Programs and concentrations. Links go to the detailed discussion of each program, including its courses, later in the catalog.

		Undergraduate Education		Graduate Education				
	B.A.	B.S.	Minor	Certi-	M.A./ M.F.A.	M.S.	Ph.D.	Designated Emphasis
American literature:				nearc	M.1 .74.			Linpitusis
see Literature								
American studies	•							•
Anthropology	•		•				•	•
Archaeology							<u>c</u>	
Cultural anthropology							c	
Physical anthropology							<u>_</u>	
Applied Mathematics			•					
Applied Mathematics and Statistics						•	•	
Applied physics		•				-	-	
Art	•	-						
	- ·							
Art history: see <u>History of art and visual</u>								
culture								
Asian studies: see								
East Asian studies								
Astronomy and astrophysics							•	
Astrophysics (see also								
Physics [Astrophysics])			•					
Bilingual-multicultural								
education: see Education								
Biochemistry and								
molecular biology		•						
Bioengineering		•						
Bioelectronics		C						
Biomolecular		C						
Rehabilitation	-	<u>c</u>						
Bioinformatics	-	•	•					
	_	-	-			•	•	
Biomolecular engineering and bioinformatics						•	•	
Biological Sciences								
Biology	•	•	•					
Bioeducation	С							
Ecology and evolution		•						
Ecology and evolutionary					•		•	•
biology								
Human Biology		•						
Marine biology		•						
Molecular, cell, and		•			•		•	
developmental biology	_							
Neuroscience	_	•						
Plant sciences		•						
<u>Chemistry</u>	•	•	•			•	•	
Biochemistry		<u>C</u>						
Environmental chemistry		<u>C</u>						
Chinese language								
Classical studies			•					
(see also Literature)	•		L •					
Cognitive science (see also Psychology)		•						
Community studies	•							
Computer engineering (2)		•	•			•	•	
<u>Computer systems</u>		C						
Digital hardware		<u>c</u>						
Networks		<u>c</u>						
Robotics and control								•
	-	<u>C</u>						•
Systems programming		<u>C</u>						
Computer science	•	•	•			•	•	
Computer science:		•						
Computer game design								

Creative writing:								
see <u>Literature</u>								
Dance: see <u>Theater arts</u> Digital arts and new								
<u>media (3)</u>					•			
Drama: see Theater arts								
Dramatic literature:								
see Theater arts Earth sciences		•	•			•	•	
Environmental geology		C	•			•	•	
Ocean sciences		<u>c</u>						
Planetary sciences		<u>c</u>						
Science education		<u>C</u>						
East Asian studies			•					
Ecology and evolution		•						
Ecology and evolutionary biology					•		•	
Economics	•		•				•	
Applied economics and finance						•		
Business management	•							
economics								
Global economics Education (4)	•		•		•		•	•
Science, technology engineering, and mathematics			•		•		•	•
Bilingual-multicultural education					<u>c</u>			
Multiple subjects								
credential (elementary)					<u>C</u>			
Single subjects					<u>c</u>			
credential (secondary) Language, literacy, and culture							C	
Learning and teaching							<u>c</u> <u>c</u>	
Mathematics and science education							<u> </u>	
Social and cultural contexts of education							<u>C</u>	
Teachers and teacher development							<u>C</u>	
Electrical engineering		•	•			•	•	
Electronics/Optics		<u>C</u>						
Communications, signals, systems, and controls		<u>C</u>						
English:								
see Literature								
and see <u>Linguistics</u>								
Environmental studies Environmental toxicology: see Microbiology and	•						•	•
Environmental Toxicology: see <u>Microbiology and</u> Environmental Toxicology								
Feminist studies	•						•	•
Culture, power, and representation	<u>C</u>							
Law, politics, and social change	<u>C</u>							
Science, technology, and medicine	<u>C</u>							
Sexuality studies	<u>C</u>							
Film and digital media Critical studies	•		•				•	
Critical studies Integrated critical practice	<u>C</u>							
Production	<u>C</u> <u>C</u>							
French language	<u> </u>							
French literature:								
see <u>Literature</u>								
Games and Playable Media						•		
Geology: see Earth sciences								
German language								
German literature: see <u>Literature</u>								
German studies	•							
Global information and			•					
			•					
social enterprise studies								
Greek language:								
Greek language: see <u>Greek and Literature</u>								
Greek language:								
Greek language: see <u>Greek</u> and <u>Literature</u> Greek literature:								

