# SECONDARY EDUCATION MAJOR - MATHEMATICS

**Program Director:** Anisha Campbell, Ph.D.

## MATHEMATICS EDUCATION (GRADES 7-12)

Undergraduates who complete the Mathematics Education curriculum receive the Bachelor of Science degree and meet the MSDE requirements for the Professional Eligibility Certificate. Teacher candidates admitted to Mathematics Education are required to have an academic content major and must complete the program requirements (p. 1). Please check with the MATH department regarding specific math courses to be taken.

## Secondary Education Pathways

The Department of Teaching and Learning, Policy and Leadership offers undergraduate curricula in secondary education that lead to the Bachelor of Science or Bachelor of Arts degree and prepares teachers in various subject areas for teaching in middle schools, secondary schools (grades 7-12), and PreK-12 settings (Art and World Languages).

Multiple pathways are available for individuals who are interested in teaching at the secondary level:

The Dual Major option, which is designed for incoming freshmen or sophomores, leads to the Bachelor's degree with a major in an academic content area plus a second major in secondary education. All secondary majors are required to have an academic content major which satisfies the requirements of the academic department and meets the standards for teacher certification. Candidates who follow the proposed sequencing of courses can complete both majors in four years with careful advisement and scheduling;

The five-year Integrated Master's with certification program.  See http://www.education.umd.edu/MCERT/.

Graduates of the Secondary Education programs meet the requirements for certification in Maryland and additional states that are affiliated with the Interstate Reciprocity Agreement through the Maryland State Department of Education.

*Note:* For more information on the Mathematics Education and Science Education programs, please visit the Terrapin Teachers website http://terrapinteachers.umd.edu.

## Admission to the Major

Admission to the Teacher Education Professional Program is competitive. Admission procedures and criteria can be found on the College of Education, College Requirements tab (https://academiccatalog.umd.edu/undergraduate/colleges-schools/education/).

## Placement in Courses

The Secondary Education programs include both pre-professional and professional education course work. Before undergraduates may enroll in courses identified as part of the professional sequence, they must complete the selective admissions requirements and be fully admitted to the College of Education's Teacher Education program. Admission procedures and criteria are explained in the College of Education entry. Teacher candidates will not be permitted to enroll in professional sequence courses — including the yearlong internship — prior to completion of the selective admissions requirements and full admission to the College of Education.

## Program Learning Outcomes

1. Secondary Education teacher candidates have in-depth knowledge of the subject matter that they teach as described in professional (e.g., National Council of Teachers of English - NCTE, National Council of Teachers of Mathematics - NCTM, etc.); state (MSDE); and, institutional standards.
2. Secondary Education teacher candidates can effectively plan classroom-based instruction or activities for their roles as teachers. Candidates' knowledge, skills, and dispositions are applied effectively in practice.
3. Secondary Education teacher candidates practice evidence-based decision-making through the use of assessment as well as the critical interpretation of research and inquiry in order to improve educational practice. They accurately assess and analyze student learning, make appropriate adjustments to instruction, monitor student learning, and have a positive effect on learning for all students.
4. Secondary Education teacher candidates demonstrate understanding of learners and their social and cultural contexts with a global perspective and intentional sensitivity to other cultures. They are able to work with students, families, and communities in ways that reflect the dispositions expected of professional educators as delineated in professional (e.g., NCTE, NCTM, etc.); state (MSDE); and, institutional standards.
5. Secondary Education teacher candidates competently integrate technology in instruction to support student learning and develop data-driven solutions for instructional and school improvement. They demonstrate proficiency in each of the seven Maryland Teacher Technology Standards.

## REQUIREMENTS

All Teacher Education Programs have designated pre-professional courses and a specified sequence of professional courses. Before undergraduates may enroll in professional education course requirements they must be fully admitted to the College of Education's Teacher Education Program. An overall grade point average of 2.75 must be maintained after admission to Teacher Education. All teacher candidates are required to obtain satisfactory evaluations on the College of Education Foundational Competencies/Model Code of Ethics for Educators (MCEE) standards and to attain qualifying scores for the State of Maryland on a test of basic skills (Praxis CORE, SAT, ACT or GRE) and Praxis II assessments. The test of basic skills is required for admission, and Praxis II is required for the teaching internship and graduation. The culminating experience of the program is the yearlong internship, which takes place in a public Collaborating School (i.e., partner school, PDS - Professional Development School).

The department of Teaching and Learning, Policy and Leadership offers a variety of secondary education programs-tracks leading to the Bachelor of Science and Bachelor of Arts degrees. Teacher candidates who complete a secondary education program at UM meet the Maryland State Department of Education requirements for the Professional Eligibility Certificate. Consult the Curriculum and Instruction program advisor for updated information.

Secondary Math Education and Science Education are part of Terrapin Teachers, an innovative program designed to produce a new generation

of highly qualified instructors in STEM subjects. In this program, you can earn a STEM degree PLUS eligibility for certification as a middle or high school teacher. For more information about this program please visit our website at the following link: tt.umd.edu (http://www.tt.umd.edu/).

| Course | Title | Credits |
| --- | --- | --- |
| College Requirements (https://academiccatalog.umd.edu/undergraduate/colleges-schools/education/#collegerequirementstext) | | |
| **Pre-Professional/Education Courses** | | |
| EDHD426 | Cognitive and Motivational Literacy Content | 3 |
| TLPL101 | Inquiry Approach to Teaching STEM (Step 1) | 1 |
| TLPL102 | Inquiry Teaching of STEM in Middle School | 2 |
| Select one of the following: | | 3 |
| TLPL360 | Foundations of Education | |
| TLPL250 | Historical and Philosophical Perspectives on Education | |
| MATH274 | History of Mathematics | 3 |
| MATH470 | Mathematics for Secondary Education | 3 |
| TLPL488 | Special Topics in Education | 1-3 |
| **Professional Education Courses** | | |
| BSCI348 | Special Topics in Cell Biology and Molecular Genetics | 1-4 |
| TLPL401 | Student-Centered Curriculum and Instruction | 3 |
| TLPL403 | Teaching and Learning High School Mathematics (Fall only, Senior Year) | 3 |
| TLPL479 | Field Experiences in Education (TLPL479D Field Experience in Secondary Mathematics Education. Fall only, Senior Year) | 1 |
| TLPL478 | Professional Seminar in Education (TLPL478D ) | 1 |
| TLPL489 | Internship in Education (TLPL489D Student Teaching in Secondary Math) | 12 |
| TLPL488 | Special Topics in Education (TLPL488B Teaching Academically, Culturally, and Linguistically Diverse Students in Secondary Education) | 2 |
| **Total Credits** | | **39-44** |

# GRADUATION PLANS

Click here (https://education.umd.edu/student-resources/student-services/coe-undergraduate-studies-student-services-office/major-four/) for roadmaps for graduation plans in the College of Education.

Additional information on developing a graduation plan can be found on the following pages:

- http://4yearplans.umd.edu
- the Student Academic Success-Degree Completion Policy (https://academiccatalog.umd.edu/undergraduate/registration-academic-requirements-regulations/academic-advising/#success) section of this catalog