OLD DOMINION UNIVERSITY 2009-2010 Catalog
Bachelor of Science—Ocean and Earth Science Major

NAME: _____
UIN: _____
TELEPHONE: _____

LOWER DIVISION GENERAL EDUCATION
(Required of all emphasis areas)

A. Skills

Written Communication
ENGL 110C _____3 _____
ENGL 111C or 131C _____3 _____

Oral Communication _____3 _____
(Satisfied by OEAS 441-442W)

Mathematics _____3 _____
(Requires MATH 211)

Foreign Language Skills _____0-6_____
(Competence must be at the 102 level)

Computer Skills _____3 _____
(Requires CS 149D or higher; satisfied by ECI 430 in Earth Science Education track)

B. Perspectives

Fine and Performing Arts _____3 _____
ARTH 121A, ARTS 122A, MUSC 264A, DANC 185A, THEA 241A, COMM/THEA 270A

History _____3 _____
HIST 101H, 102H, 103H, 104H, or 105H _____3 _____

Literature _____3 _____
ENGL 112L, 144L, or FLET 100L

Philosophy _____3 _____
PHIL 110P, 120P, or 150P

Natural Science and Technology
(CHEM 115N-116N required) _____4 _____
_____4 _____
Technology Requirement _____3-4_____
(Met in the major)
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 or
CS 150 Problem Solving and Programming I _____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
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
OEAS 441-442W Ocean and Earth Science Field Study _____6
(Satisfies oral and written communication requirement)

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
or CS 150 Problem Solving and Programming I
(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
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
or 452 Inorganic Chemistry Laboratory _____2
CHEM 451 Advanced Inorganic Chemistry _____3
Electives (from OEAS 403W, 412, 413, 418)
OEAS 441-442W Ocean and Earth Science Field Study _____6
(Satisfies oral and written communication requirement)

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 or _____3
CS 150 Problem Solving and Programming I
(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 310W Intro to Data Analysis
or 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 and written communication requirement)

Course Requirements—Geology Emphasis

BIOL 115N General Biology 1 _____4
BIOL 116N General Biology 2
or OEAS 303 Paleontology _____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 211-212 Calculus I and II _____8
PHYS 231N-232N University Physics I and II _____8
STAT 310W Intro to Data Analysis
or 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
OEAS elective from: OEAS 303, 368, 403W,408, 412, 413
413, 414, 415, 419, 420; 431, 434, 436, 446 _____3
OEAS 441-442W Ocean and Earth Science Field Study _____6
(satisfies oral and written communication requirement)

Course Requirements-Earth Science Education Emphasis

Admission. Students wanting to be admitted to the teacher education probfam must have a 2.75 grade point average in the major, the professional education core and overall, with no grade less than C in the content area and C- in the professional education core and have passed Praxis I or achieved State Board of Education-approved SAT or ACT scores. Although students may enroll in a limited number of education courses, passing Praxis I scores or approved equivalent test scores must be on file in the Office of Teacher Education Services and Advising prior to enrollment in any education practicum course or courses on developing instructional strategies. It is recommended that students take the Praxis I exam prior to, or during, enrollment in ECI 301.

Continuance. Students must maintain an overall grade point average of 2.75 and 2.75 in the academic major and the professional education core and complete all degree requirements for the major and the professional education core with no grade less than a C- for continuance in the College of Education. In order to obtain a Virginia teaching license, all teacher education students must attain passing scores on the Praxis II specialty area tests. A list of the passing scores established by the Virginia Department of Education is available on the Virginia Department of Education website or the Office of Teacher Education Services and Advising, Education 152. The Praxis II Earth Science Content Examination and the Virginia Communication and Literacy Assessment (VCLA) must be passed before the candidate may begin the teacher internship. Passing Praxis II and VCLA scores must be on file in the Office of Teacher Education Services and Advising prior to student teaching.

Graduation. Requirements for graduation included passage of the Exit Examination of Writing Proficiency; completion of the Senior Assessment; a minimum 2.75 grade point average overall, in the major, and in the professional education core, with no grade less than a C in the major and C- in the professional education core; and completion of 126.

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 211 Calculus _____3
STAT 310W Intro to Data Analysis
or STAT 330 Intro to Probability and Stats _____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 _____4
OEAS 344W Geomorphology _____3
OEAS 443 General Meteorology _____3
PHYS 408 Astronomy for Teachers _____3
OEAS 441-442W Ocean and Earth Science Field Study _____6
(Satisfies oral and written 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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Option C. Two Upper Division courses from another college (6 hours).

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.