3

Actuarial Sciences/Economics (9 Units):

ECON 300 Fundamentals of Economics ..... 3 (G.E. D)
ECON 486 Econometrics 3
MATH 440 Operations Research 3

Business Management (9 Units):

ECON 300 Fundamentals of Economics ..... 3 (G.E.D)
MATH 440 Operations Research 3
MGT Upper division management course 3

Cognitive Science (9 Units):

MATH 343 Research design and Data Analysis 3
PSY 320 Cognitive Psychology 3
PSY 450 Neuroscience or other upper division cognitive

psychology course....3

Education (9 Units):

EDUC	320	Education in Modern Society	3
	Or		
PSY	200	Introduction to Psychology	3
MATH	318	Mathematics for Secondary School Teachers	3
MATH	331	History of Mathematics	3

Applied Mathematics (9):

MATH	450	Partial Differential Equations and Mathematical Physics	3
MATH	451	Numerical Analysis	3
MATH	440	Operations Research	3

Digital Design (9):

MATH	393	Abstract Algebra	3
ART	108	Visual Technologies	3
ART	300	Digital Art technologies or ART 312, ART 322	3

Choice of another emphasis or individualized emphasis is possible upon approval of the mathematics advisor.

ELECTIVE REQUIREMENTS (9 Units):

MATH	318	Mathematics for Secondary School Teachers	3
MATH	331	History of Mathematics	3
MATH	344	Analysis of Algorithms	3
MATH	393	Abstract Algebra	3
MATH	430	Scientific experimental design and Data Analysis	3
MATH	440	Operations Research	3
MATH	450	Partial Differential Equations and Mathematical Physics	3
MATH	451	Numerical Analysis	3
MATH	480	Differential and Riemannian geometry	3
MATH	482	Number Theory and Cryptography	3
MATH	484	Algebraic Geometry and Coding Theory	3
MATH	490	Topics in Mathematics	3
MATH	492	Internship	3
MATH	494	Independent Study	3
MATH	497	Directed Study	3
MATH	499	Senior Colloquium	1

REQUIRED SUPPORTING AND OTHER GE COURSES (22 units):

American Institutions Requirement....6
Electives / GE Courses....16

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MULTIPLE SUBJECT TEACHING CREDENTIAL

The Multiple Subject Credential Program prepares teachers to work with students in grades K-8 with responsibility for all subject areas in a self-contained classroom. Multiple Subject Credential Teachers most often teach in elementary, middle school, or self-contained departmentalized classrooms.

This program specifically prepares teachers for the diversity of languages and cultures often encountered in California's public classrooms. The program prepares candidates to address the needs of students who speak English as a native language and/or as a second language in the elementary school setting.

An underlying principle of the program is the belief that all children (regardless of race, ethnicity, gender, ability or economic status) are capable of learning. Emphasis is placed on the K-8 student as actively engaged in his/her learning.

PROGRAM OFFERED:

Multiple Subject Teaching Credential

CONTACT INFORMATION:

Lillian Vega-Castaneda, EdD, Professor of Elementary Education
(805) 437-8872
Lillian.Castaneda@csuci.edu

Joan Karp, PhD, Professor of Special Education
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FAX: (805) 437-8864
Web Page: http://www.csuci.edu

REQUIREMENTS FOR ADMISSION TO THE MULTIPLE SUBJECT TEACHING CREDENTIAL PROGRAM:

1. Application. Application to both the University and the Education Program Area.

2. CBEST Examination. Students must take the California Basic Educational Skills Test (CBEST) prior to admission to the Multiple Subject Teaching Credential Program. Students are urged to take this examination at the earliest possible time after deciding to pursue a teaching credential. CBEST must be passed before certification or intern teaching.

3. Subject Matter Preparation. The CSU Channel Islands Liberal Studies Option 3 – Teaching and Learning best prepares students for the subject matter knowledge and skills required for the Multiple Subject Teaching Credential Program. Prior to admission to the CSU Channel Islands Multiple Subject Teaching Credential Program, students may also complete a state-approved subject matter program from other colleges or universities. Students who have not completed a state-approved subject matter program must take the Multiple Subjects Assessment for Teachers (MSAT) prior to admission to the Multiple Subject Credential Program. The examination includes Content Knowledge and Content Area Exercises. The MSAT examination results are valid for five years from the date of passing and must be valid upon final completion of the program.

