

**LOWER DIVISION GENERAL EDUCATION (required of all emphasis areas)**

**A. Skills**

Written Communication

ENGL 110C \_\_\_\_\_ 3 \_\_\_\_\_  
 ENGL 111C or 131C \_\_\_\_\_ 3 \_\_\_\_\_

Oral Communication

(Satisfied by OEAS 441-442W) \_\_\_\_\_ 3 \_\_\_\_\_

Mathematics

(Requires 162M or higher) \_\_\_\_\_ 3 \_\_\_\_\_

Foreign Language Skills

(Competence must be at the 102 level) \_\_\_\_\_ 3 \_\_\_\_\_

Computer Skills

(Requires CS 149D or higher; satisfied by ECI 430 in Earth Science Education track) \_\_\_\_\_ 3 \_\_\_\_\_

**B. Perspectives**

Fine and Performing Arts

ARTH 121A, ARTS 122A, MUSC 264A, DANC 185A, THEA 241A, COMM/THEA 270A \_\_\_\_\_ 3 \_\_\_\_\_

History

HIST 101H, 102H, 103H, 104H, \_\_\_\_\_ 3 \_\_\_\_\_  
 or 105H \_\_\_\_\_ 3 \_\_\_\_\_

Literature

ENGL 112L, 144L, or FLET 100L \_\_\_\_\_ 3 \_\_\_\_\_

Philosophy

PHIL 110P, 120P, or 150P \_\_\_\_\_ 3 \_\_\_\_\_

Natural Science and Technology

(CHEM 115N-116N required) \_\_\_\_\_ 4 \_\_\_\_\_

\_\_\_\_\_ 4 \_\_\_\_\_

Technology Requirement

(Met in the major) \_\_\_\_\_ 3-4 \_\_\_\_\_

Social Sciences

\_\_\_\_\_ 3 \_\_\_\_\_

\_\_\_\_\_ 3 \_\_\_\_\_

ANTR 110S; COMM 200S; CRJS 215S; ECON 200S, 201S, 202S

GEOG 100S, 101S; POLS 100S, 101S; PSYC 201S, 203S; SOC

201S; WMST 201S

**Students must select one of the following options:**

**Course Requirements-Biological Oceanography Emphasis**

BIOL 115N General Biology 1 \_\_\_\_\_ 4

BIOL 116N General Biology 2 \_\_\_\_\_ 4

CHEM 115N-116N College Chemistry \_\_\_\_\_ 8

(satisfies natural science perspective)

CS 149D Elements of Computer Science \_\_\_\_\_ 3

(satisfies computer skills requirement)

OEAS 111N Physical Geology \_\_\_\_\_ 4

MATH 211-212 Calculus I and II \_\_\_\_\_ 8

OEAS 306 Oceanography \_\_\_\_\_ 3

PHYS 231N-232N University Physics I and II \_\_\_\_\_ 8

STAT 330 Intro to Probability and Statistics \_\_\_\_\_ 3

Or STAT 310W Intro Data Analysis \_\_\_\_\_ 3

OEAS 310 Global Earth Systems \_\_\_\_\_ 3

OEAS 440 Biological Oceanography Lec/Lab \_\_\_\_\_ 4

BIOL 292 Evolution \_\_\_\_\_ 3

BIOL 415 Marine Ecology \_\_\_\_\_ 3

CHEM 211, 212, 213 Organic Chemistry Lec/Lab \_\_\_\_\_ 8

CHEM 445 Biochemistry \_\_\_\_\_ 3

Elective (from OEAS 403W, 404, 410, 412, 414, 420, STAT 310W) \_\_\_\_\_ 6

\_\_\_\_\_ 6

OEAS 441-442W Ocean and Earth Science Field Study \_\_\_\_\_ 6

(satisfies oral communication requirement)

Students in the Biological subdiscipline are strongly encouraged to

complete a minor in Biology. The following courses are required:

BIOL 316 General Ecology \_\_\_\_\_ 3

BIOL 331 Marine Biology \_\_\_\_\_ 3

BIOL 442 Marine Ecology Lab \_\_\_\_\_ 2

BIOL Elective (cannot include BIOL 313 or 317) \_\_\_\_\_ 2

**Course Requirements-Chemical Oceanography Emphasis**

BIOL 115N General Biology 1 \_\_\_\_\_ 4

BIOL 116N General Biology 2 \_\_\_\_\_ 4

CHEM 115N-116N College Chemistry \_\_\_\_\_ 8

(satisfies natural science perspective)

CS 149D Elements of Computer Science \_\_\_\_\_ 3

(satisfies computer skills requirement)

