

**OLD DOMINION UNIVERSITY 2004-2006 Catalog**

**Bachelor of Science-Mathematics Major**

Students earning the AS, AA, or AA&S (or university parallel) degree from a Virginia Community College automatically satisfy the lower division general education requirements. **Courses marked with \* require a grade of C or better to transfer, even with the AS degree. The remaining lower division courses are automatically satisfied by the AS (including foreign language), regardless of the grade earned.** Additionally, courses in which a grade of AC-A or below were earned will not transfer. Therefore Community College degree holders may require additional credits to meet the 120 credit hour graduation minimum. (AS=Associate degree)

**LOWER DIVISION GENERAL EDUCATION**

**A. Skills**

Written Communication

ENGL 110C \_\_\_\_\_ 3 \_\_\_\_\_  
 ENGL 111C, 131C, PHIL 111C, or \_\_\_\_\_ 3 \_\_\_\_\_  
 HIST 111C \_\_\_\_\_

Oral Communication \_\_\_\_\_ 3 \_\_\_\_\_  
 (Met in the major by MATH 317)

Mathematics \_\_\_\_\_ 3 \_\_\_\_\_ \*  
 (Math 162M-163)

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

Computer Skills \_\_\_\_\_ 3 \_\_\_\_\_ \*  
 (requires CS 150)

**B. Perspectives**

Fine and Performing Arts \_\_\_\_\_ 3 \_\_\_\_\_  
 ARTH 121A, ARTS 122A, MUSC 264A, DANC 185A, THEA 241A)

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

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

Philosophy \_\_\_\_\_ 3 \_\_\_\_\_  
 PHIL 110P, 120P, or 150P  
 (recommend PHIL 120P)

Natural Science and Technology  
 (Eight credit hours of Natural Science with labs in sequence. Additionally, 3-4 credit hours of Natural Science or Technology are required. PHYS 231N-232N are advised for the applied Mathematics option; either BIOL 108N-109N or BIOL 115N-116N are advised for the statistics/biostatistics option.)

\_\_\_\_\_ 4 \_\_\_\_\_ \*  
 \_\_\_\_\_ 4 \_\_\_\_\_ \*  
 Technology Requirement \_\_\_\_\_ 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

**Mathematics Course Requirements**

MATH 211 Calculus I \_\_\_\_\_ 4 \_\_\_\_\_ \*  
 MATH 212 Calculus II \_\_\_\_\_ 4 \_\_\_\_\_ \*

MATH 307 Ordinary Differential Equations \_\_\_\_\_ 3 \_\_\_\_\_

MATH 311W Modern Algebra I \_\_\_\_\_ 3 \_\_\_\_\_

MATH 312 Calculus III \_\_\_\_\_ 4 \_\_\_\_\_

MATH 316 Intro Linear Algebra \_\_\_\_\_ 3 \_\_\_\_\_

MATH 317 Calculus IV: \_\_\_\_\_ 3 \_\_\_\_\_  
 Into Analysis

STAT 310W or 431 Intro Data \_\_\_\_\_ 3 \_\_\_\_\_  
 Analysis or Theory of Stat

(statistics/biostatistics majors take both)  
 STAT 330 or 331 Intro Probability and Stat or Theory of Probability  
 (Statistics and Biostatistics majors take STAT 331)

A grade of C+ or higher is required in the courses listed above.

All students are required to choose one of the following options:

**Applied Mathematics**

MATH 401 Partial Differential Equations \_\_\_\_\_ 3

MATH 408 Applied Numerical Methods I \_\_\_\_\_ 3

MATH 422 Applied Complex Variables \_\_\_\_\_ 3

MATH 400-level electives \_\_\_\_\_ 9

(at most three hours from MATH 400, 404U, 405, 406)

**Statistics/Biostatistics**

STAT 310W or 431 Intro Data Analysis or \_\_\_\_\_ 3  
 Theory of Statistics

STAT 405 SAS: An Introduction to Data Handling \_\_\_\_\_ 1

STAT 400-level electives \_\_\_\_\_ 15

**Math Teaching Licensure**

**Admission.** Students wanting to enroll in the teacher education program must have a 2.75 grade point average in the major and overall, with no grade less than C- in the content area and the professional education core. Additionally, passage of the PRAXIS I exam prior to enrollment in any education practicum course or courses in developing instructional strategies is required. It is recommended that students take the PRAXIS I exam prior to, or during, enrollment in ECI 301.

**Continuance.** Students must maintain a general grade point average of 2.75 in the academic major and complete all degree requirements for the major and in the professional education core with no grade less than a C- for continuance in the College of Education.

**Graduation.** Requirements for graduation include passage of the Exit Examination of Writing Proficiency; completion of the Senior Assessment; a minimum 2.75 grade point average overall and in the major, with no grade less than a C- in the major, minor, and professional education core; and completion of a minimum of 134 credit hours. In order to obtain a Virginia teaching license, all teacher education students must attain passing scores on the appropriate 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, Education Building room 152.

MATH 400 History of Mathematics

MATH 404 Fundamental Concepts of Geometry \_\_\_\_\_ 3

MATH 406 Number Theory \_\_\_\_\_ 3

MATH 417 or 422 Inter. Real Analysis or Applied \_\_\_\_\_ 3  
 Complex Variables

MATH 400-level electives (2 courses) \_\_\_\_\_ 6

**Professional Education core:**

ECI 301 Social and Cultural Foundations \_\_\_\_\_ 3

ECI 304 Educational Applications of Technology \_\_\_\_\_ 3

ECI 360 Classroom Management and Discipline \_\_\_\_\_ 3

ECI 408 Reading and Writing in Content Area \_\_\_\_\_ 3

ECI 453 Developing Instructional Strategies: Math \_\_\_\_\_ 4

ECI 485 Student Teaching \_\_\_\_\_ 12

ESSE 406 The Special Needs Student \_\_\_\_\_ 3

ESSE 413 Human Growth and Development \_\_\_\_\_ 3

**UPPER DIVISION GENERAL EDUCATION**

Option A. Approved Minor, 12-24 hours; second degree or second

major. (**Professional Education core satisfies this requirement.**)

Option B. Cluster, 9 hours (3 hours may be in the major area of study.) Requirements for graduation (non-teacher education tracks) include a minimum cumulative grade point average of 2.00 overall and in the major, 120 credit hours, passage of the Exit Examination of Writing Proficiency, and completion of Senior Assessment.