



California State University Channel Islands

# Bachelor of Arts in Chemistry Subject Matter Preparation in Teaching Chemistry Option

(Pending CCTC Approval)

Advisement Form 2009-2010

Name \_\_\_\_\_ ID \_\_\_\_\_

Chemistry Curriculum	Un.	Instit.	Course	Units	Grade	Term	Prerequisites, GE & Comments
<b>Lower Division Requirements (43-44 units)</b>							
<b>Chemistry</b>							
CHEM 121 General Chemistry I <i>Must receive a C or better</i>	4						Prereq: Passing score on Chemistry Placement Exam or CHEM 105; GE: B1
CHEM 122 General Chemistry II <i>Must receive a C or better</i>	4						Prereq: CHEM 121 with a C or better; GE: B1
CHEM 250 Quantitative Analysis	3						Prereq: CHEM 122 with a C or better; Corequisite: CHEM 251
CHEM 251 Quantitative Analysis Laboratory	1						Prereq: CHEM 122 with a C or better; Corequisite: CHEM 250
<b>Biology</b>							
BIOL 200 Principles of Organismal and Population Biology	4						GE: B2
BIOL 201 Principles of Cell and Molecular Biology	4						Prereq: CHEM 105 or 121; GE: B2
<b>Math</b>							
MATH 150 Calculus I	4						Prereq: Passing scores on the Calculus Placement Exam or MATH 105; GE: B3
MATH 151 Calculus II	4						Prereq: MATH 150
<b>Physics</b>							
<i>Select <u>one</u> of the following:</i>							
PHYS 100 Introduction to Physics I	4						GE: B1
PHYS 200 General Physics I	4						Prereq: MATH 150; GE: B1
<i>Select <u>one</u> of the following:</i>							
PHYS 101 Introduction to Physics II	4						Prereq: PHYS 100; GE: B1
PHYS 201 General Physics II	4						Prereq: PHYS 200; GE: B1
<b>Astronomy</b>							
ASTR/PHYS 105 Introduction to the Solar System <i>(or)</i> PHYS 107 The Stars and Beyond	4 3						GE: B1
<b>Earth Science</b>							
GEOL 121 Physical Geology	4						GE: B1
<b>Total Upper Division (32-33 units)</b>							
<b>Upper Division Major Requirements (24-25 units)</b>							
<b>Chemistry</b>							
CHEM 305 Computer Applications in Chemistry	1						Prereq: CHEM 122 with a C or better; GE: B4
CHEM 311 Organic Chemistry I <i>Must receive a C or better</i>	3						Prereq: CHEM 122 with a C or better
CHEM 312 Organic Chemistry I Lab <i>Must receive a C or better</i>	1						Prereq: CHEM 311 (or taken concurrently) with a C or better
CHEM 314 Organic Chemistry II <i>Must receive a C or better</i>	3						Prereq: CHEM 311 with a C or better