OEAS 111N Physical Geology \_\_\_\_\_ 4

MATH 211-212 Calculus I and II \_\_\_\_\_ 8

OEAS 306 Oceanography \_\_\_\_\_ 3

PHYS 231N-32N University Physics I and II \_\_\_\_\_ 8

STAT 330 Intro to Probability and Statistics \_\_\_\_\_ 3

Or STAT 310W Intro Data Analysis \_\_\_\_\_ 3

OEAS 310 Global Earth Systems \_\_\_\_\_ 3

OEAS 410 Chemical Oceanography Lecture/Lab \_\_\_\_\_ 4

CHEM 211/213 Organic Chemistry Lecture \_\_\_\_\_ 6

CHEM 331/333 Physical Chemistry Lecture \_\_\_\_\_ 6

CHEM 332 Experimental Physical Chemistry \_\_\_\_\_ 6

Or 452 Inorganic Chemistry Laboratory \_\_\_\_\_ 2

CHEM 451 Advanced Inorganic Chemistry \_\_\_\_\_ 3

Electives (from OEAS 403W, 414, 412, 418) \_\_\_\_\_ 3

OEAS 441-442W Ocean and Earth Science Field Study \_\_\_\_\_ 6

(satisfies oral communication requirement)

Students in the chemical subdiscipline are strongly encouraged to

complete a minor in chemistry. The following courses are required:

CHEM 211-213 Organic Chemistry Lecture \_\_\_\_\_ 6

CHEM 212-214 Organic Chemistry Laboratory \_\_\_\_\_ 4

CHEM 321 Analytical Chemistry Lecture \_\_\_\_\_ 3

CHEM 322 Analytical Chemistry Laboratory \_\_\_\_\_ 2

**Course Requirements-Physical Oceanography Emphasis**

BIOL 115N General Biology 1 \_\_\_\_\_ 4

BIOL 116N General Biology 2 \_\_\_\_\_ 4

CHEM 115N-116N College Chemistry \_\_\_\_\_ 8

(satisfies natural science perspective)

CS 149D Elements of Computer Science \_\_\_\_\_ 3

(satisfies computer skills requirement)

OEAS 111N Physical Geology \_\_\_\_\_ 4

MATH 211-212 Calculus I and II \_\_\_\_\_ 8

PHYS 231N-232N University Physics I and II \_\_\_\_\_ 8

STAT 330 Intro to Probability and Statistics \_\_\_\_\_ 3

OEAS 306 Oceanography \_\_\_\_\_ 3

OEAS 310 Global Earth Systems \_\_\_\_\_ 3

OEAS 405 Physical Oceanography	_____3
OEAS 415 Waves and Tides	_____3
OEAS 451W Data Collection /Analysis in Oceanography	_____3
GEOG 402 or 404 Geo Info Sys or Digital Remote Sensing	_____3
MATH 307 (MATH 280-does not meet minor requirements)	
Ordinary Differential Equations	_____3
ME 303 Mechanics of Fluids	_____3
ME 311 Thermodynamics	_____3
PHYS 319 Analytical Mechanics	_____3
STAT 437 Regression and Analysis of Variance	_____3
OEAS 441-442W Ocean and Earth Science Field Study	_____6
(satisfies oral communication requirement)	

Students in the physical subdiscipline are strongly encouraged to complete a minor in applied mathematics. The following courses are required:

MATH 312 Calculus III	_____3
MATH 316 Intro Linear Algebra	_____3
MATH 317 Calculus IV	_____3
MATH 401 Partial Differential Equations	_____3

**Course Requirements—Geology Emphasis**

BIOL 115N General Biology 1	_____4
BIOL 116N General Biology 2 or	
OEAS 303 Palenotology	_____3-4
CHEM 115N-116N College Chemistry	_____8
(satisfies natural science perspective)	
CS 149D Elements of Computer Science	_____3
(satisfies computer skills requirement)	
OEAS 111N-112N Physical Geology/Historical Geology	_____8
MATH 205-206 Intro Calculus I and II	_____6
PHYS 231N-232N University Physics I and II	_____8
STAT 330 Intro to Probability and Statistics	_____3
OEAS 306 Oceanography	_____3
OEAS 310 Global Earth Systems	_____3
OEAS 313 Mineralogy	_____3
OEAS 314 Petrology	_____3
OEAS 344W Geomorphology	_____3
OEAS 320 Sedimentology/Stratigraphy	_____4
OEAS 411 Structural Geology	_____4
OEAS 420 Hydrogeology OR	
OEAS 434 Intro to Geophysical Methods	_____3
Two electives chosen from OEAS 303,	
340, 368, 408, 414, 420, 431, 434, 435, 446, 450;	
OEAS 403, 412, 414, 415, 419, 436	_____6
OEAS 441-442W Ocean and Earth Science Field Study	_____6
(satisfies oral communication requirement)	

