



Minors

ART

The Art minor provides non-majors with the opportunity to explore artistic media, techniques and basic art concepts. Coursework includes aspects of art appreciation, aesthetics, art history and studio experience. Students seeking the minor are required to complete a minimum of twenty-four units of Art courses.

Contact Information:

Jack Reilly, MFA, Professor of Fine Arts

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Lower Division Requirements (12 units):

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

Select one additional course from the following:

ART	100	Understanding Fine Arts Processes	3
ART	102	Children's Art Media and Methods	3
ART	107	Life Drawing	3
ART	110	Prehistoric Art to the Middle Ages	3
ART	111	Renaissance to Modern Art	3
ART	112	Arts of the Eastern World	3

Upper Division Interdisciplinary Art History (6 units):

ART	331	Art and Mass Media	3
		Or	
ART	430	Modern and Contemporary Art	3

Select one additional course from the following:

ART	330	Critical Thinking in a Visual World.....	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	431	European Renaissance Literature and Art	3
ART	432	Arts of the Harlem Renaissance	3
ART	433	Women in the Arts	3

Art Studio Courses (6 units):**Select a minimum of two courses (in consultation with advisor)**

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
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

BIOLOGY

Biology as a discipline has been rapidly advancing in the last decade and with the information derived from the sequencing of the genomes of many organisms, it will have far-reaching impacts on the environment, on public health, and on local, regional, and global economies. The Biology Minor allows students in majors other than biology to gain an understanding of these exciting developments. It will provide a solid background in biology and the opportunity to explore selected area(s) at a greater depth. Equipped with a minor in biology, students with a major in other disciplines will have a greater understanding and knowledge of the latest advances in many areas of biology and will therefore be more versatile in their career paths. The requirement for a Minor in Biology is 21 units.

Contact Information:

Ching-Hua Wang, PhD, Professor of Biology

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Lower Division Requirements (8 units):

BIOL	200	Principles of Organismal and Population Biology	4
BIOL	201	Principles of Cell and Molecular Biology	4

Upper Division Requirements (13 units):**1. Biology (7 Units)**

BIOL	300	Cell Physiology.....	4
BIOL	302	Genetics and Evolution.....	3

2. Biology Electives (6 Units)

A minimum of 6 units of 300-400 level biology courses, with no more than one course selected from BIOL 331-333, 340, 410 and 430.

BUSINESS

The minor in Business Management offers students a foundation in principles related to managing people. The minor stresses critical thinking and the application of management concepts in a variety of organizational environments. The minor provides non-business majors with a basic understanding of management issues.

Contact Information:

William P. Cordeiro, PhD, Professor of Management

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Lower Division Requirements (9 units):

BUS	110	Business Law.....	3
CIS	110	Business Computer Systems	3
		Or	
COMP	150	Object Oriented Programming	3
ECON	300	Fundamentals of Economics	3
ENGL	330	Writing in the Disciplines.....	3
MATH	140	Calculus for Business & Economics	3
		Or	
MATH	150	Calculus	3

Upper Division Requirements (12 units):

BUS	420	Cases in Strategy	3
BUS	424	Business in Its Social Setting	3
MATH	340	Statistics for Business & Economics.....	3
MATH	440	Operations Research.....	3
MGT	307	Management of Organizations	3
MGT	310	Management of International Businesses.....	3
MGT	325	Entrepreneurial Management	3
MGT	346	Scientific & Professional Ethics	3
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
MKT	310	Principles of Marketing	3

CHEMISTRY

The boundaries between Chemistry and other scientific disciplines (i.e., Biology, Physics, Computer Science, and Mathematics) are increasingly becoming difficult to distinguish, and new interdisciplinary fields continue to appear that lie at the interface between Chemistry and these other disciplines, i.e. bioinorganic and bioorganic chemistry, cheminformatics and computational chemistry. The purpose of the Chemistry minor is to provide non-majors with the Chemistry background that is needed to pursue graduate study or a career in an interdisciplinary field. Students in pre-professional programs (pre-medical, pre-dental, pre-veterinary, pre-pharmacy), or majoring in Biology or Environmental Science and Resource Management, in particular, should consider obtaining a Chemistry minor, since a significant portion of the coursework needed for the Chemistry minor is included in these programs.