4. Prerequisite Courses in Education (12 units). If taken at CSU Channel Islands, the course must be completed within seven (7) years prior to beginning the program with a grade of "C" or better. If an equivalent course at another college or university has been taken, it must have been completed within five (5) years prior to beginning the program.

ENGL	475	Language and Social Context
EDUC	510	Learning theory and development applied in multicultural education contexts
EDUC	512	Equity, Diversity and Foundations of Schooling
SPED	345	Individuals with Disabilities in Society

5. U.S. Constitution. Knowledge of the U.S. Constitution demonstrated by completion of two semester-units of a college level course or college-level examination.

6. Grade Point Average. A student must have a cumulative grade point average (GPA) of 2.75 to be accepted into the Multiple Subject credential program offered at CSUCI. If you do not have the required GPA, conditional admission may be available on a limited basis.

7. Health Clearance. Tuberculin clearance is required. The tuberculin clearance is valid for four (4) years and must be valid through student teaching. The tuberculin clearance may be completed at a private physician's office, the County Health Department, or the CSUCI Student Health Center.

8. Certificate of Clearance. Students must possess or apply for a valid Certificate of Clearance as part of admission to the Teaching Credential Program. A copy of an emergency permit satisfies the clearance requirement.

9. Two Sets of Official Transcripts. One official set of transcripts from each of the colleges or universities attended must be mailed directly to the CSU Channel Islands Office of Admissions, and one official set of transcripts must be submitted to the Education Program Student Services Center with the program application.

10. Two Letters of Recommendation. Two letters of recommendation from faculty, employers, and/or others who are knowledgeable about the student's personal qualities and potential to work with children must be submitted with the program application.

11. Interview. An interview conducted by an Education Program Admissions Committee

12. Experience. At least 45 hours documented field experience in a K-8 classroom or a documented field experience deemed equivalent.

13. Bachelor's Degree. A bachelor's degree or all undergraduate academic subjects must be satisfied toward a bachelor's degree before entering a teacher education program. A bachelor's degree is a requirement for teacher certification.

14. Writing Sample. Writing samples are required as part of the application process.
Please Note: The California Commission on Teacher Credentialing requires passing the Reading Instruction Competence Assessment (RICA) for the initial issuance of a Multiple Subject Credential. RICA consists of passing one of two components, either a comprehensive examination or a performance assessment. It is recommended that the Assessment be taken after completion of the Literacy I and Literacy II courses in the credential program.

REQUIREMENTS FOR THE MULTIPLE SUBJECT TEACHING CREDENTIAL:

FULL-TIME MULTIPLE SUBJECT CREDENTIAL PROGRAM (36 units)

Summer, Winter or Spring:

EDUC 520 Observing and Guiding Behavior in Multilingual/..... Multicultural and Inclusive Classrooms 3

First Semester:

EDMS 522 Literacy 1 Multicultural/Multilingual 3
EDMS 526 Modern Methods in Mathematics Teaching 3
EDMS 527 History, Social Studies and Integrated Arts.....4
EDUC 560 Fieldwork/Student Teaching.....5

Second Semester:

EDMS 523 Literacy 2 Multicultural/Multilingual 4
EDMS 529 Science, Health and PE 4
EDUC 560 Fieldwork/Student Teaching.....9
EDUC 561 Student Teaching Seminar.....1

PART-TIME MULTIPLE SUBJECT CREDENTIAL PROGRAM (36 units)

Summer, Winter or Spring:

EDUC 520 Observing and Guiding Behavior in Multilingual/..... Multicultural and Inclusive Classrooms 3

First Semester:

EDMS 522 Literacy 1 Multicultural/Multilingual 3
EDMS 526 Modern Methods in Mathematics Teaching 3

Second Semester:

EDMS 527 History, Social Studies and Integrated Arts.....4
EDMS 523 Literacy 2 Multicultural/Multilingual 4

Third Semester:

EDMS 529 Science, Health and PE 4

Fourth Semester:

EDUC 560 Fieldwork/Student Teaching.....5
EDUC 561 Fieldwork/Student Teaching.....9
EDUC 561 Student Teaching Seminar.....1

Note: This program had not received final approval at the time this catalog went to press. Please visit our Website at www.csuci.edu for confirmation of its approval.