

THE MATHEMATICS EDUCATION PROGRAM HANDBOOK

Updated June 2021

(also see the Math Education web site: www.mathed.soe.vt.edu)

1. INTRODUCTION

Mathematics - Education Option (Math-Ed Program). The Math-Ed Program is an option program, administered by the Department of Mathematics. The five-year program leads to a Bachelor of Science degree in Mathematics at the end of four years and a Masters of Arts in Teaching and Learning at the end of the fifth year. The Program is designed to prepare future teachers of mathematics in secondary grades 6-12. Upon successful completion of the Program, a student may apply to Virginia State Department of Education for licensure to teach secondary mathematics in the state of Virginia. The program is open to all students admitted into the Department of Mathematics. To complete the degree requirements of the Math-Ed Program, the student must satisfy the progress towards degree requirements listed below. Also a 3.0 GPA overall by the end of the senior year is a minimum requirement for consideration for admission to the Center for Teacher Education (School of Education) graduate program, but students with a lower GPA might be admitted on provisional status.

Specific details of the program can be found in the appropriate sections below and in the Mathematics Education Option checksheet.

2. THE PROFESSIONAL STUDIES COMPONENT

The Math-Ed Program described in this brochure is a professional program. You must be admitted to the Professional Studies Component before you can enroll in EDCI 3004. The following minimal requirements must be met to be admitted into the Professional Studies Component:

- a) A 2.3 overall GPA.
- b) A 2.3 GPA in all math courses taken up to the point of admission. These courses must include Math 1225, 1226, 2204, 2114 and 2214 or their equivalents.
- c) A grade of C or better in all 3000/4000 level courses completed at the point of admission. Only the highest grade of repeated courses will count for this requirement.
- d) A 2.0 GPA in Freshman English.
- e) An application for admission to the Professional Studies Program must be submitted by August 31 of the Fall semester prior to the Spring semester in which the student enrolls in EDCI 3004.

The early teaching experience part of EDCI 3004 requires that you spend 30 hours, serving as a teacher aide in a middle or high school. The methods class will meet on campus on Tuesday and Thursday mornings when you are not working at a school. You will be expected to provide your own transportation to and from your field experience placement.

Evaluation of your field experience is conducted throughout the semester. Upon completion of EDCI 3004, you will be evaluated by your cooperating teacher, university supervisor, and the EDCI 3004 instructor as to the quality of your field experience. If, jointly, these evaluators decide that you did not have a satisfactory field experience, then you are considered to be not making satisfactory progress towards a degree in the Math-Ed Program. You will then be advised to seek a degree in some other area of study.

3. SATISFACTORY PROGRESS

Satisfactory progress toward the Bachelor of Science degree in Mathematics involves required 1000-level and 2000-level math classes and Math 3034. Refer to the Mathematics Education Option checksheet for details on specific progress to degree requirements.

4. CURRICULUM FOR LIBERAL EDUCATION / PATHWAYS GEN. EDUCATION

Most students graduating in 2021 or earlier must satisfy Curriculum for Liberal Education (CLE) General Education requirements. Most students graduating in 2022 or later must satisfy Pathways General Education requirements. These will be referred to in the paragraph below as “CLE/Pathways” requirements.

The University and College of Science have CLE/Pathways requirements that must be satisfied before a degree will be granted. A student who satisfies the College of Science CLE/Pathways will also have satisfied the University CLE/Pathways requirements. No course used to meet a College CLE/Pathways requirement can be taken on a pass/fail basis. Further information on the CLE/Pathways requirements can be found in the Mathematics Education Option checksheets.

5. ADDITIONAL MATH-ED PROGRAM REQUIREMENTS

- a) A minimum of 50 mathematics credits are required in the Program. Of these 50 credits, 47 credits are prescribed and the remaining three credits can be satisfied with any 3000 or 4000-level mathematics course, including research experience (MATH 4994).
- b) Two writing intensive courses are required. This requirement is automatically satisfied by taking the required courses Math 3034 Proofs, and Math 4044 History of Math.
- c) Three credits of Computer Science (CS 1044, 1054, 1114 or Math 1454, 3054) and three credits of statistics (STAT 3005 or 3604) are required.
- d) Nine credits of graduate-level education course work are required in the undergraduate component of the five-year program. The remaining education courses in the five-year program are typically taken during the fifth year, in the School of Education’s MAEd program.
- e) Foreign language requirement: See the University Catalog.

6. TEACHING LICENSURE

To receive a recommendation from the Center for Teacher Education to teach secondary mathematics in the State of Virginia, the student must:

- a) Successfully complete the Math-Ed Program.
- b) Earn a minimum grade of C⁺ in student teaching (at the graduate level).
- c) Receive a positive recommendation from the cooperative teacher(s), a principal or school administrator in the school in which the student teaching experience was completed, and the university supervisor.
- d) Pass Praxis II with a score of 147/200 or better during the senior year.
- e) The State of Virginia has established an alternate route to licensure for those persons desiring licensure to teach secondary mathematics in Virginia. Please contact the Director of the Math-Ed Program or the Center for Teacher Education at Virginia Tech for more information about alternative licensure.

7. MISCELLANEOUS TOPICS

Second Teaching Endorsements

It is possible in State of Virginia to be endorsed in a second area of study. Usually one can obtain a second teaching endorsement by completing a required number of hours in that area. The hours of study for a particular endorsement vary so the student should consult with his or her advisor to learn about the requirements for a particular area of endorsement.

Honors

Students of superior ability may be invited into the University Honors Program. Please consult your undergraduate catalog and your advisor for more information on the Honors Program.

Cooperative Education

The Mathematics Department participates in the Cooperative Education Program, which integrates practical experience with academic learning. The co-op student spends two or three semesters on campus and then alternates semesters between industry and campus until the senior year, which is spent on campus. The co-op program takes five years to complete but has many compensating advantages. The co-op program is open to all qualified Math Education option students. A brochure providing further details about the program is available from the Cooperative Education Program Office.

Student Societies

The Mathematics Department sponsors a chapter of Pi Mu Epsilon, a national organization for the promotion of scholarly activity in mathematics at the undergraduate level. Outstanding undergraduate Math-Ed majors may be elected to membership in this organization. Also, Math Education option students are encouraged to join the Mathematical Association of America (MAA) Student Math Club.

Scholarships

A number of mathematics and teaching related scholarships are available for the junior and senior years. These include the Powell Scholarship, the Hahn Scholarship, and the Virginia Council of Teachers of Mathematics (VCTM) Scholarship. Check the mathematics education website for more details.