<u>History</u>	•		•	•		•	
Americans and Africa	<u>C</u>						
Asia and the Islamic world	<u>C</u>						
Colonialism, nationalism,						<u>C</u>	
and race Europe	6						
History of gender	<u>C</u>					<u> </u>	
History of art and visual						<u>C</u>	
culture	•		•				
Religion and visual culture	<u>C</u>						
History of consciousness						•	•
Human Biology		•					
Italian language							
Italian literature:							
see Literature							
Italian studies	•		•				
Japanese language							
Jewish studies	•		•				
Language studies	•		•				
Chinese	<u>C</u>		<u>C</u>				
French German	<u>C</u>		<u>C</u>				
Italian	<u>C</u>		<u>C</u>				
	<u>C</u>		<u>c</u>				
Japanese Spanish	<u>C</u>		<u>C</u> <u>C</u>				
Latin American and	<u> </u>						
Latino studies	•		•			•	•
Latin language:							
see Latin_and Literature							
Latin literature:							
see <u>Literature</u>							
Legal studies	•		•				
Linguistics (see also Language studies)	•		•	•		•	
Theoretical linguistics	<u>c</u>			C		C	
Literature (5)	•		•	<u> </u>		<u>c</u>	•
Creative writing	<u>C</u>						
English-language literatures	<u> </u>			<u>C</u>		<u>C</u>	
French literature	C			<u>c</u>		<u> </u>	
<u>German literature</u>	<u> </u>			_		_	
Greek and Latin literatures	<u>c</u>						
Italian literature	<u>c</u>						
Modern literary studies	<u>C</u>			<u>C</u>		<u>C</u>	
Pre- and early modern studies	<u>C</u>			<u>C</u>		<u>C</u>	
Spanish/Latin American/	<u>C</u>			<u>C</u>		<u>c</u>	
Latino literatures	<u> </u>			<u>u</u>		<u>_</u>	
World literature and	<u>c</u>			<u>C</u>		<u>c</u>	
<u>cultural studies</u>	<u> </u>	•					
Marine biology Marine sciences:		•					
Marine sciences: see <u>Ocean sciences</u>							
Mathematics	•		•	•		•	
<u>Computational mathematics</u>	<u>C</u>						
Mathematics education	<u>c</u>						
Pure mathematics	<u> </u>			<u>C</u>		<u>C</u>	
Medieval studies				_		_	
Microbiology and environmental toxicology					•	•	
Molecular, cell, and	1	•		•		•	
developmental biology							
<u>Music</u> (<u>6</u>)							
	•			•		•	
Electronic music			•				
			•				
<u>Network and Digital Technology</u>	•						
Neuroscience		•					
Ocean sciences					•	•	
	1						

			•	•	•			
Biology						<u>c</u>		
(see also Marine biology) Biological oceanography							<u> </u>	
Chemical oceanography							C C	
Chemistry						<u>c</u>	<u> </u>	
Earth Sciences						<u>c</u>		
Geological oceanography						<u> </u>	C	
Physical oceanography							С	
Physics						C		
Philosophy	•		•		•		•	•
Photography: see Art								
Physics (1)		•	•			•	•	
Physics (Astrophysics)		•						
Physics Education		•						
Plant sciences		•						
Playwriting: see Theater arts								
Politics	•		•				•	•
Portuguese language								
Psychology (5)	•						•	
Cognitive psychology							<u>C</u>	
Developmental psychology							<u>C</u>	
Social psychology							<u>C</u>	
Religious studies								
Robotics Engineering								
Russian language								
Science communication:				•				
Science writing								
Social documentation					•			
Sociology (5)	•		•				•	•
<u>Spanish for Spanish speakers</u> Spanish language								
Spanish literature:								
see Literature								
Spanish Studies	•							
Language and Linguistics								
Literature and Culture	<u>C</u>							
	<u>C</u>							
<u>Statistics</u>			•					•
Statistics and Applied Mathematics						•	•	
Technology and information management		•	•			•	•	
Theater arts	•		•		•			
Dance	<u>C</u>		•					
Design and technology	<u>C</u>							
Drama Visual Studies	<u>C</u>							
Western civilization							•	-
Women's studies								
(see <u>Feminist Studies</u>)								
Writing								
Combined majors. In addition, students may complete a of designated fields. Combined majors currently available economics/mathematics, environmental studies/biology, estudies/economics, Latin American and Latino studies/gloi studies/literature, Latin American and Latino studies/polit Students also have the option of pursuing a <u>double major</u>	inclu enviro bal ec ics, a	de th nmer conor	nose in ntal stu nics, La	Earth s dies/Ea tin Am	ciences. rth scie erican a	/anth nces, ind La	ropolog enviro atino	gy, inmental
students also have the option of pursuing a <u>double major</u> $c =$ concentration, or emphasis, within a program. Some		rame	dive et	udanta	the ent	ion c	f follow	ling a
general course of study or selecting a concentration; othe concentration. Consult the program on the page indicated	er pro							ing a
1 Combined B.S./M.S. in physics is available with concent	tratio	ns in:						
a) Materials and device physics								
 b) Energy and the environment c) Computational physics 								
d) Finance and economics								
e) Medical biophysics								
2 A combined B.S./M.S. program in computer engineering	·							
3 A master of fine arts (M.F.A.) degree is awarded in dig								
4 Because California state law requires prospective teach								
discipline other than education, no undergraduate major i postbaccalaureate. UCSC offers the professional clear Cro								
postbaccaladi cate. 0000 oners the professional ciedi. Cro	33-cu	nural	, Langu	aye all	a Acade		Jevelo	Smerit

(CLAD) and Bilingual Cross-cultural, Language and Academic Development (BCLAD) multiple subjects credentials, which are used in self-contained elementary classrooms (K–6) where all subjects are taught by the same teacher. UCSC also offers the CLAD and BCLAD single subjects credentials, which are used in departmentalized settings where the teacher is responsible for one subject (7–12). A Doctor of Education (Ed.D.) in collaborative leadership is also available.

5 An intensive major is also available.

6 B.M. degree in music also available. Doctorate of musical arts (D.M.A.) degree in composition also available.
Degrees
B.A. = Bachelor of Arts
B.M. = Bachelor of Music
B.S. = Bachelor of Science
D.M.A. = Doctor of Musical Arts
Ed.D. = Doctor of Education

M.A. = Master of Arts

M.F.A. = Master of Fine Arts

M.S. = Master of Science

Ph.D. = Doctor of Philosophy