<b>Chemistry Requirements, cont.</b>	<b>Un.</b>	<b>Instit.</b>	<b>Course</b>	<b>Units</b>	<b>Grade</b>	<b>Term</b>	<b>Prerequisites, GE &amp; Comments</b>
CHEM 315 Organic Chemistry II Lab	1						Prereq: CHEM 311, 312 and 314 (or taken concurrently) all with C's or better
CHEM/HIST 330 The History of Science: NonWestern Origins and the Western Revolution	3						GE: B1, INTD
CHEM 371 Physical Chemistry I	3						Prereq: CHEM 122 with a C or better, PHYS 101 or 201, and MATH 150
CHEM 372 Physical Chemistry Laboratory	1						Prereq: CHEM 371 (or taken concurrently)
CHEM 499 Chemistry Capstone Colloquium	2						Prereq: CHEM 305, 371 and CHEM 492 or 494 (or taken concurrently) CR/NC
<b>Earth Science</b>							
BIOL 335 The Biosphere (or)	3						GE: B2, INTD
GEOL 300 Foundations of Earth Science	4						Prereq: PHSC 170
<b>Education</b>							
EDUC 330 Introduction to Secondary Schooling	3						GE: D, INTD; Offered fall semester only Recommended to be concurrently enrolled in a core course in CHEM
<b>Upper Division Chemistry Electives (8 units)</b>							
<i>A total of <u>eight</u> units of electives from those listed below are needed. Lab courses are denoted<sup>L</sup>. Select from the following:</i>							
CHEM 301 Environmental Chemistry – Atmosphere and Climate	3						Prereq: CHEM 122 with a C or better
CHEM 302 Environmental Chemistry – Soil and Water <sup>L</sup>	4						Prereq: CHEM 122 with a C or better
CHEM 313 Organic Chemistry I Learning Community	1						Coreq: CHEM 311
CHEM 316 Organic Chemistry II Learning Community	1						Coreq: CHEM 314
CHEM 373 Physical Chemistry II	3						Prereq: CHEM 122 with a C or better, PHYS 101 or 201, and MATH 150
CHEM 410 Advanced Organic Synthesis <sup>L</sup>	4						Prereq: CHEM 305 (or concurrent enrollment), CHEM 314 and 315 or consent of instructor
CHEM 415 Molecular Structure Determination <sup>L</sup>	4						Prereq: CHEM 305 (or concurrent enrollment), CHEM 314, and 315 or consent of instructor
CHEM 420 Advanced Inorganic Chemistry	3						Prereq: CHEM 314 and 371
CHEM 450 Instrumental Analysis and Laboratory <sup>L</sup>	4						Prereq: CHEM 250, 251, 305 (or concurrent enrollment or consent of instructor), and 315 with a C or better
CHEM 460 Biochemistry I <sup>L</sup>	4						Prereq: CHEM 314 with a C or better
CHEM 461 Biochemistry II <sup>L</sup>	4						Prereq: CHEM 305 (or concurrent enrollment) & CHEM 460 with a C or better or consent of instructor
CHEM 465 Bioinorganic Chemistry <sup>L</sup>	4						Prereq: CHEM 305 (or concurrent enrollment), CHEM 314 with a C or better or consent of instructor
CHEM 490 Special Topics in Chemistry	1-3						Prereq: Consent of instructor. Repeatable by topic.
CHEM 492 Internship/Service Learning <sup>L,R</sup>	1-3						Prereq: Consent of instructor. Repeatable
CHEM 494 Independent Research <sup>L,R</sup>	1-3						Prereq: Consent of instructor. Repeatable
CHEM 497 Directed Studies <sup>R</sup>	1-3						Prereq: Consent of instructor. Repeatable
<sup>R</sup> No more than a combined total of <u>six</u> units of CHEM 492, 494, and 497 may be applied as electives. No more than <u>one</u> CHEM 492 or 494 may be (by petition) considered a laboratory elective.							

**Additional University Graduation Requirements**

**9 Units Upper Division Interdisciplinary GE at CSUCI (courses numbered 330-349 or 430-449)**

Course 1 (in major) CHEM 330 Course 2 (in major) EDUC 330 Course 3 (outside of major) \_\_\_\_\_  
(outside major)

**American Institutions Requirements:** US History \_\_\_\_\_ State and Local Gov't \_\_\_\_\_  
(choose from HIST 270, 271, 272, 275 or 350) (choose POLS 150)

*Students must receive a grade of C or better in the Language and Multicultural Requirements*

**Language Requirement:** GE C3a \_\_\_\_\_  
(one semester of college level language)

**Multicultural Requirement:** GE C3b \_\_\_\_\_

*Minimum total units to graduate: 120 of which 40 must be upper division. Please see catalog for a complete list of graduation requirements.*

Advisor \_\_\_\_\_ Date Completed: \_\_\_\_\_

Advisor Comments: \_\_\_\_\_

**PREREQUISITES FOR THE CHEMISTRY SINGLE SUBJECT TEACHING CREDENTIAL AT CSUCI ONLY:**

CSUCI credential program requires prerequisite courses that may be taken as part of the undergraduate degree.

Please contact the Credential Office (805-437-8953, [credential.assistant@csuci.edu](mailto:credential.assistant@csuci.edu)) for a list of the required prerequisites and any question you may have regarding the credential program. It is recommended that you contact the credential office during your junior year.