Contact Information:

Philip Hampton, PhD, Associate Professor of Chemistry

Phone: (805) 437-8869

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Lower Division Requirements (8 units):

CHEM	121	General Chemistry I and Laboratory	4
CHEM	122	General Chemistry II and Laboratory	4

Upper Division Requirements (8 units):

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

Electives (7 units):

A total of 7 units of electives on the 300-400 level or CHEM 250 and CHEM 251; a maximum of three units of an upper-division interdisciplinary General Education course (CHEM 330-349 or CHEM 430-449) and/ or one unit of a Learning Community course (CHEM 313 or 316) can be applied to the Chemistry minor. Interdisciplinary General Education courses that are cross-listed with Chemistry can be counted toward the major and the Chemistry minor.

COMPUTER SCIENCE

The Computer Science minor offers latest, cutting edge education for various industrial and applied fields. The program will supplement students' majors to be useful 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 background in computer hardware and software, as well as a substantial amount of "hands-on" experience. The program will stress interdisciplinary applications in other sciences and business.

Contact Information:

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Course Requirements (25 units):

MATH 150	Calculus I.....	4
MATH 151	Calculus II	4
COMP 150	Object Oriented Programming	4
COMP 151	Data Structures and Program Design	4
MATH 300	Discrete Math	3
Select two upper upper-division courses from the CS program approved by the advisor		6

ECONOMICS

The economics minor familiarizes students with the tools of economic analysis, and applies these tools to economic decisions made by individuals in their personal and professional lives, and to the workings of national economies and the world economy. It is suitable for students desiring careers in all fields of business, education, journalism, law and government.

Contact Information:

Dennis D. Muraoka, PhD, Professor of Economics
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Lower Division Requirements (6-10 units):

ECON 110	Principles of Microeconomics	3
ECON 111	Principles of Macroeconomics	3
Or		

ECON 300	Fundamentals of Economics	3
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Note: If ECON 300 is taken en lieu of ECON 110 and 111, an additional course must be taken from the list of upper division electives below)

MATH 140	Calculus for Business and Economics.....	3
Or		
MATH 150	Calculus I.....	4

Upper Division Requirements (6 units):

ECON 310	Intermediate Microeconomics	3
Or		
ECON 329	Managerial Economics	3
ECON 311	Intermediate Macroeconomics	3
Or		
ECON 320	Money and Banking	3

Electives (8-12 units):

Additional upper division courses in economics. (Total units for the minor must add up to at least 24.)

ENGLISH

The English minor provides non-majors with the opportunity to explore literature and become more involved with the writing process. The English minor is an excellent addition to the baccalaureate degree for all majors. A minor in English requires completion of 24 English program units with a grade of C or better in each course.

Contact Information:

N. Jacquelyn Kilpatrick, PhD, Associate Professor of English
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Lower Division Requirements (12 units):

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

Upper Division Requirements (12 units):

ENGL 310	Research Methods.....	3
ENGL 330	Writing in the Disciplines.....	3
ENGL 410	Shakespeare.....	3

Plus one of the following:

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 431	European Renaissance Literature and Art.....	3
ENGL 432	Arts of the Harlem Renaissance.....	3

MATHEMATICS

Many areas of modern life require use of mathematical ideas and problem solving skills, especially in education, business, high-tech and bio-tech industries. A Mathematics Minor will assist all students in being more effective participants in their future careers. The Minor introduces students to mathematical concepts and abstract thinking. First, students in the program build a basic understanding of modern methods in mathematics and develop problem solving skills. Next, the program introduces students to contemporary applications of mathematics in various fields.

Contact Information:

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Lower Division Requirements (8 units):

MATH 150	Calculus I.....	4
MATH 151	Calculus II.....	4

Upper Division Requirements (3 units):

MATH 300	Discrete Math.....	3
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Electives (9 units):

Select three upper-division courses from the Mathematics program approved by the advisor.