

Northern Virginia Community College 2008-2009 Catalog

SCIENCE:

Mathematics Specialization

Associate of Science Degree

AL, AN, LO, MA, WO

Purpose: The curriculum is designed for persons who plan to transfer to a four-year college or university to complete a baccalaureate degree. This curriculum is designed to prepare students to major in one of the following fields: mathematics, mathematics education, statistics, operations research, applied mathematics or computer science.

Transfer Information: Students are advised to work closely with the faculty and counseling staff for program and course scheduling. Electives should be chosen carefully to meet requirements of transfer institution. The responsibility for proper course selection rests with the student.

Recommended Preparation: Satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English, 4 units of college preparatory mathematics, 1 unit of laboratory science, and 1 unit of social science.

| Two Years | | Credits |
|----------------------|---|----------------|
| 1st Semester | | |
| CSC | 110 Introduction to Computing | 3 |
| ENG | 111 College Composition I | 3 |
| ¹ HIS | Elective | 3 |
| MTH | 173 Calc. with Analytic Geometry I | 5 |
| ² ___ | Social Science Elective | 3 |
| SDV | Elective | 1 |
| | Total | 18 |
| 2nd Semester | | |
| CSC | 130 Scientific Programming or MTH 286 Discrete Mathematics | 3-4 |
| ³ ENG | 112 College Composition II | 3 |
| MTH | 174 Calc. with Analytic Geometry II | 5 |
| ² ___ | Social Science Elective | 3 |
| | Total | 14-15 |
| 3rd Semester | | |
| ⁴ ___ | Humanities/Fine Arts Elective | 3 |
| MTH | 277 Vector Calculus | 4 |
| ⁵ MTH | Elective | 3 |
| ⁶ ___ | Natural Science/Lab Elective | 4 |
| ⁷ PED | 116 Lifetime Fitness & Wellness | 1 |
| | Total | 15 |
| 4th Semester | | |
| ⁴ ___ | Humanities/Fine Arts Elective | 3 |
| ⁵ MTH | Elective | 3-4 |
| ⁶ ___ | Natural Science/Lab Elective | 4 |
| ⁷ PED/RPK | Elective | 1 |
| SPD | 110 Intro. to Speech Communication | 3 |
| | Total | 14-15 |

Total credits for the A.S. Degree in Science with a Specialization in Mathematics = 61-63.

Twenty of these credits must be taken in MTH courses for transfer to a four-year institution with a major in Science.

¹ HIS 101, 102, 121, or 122 recommended. Although not required, students are encouraged to take a two-semester sequence in history, depending on the requirements of the transfer institution.

² The social science elective may be selected from the social/behavioral sciences courses listed under General Education Electives. Base selection on requirements of transfer institution.

³ ENG 125 may be substituted with the advice of a counselor or faculty advisor according to requirements of transfer institutions.

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⁴ Humanities/fine arts elective may be selected from the humanities/fine arts courses listed under General Education Electives. Elective should be selected with advice of a counselor or faculty advisor to meet requirements of transfer institution.

⁵ Math electives should be chosen carefully from 200-level courses and after investigation of requirements of the institution to which transfer is intended.

⁶ Science courses (with laboratories) may be selected from the following: BIO 101-102, CHM 111-112, PHY 231-232 or PHY 241-242, PHY 243, GOL 105-106, or any 200-level biology, chemistry, geology, or physics course.

⁷ The PED requirement may be met by one of the following options: PED 116, 2 cr.; PED 116, 1 cr. plus a PED activities course, 1 cr.; or PED 116, 1 cr. plus RPK activities course. PED 116 is offered as both a 1-credit and a 2-credit course.