

College of Liberal Arts and Human Sciences  
School of Education  
Bachelor of Science in Education in Secondary Education  
Major in Mathematics Education  
For students entering under UG Catalog 2021-2022

## GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

## SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91<sup>1</sup> requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

## PATHWAYS TO GENERAL EDUCATION (47 CREDITS)

*\*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis*

### Concept 1: Discourse (9 credits)

#### 1f - Foundational

\_\_\_ ENGL 1105 First-Year Writing (3 credits) or COMM 1015 Communication Skills (3 credits)

\_\_\_ ENGL 1106 First-Year Writing (3 credits) or COMM 1016 Communication Skills (3 credits)

#### 1a - Advanced/Applied

\_\_\_ (3 credits)

### Concept 2: Critical Thinking in the Humanities (6 credits)

\_\_\_ (3 credits)

\_\_\_ (3 credits)

### Concept 3: Reasoning in the Social Sciences (6 credits)

\_\_\_ (3 credits)

\_\_\_ (3 credits)

### Concept 4: Reasoning in the Natural Sciences (6 credits)

\_\_\_ (3 credits)

\_\_\_ (3 credits)

### Concept 5: Quantitative and Computational Thinking (11 credits)

#### 5f - Foundational

\_\_\_ MATH 1225 Calculus of a Single Variable (4 credits)

\_\_\_ MATH 1226 Calculus of a Single Variable (Pre: Grade of at least C- in 1225) (4 credits)

#### 5a - Advanced/Applied

\_\_\_ STAT 3005 Statistical Methods (Co: MATH 1206 or MATH 1226. Pre: MATH 1205 or MATH 1225) (3 credits)

### Concept 6: Critique and Practice in Design and the Arts (6 credits)

#### 6d - Design

\_\_\_ (3 credits)

#### 6a - Arts

\_\_\_ (3 credits)

### Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

\_\_\_ (3 credits)

<sup>1</sup> <https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf>

## **BACHELOR OF SCIENCE IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS<sup>2</sup>**

### **(21 CREDITS)**

- \_\_\_ EDCI 2574 Social Foundations of Education (3 credits)
- \_\_\_ EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing)(3 credits)
- \_\_\_ EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- \_\_\_ EDCI 4734 Adolescent Literacy and Reading (3 credits)
- \_\_\_ EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- \_\_\_ EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- \_\_\_ EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

### **MAJOR IN MATHEMATICS EDUCATION REQUIREMENTS (51 CREDITS)**

- \_\_\_ MATH 1004 Discovering Mathematics I (Pass/Fail only) (1 credit)
- \_\_\_ MATH 1044 Discovering Mathematics II (2 credits)
- \_\_\_ MATH 2114 Introduction to Linear Algebra (Pre: 1225 or 1226) (3 credits)
- \_\_\_ MATH 2204 Introduction to Multivariable Calculus (Pre: 1226) (3 credits)
- \_\_\_ MATH 3034 Introduction to Proofs (Pre: 2114 or 2114H or 2405H) (3 credits)
- \_\_\_ MATH 3124 Modern Algebra (Pre: 3034) (3 credits)
- \_\_\_ MATH 3224 Advanced Calculus (Pre: (2224 or 2224H or 2204 or 2204H or 2406H or CMDA 2005), MATH 3034) (3 credits)
- \_\_\_ MATH 4044 History of Mathematics (Pre: Senior Standing) (3 credits)
- \_\_\_ MATH 4334 College Geometry (Pre: 1114 or 2114 or 2114H or 2405H, 1226) (3 credits)
- \_\_\_ MATH 4625 Mathematics for Secondary Teachers I (Pre: 3034) (3 credits)
- \_\_\_ MATH 4626 Mathematics for Secondary Teachers II (Pre: 3034) (3 credits)
- \_\_\_ EDCI 4244 Curriculum and Instruction in the Middle School Classroom (4-8) (3 credits)

### **Computer Programming (3 credits)**

- \_\_\_ choose one (1) from list below
- \_\_\_ CS 1044 Introduction to Programming in C++ (3 credits)
- \_\_\_ CS 1054 Introduction to Programming in Java (3 credits)
- \_\_\_ CS 1064 Introduction to Programming in Python (3 credits)
- \_\_\_ CS 1114 Introduction to Software Design (3 credits)

### **Secondary Teaching Practicum (15 credits)**

- \_\_\_ EDCI 3964 Field Work/Practicum (6 credits)
- \_\_\_ EDCI 4964 Field Work/Practicum (9 credits)

### **FREE ELECTIVE COURSES (1 CREDIT)**

### **TOTAL CREDITS 120**

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<sup>2</sup> unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.