**Course Requirements-Earth Science Education Emphasis**

**Admission.** Students applying for admission to the teacher education programs must (1) complete at least one semester at Old Dominion University, (2) have a 2.75 grade point average overall, in the major, and in the professional education core with no grade less than C in all courses taken in the major and C- in the professional education core, (3) have passed PRAXIS I or achieved State Board of Education approved scores on the SAT or ACT, (4) present written recommendations from two faculty members from the Occupational and Technical Studies Department, and (5) have an interview with the program leader. Although students may enroll in a limited number of education courses, admission into the teacher education program and passing PRAXIS I scores or approved equivalent test scores must be on file in the Teacher Education Services Office prior to students enrolling in any professional education practicum course.

**Continuance.** Student in education licensure programs

must (1) satisfy University requirements, (2) continue to maintain a 2.75 grade point average overall, with no grade less than C in the major and no grade less than C- in the professional education core, and (3) successfully complete a student teaching interview.

**Assessments required for teacher education programs and licensure.**

In order to obtain a Virginia teaching license, all teacher education students must attain passing scores on the appropriate teacher licensure exams. Students who complete their programs after December 1, 2006 are required to take the Virginia Communication and Literacy Assessment (VCLA) to be eligible for licensure. The VCLA should be taken during the semester of student teaching. It is recommended that the VCLA be taken after students have completed their English and reading course requirements. In addition, all students must take and pass the Exit Examination of Writing Proficiency to be eligible for student teaching. The University recommends that students take this exam in their junior year. All students will take and attain a passing score on the appropriate PRAXIS II specialty test in order to be eligible for student teaching and licensure. Score reports of all examinations must be on file in the Teacher Education Services Office in room 152 of the Education Building.

**Exit.** Students in marketing education and technology education licensure programs must have (1) a 2.75 grade point average overall, in the major, and in the professional education core, (2) earned a passing grade in student teaching, and (3) completed the senior assessment.

NOTE: Due to changing University requirements, national accreditation standards, and Commonwealth licensure regulations, the programs in the Darden College of Education are under constant revision. Any changes resulting from these factors supersede the program requirements described here or in the University catalog. Students should obtain current program information from their academic advisor and the Darden College of Education website at <http://www.education.odu.edu>.

The curriculum is as follows:

BIOL 115N General Biology 1	_____4
CHEM 115N-116N College Chemistry	_____8
(satisfies natural science perspective)	
OEAS 111N-112N Physical Geology/Historical Geology	_____8
MATH 163 Pre-calculus II	_____3*
PHYS 111N-112N Intro General Physics I and II	_____8
OEAS 306 Oceanography	_____3
OEAS 310 Global Earth Systems	_____3
OEAS 303 Paleontology	_____3
OEAS 313 Mineralogy	_____3
OEAS 314 Petrology	_____3
OEAS 344W Geomorphology	_____3
OEAS 360 Environmental Systems Education	
(satisfies oral communication requirement)	_____3
OEAS 443 General Meteorology	_____3
PHYS 408 Astronomy for Teachers	_____3
OEAS 441-442W Ocean and Earth Science Field Study	_____6
(satisfies oral communication requirement)	

**Professional Education Courses**

ECI 301 Foundations and Assessment	_____3
ECI 360 Classroom Management and Discipline	_____2
ECI 408 Reading and Writing in Content Areas	_____3
ECI 430 PK 12 Instructional Technology	
(Satisfies computer skills requirement)	_____3
ECI 454 Developing Instructional Strategies	_____3
ECI 483 Practicum Seminar in Education	_____1

ECI 485 Student Teaching \_\_\_\_\_12

ESSE 313 Fundamentals-Human Growth and Development \_\_\_\_\_3

ESSE 406 Students with Diverse Learning \_\_\_\_\_3

**UPPER DIVISION GENERAL EDUCATION**

(Teacher Education Core satisfies this requirement.)

Option A. Approved Minor, 12-24 hours; also second degree or second major. Students completing an oceanography emphasis should see the information in the emphasis areas encouraging them to complete specific minor requirements.

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Option B. Cluster, 9 hours (3 hours may be in the major area of study.)

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Requirements for graduation (non-teacher education tracks) include a minimum cumulative grade point average of 2.00 overall and in the major with a grade of C or better in all major and prerequisite courses, 120 credit hours, passage of the Exit Examination of Writing Proficiency, and completion of Senior Assessment.