

BACHELOR OF SCIENCE in CHEMISTRY with Teaching Licensure Curriculum Sheet

2008-2009 catalog

Student Name: _____

Phone: _____

UIN: _____

Email: _____

LOWER DIVISION GENERAL EDUCATION REQUIREMENTS

Area	Credits	Grade
Composition ENGL 110C (required) and select one from: ENGL 111C ENGL 131C	6	
Oral Communication Satisfied by CHEM 485	3	X
Mathematics MATH 162M	3	
Foreign Language All "F" courses Exempt if met by HS requirements*	0-6	
Computer Skills Satisfied by CS 149D (required)	3	X
Literature ENGL 112L ENGL 144L FLET 100L	3	
Fine and Performing Arts ARTH 121A ARTS 122A DANC 185A MUSC 264A THEA 241A COMM/THEA 270A	3	
Philosophy PHIL 110P PHIL 120P PHIL150P	3	
History HIST 101H HIST 102H HIST 103H HIST 104H HIST 105H	6	
Social Sciences Select two courses from <u>different</u> disciplines ANTH 110S CRJS 215S ECON 200S, 201S, 202S GEOG 100S GEOG 101S POLS 100S POLS 101S PSYC 201S PSYC 203S SOC 201S COMM 200S WMST 201S	6	
Natural Science and Technology Satisfied by departmental requirements and PHYS 231N- 232N	11	X

DEPARTMENTAL REQUIREMENTS

Chemistry Requirements

Course	Credits	Grade
CHEM 115N-116N Foundations of Chemistry I & II	8	
CHEM 211-213 Organic Chemistry I & II	6	
CHEM 212-214 Organic Chemistry Laboratory I & II	4	
CHEM 321 Analytical Chemistry	3	
CHEM 322 Analytical Chemistry Laboratory	2	
CHEM 331-333 Physical Chemistry I & II	6	
CHEM 332W-334 Physical Chemistry Laboratory I & II	4	
CHEM 421 Instrumental Analysis Lecture	3	
CHEM 422 Instrumental Analysis Laboratory	3	
CHEM 441 Introductory Biochemistry	3	
CHEM 451 Inorganic Chemistry	3	
CHEM 452 Inorganic Chemistry Laboratory	2	
CHEM 485 Chemistry Seminar	1	

Other Requirements

MATH 163 Precalculus II	3	
MATH 211 Calculus I	4	
MATH 212 Calculus II	4	
MATH 312 Calculus III	4	
CS 149D Elements of Computer Science	3	
PHYS 231N-232N University Physics	8	

UPPER DIVISION GENERAL EDUCATION REQUIREMENTS (33 credits)

**Minor in education See reverse for more information
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This program leads to eligibility for teacher licensure in Virginia and is available to students completing requirements for a B.S. degree in Chemistry. Students who wish to apply for this program must have a 2.75 GPA in the major and overall, with no grade less than a C- in the content area and the professional education core, and have passed PRAXIS I or achieved State Board of Education-approved SAT scores. For more information on this program, contact the Office of Teacher Education Services and Advising, Education 152, 683-3348, or visit their website www.odu.edu/tes.

University General Education Requirements

* Students who have completed three high school credits in one foreign language or two high school credits in each of two languages are exempt from the foreign language requirement. Students who graduated high school prior to June 1986, and non-native speakers of English who were required to meet University TOEFL requirements are also exempt from this requirement.

**Upper Division Requirements: Minor in Education (33 credits)

Upper division general education requirements for this program are met by the following courses, which lead to a minor in education.

ECI 301	Social & Cultural Foundations of Education	3
ECI 360	Classroom Management and Discipline	2
ECI 430	PK-12 Instructional Technology	3
ESSE 406	Students with Diverse Learning Needs in the General Education Classroom	3
ECI 408	Reading & Writing in Content Areas	3
ESSE 313	Fundamentals of Human Growth & Development	3
ECI 454	Developing Instructional Strategies for Teaching in the Middle/High School: Science	3
ECI 483	Practicum Seminar in Education	1
ECI 485	Student Teaching	12

A minimum of 120 hours and a 2.00 GPA in the major, minor, and overall are required for graduation. In addition all undergraduate students are required to complete the Senior Assessment Survey (www.odu.edu/senior) and the Exit Examination of Writing Proficiency (www.odu.edu/writingcenter) prior to the intended graduation date.

Departmental Requirements

- CHEM 115N-116N is the freshman chemistry sequence, and is prerequisite to ALL other chemistry courses.
- AP credit may be assigned for CHEM 115N-116N providing a qualifying score is received on the Advanced Placement of the College Board exam in Chemistry. A score of 3 provides CHEM 115N credit, and a score of 4 or 5 provides credit for CHEM 115N-116N.
- Most chemistry courses have other CHEM courses as well as MATH courses as prerequisites (courses that must be completed prior to beginning a particular course) or corequisites (courses that must be completed concurrently with a particular course). For this reason a CHEM or BIOCHEM major should register for a CHEM and MATH course every semester until the requirements are complete. The following is a list of the prerequisites for each required CHEM course, as well as when each course is typically offered. All chemistry courses require a minimum grade of "C" in the prerequisite course(s). Prerequisite waivers are not allowed. Questions concerning prerequisites should be addressed to the instructor of record for the course, or Jennifer Adamski (jadamski@odu.edu, 757-683-4090).

Course	Offered	Prerequisites
CHEM 115N Foundations of Chemistry I	Fall, spring, summer	MATH 102M
CHEM 116N Foundations of Chemistry II	Fall, spring, summer	CHEM 115N
CHEM 211 Organic Chemistry I (<i>formerly CHEM 311</i>)	Fall, summer	CHEM 116N
CHEM 212 Organic Chemistry Laboratory I (<i>formerly CHEM 312</i>)	Fall, summer	CHEM 211 or 311 (pre- or corequisite)
CHEM 213 Organic Chemistry II (<i>formerly CHEM 313</i>)	Spring, summer	CHEM 211 or 311
CHEM 214 Organic Chemistry Laboratory II (<i>formerly CHEM 314</i>)	Spring, summer	CHEM 212 or 312 CHEM 213 or 313 (pre- or corequisite)
CHEM 321 Analytical Chemistry	Fall, spring, summer	CHEM 116N MATH 162, 163, or 166
CHEM 322 Analytical Chemistry Laboratory	Spring, summer	CHEM 321 (pre- or corequisite)
CHEM 331 Physical Chemistry I	Fall	CHEM 321 PHYS 231N-232N MATH 312 (pre- or corequisite)
CHEM 332W Physical Chemistry Laboratory I	Fall	CHEM 322 CHEM 331 (pre- or corequisite)
CHEM 333 Physical Chemistry II	Spring	CHEM 331 MATH 312
CHEM 334 Physical Chemistry Laboratory II	Spring	CHEM 332W CHEM 333 (pre- or corequisite)
CHEM 421 Instrumental Analysis Lecture	Fall	CHEM 333
CHEM 422 Instrumental Analysis Laboratory	Fall	CHEM 332W CHEM 421 (pre- or corequisite)
CHEM 451 Inorganic Chemistry	Fall	CHEM 333
CHEM 452 Inorganic Chemistry Laboratory	Fall	CHEM 451 (pre- or corequisite)

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CHEM 441 Introductory Biochemistry	Fall	CHEM 213 or 313
CHEM 485 Chemistry Seminar	Fall, spring	Senior standing

To declare a major in Chemistry please contact Jennifer Adamski (Alfriend 110B) at jadamski@odu.edu or 683-4078.