Fall 2016

Bachelor of Science in Secondary Mathematics Teacher Certification

The Bachelor of Arts degree in Mathematics is designed to provide students with the foundation of a liberal arts education and a broad overview of modern mathematics and its applications, while also emphasizing the power, depth, and beauty inherent in the subject. This degree plan is specifically designed for students who intend to teach high school mathematics. Therefore, the Urban Education Concentration is required.

The mathematical component of this plan is designed to prepare students to develop and use analytical and problem-solving skills, to master mathematical techniques required in related fields of application, and to enter the employment market with relevant and proficient mathematical tools. This degree offers many features to enhance a student's educational experience: an approved university concentration; sustained development of writing and speaking proficiency. It will help prepare students for various graduate or professional programs including mathematics and mathematics education. A student of this program, after completing the courses listed in the Mathematics Core, may then choose mathematics electives that seem most suitable to their interests. Several suggested tracks are given with recommended electives. Students are encouraged to consult their advisors for further suggestions about which electives are most suitable, based on their goals and preferences. The degree requires a minimum of 120 semester credit hours as indicated below. Students must have a grade of C or better in any course in computer science, mathematics or statistics that is applied towards the degree.

Learning Outcomes
Graduates who earn a BA in Mathematics will be able to:

- Demonstrate analytic reasoning and problem solving skills, and understanding of and ability to write proofs.
- Demonstrate basic knowledge of continuous mathematics.
- Communicate mathematical knowledge orally and in writing.

Degree Requirements

Common Core Requirements (42 hours)
See the Common Core Requirements section of the catalog for Undergraduate Academic Programs. Observe that MATH 2409 satisfies both the mathematics requirement of the Common Core and the BA in mathematics degree plan.

Major Requirements

Mathematical Sciences Requirements (45 hours)

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MATH 2401 MATH 2402
MATH 2403 MATH 2409 (3 hours of this count in the common core)

MATH 2407 MATH 3301
MATH 3302 MATH 3306
MATH 3307 MATH 3408
PED 4382 (3 hours are counted in UE Concentration)

NOTE: A mathematics education faculty advisor and topic must be decided upon and approved by the department chair at least one full semester before registering for PED 4382 Senior Project.

Mathematics Education Emphasis (6 hours)
MATH 3303
MATH 3313

Electives in the Major (15 hours)
Electives must include at least 6 more hours of 2000-4000 math electives including at 3 hours at the 4000 level subject to the following:

- MATH 4294, MATH 3321 or MATH 3322 do not count towards any mathematics degree requirements.
- At most three hours of MATH 4190-4490, Special Topics, may be applied toward degree unless approved by the department chair.
- At most three hours of MATH 3399-4399, Directed Study, may be applied toward degree unless approved by the department chair.
- At most three hours of MATH 3394-4394, Undergraduate Research, may be applied toward degree unless approved by the department chair

NOTE: students of this degree are strongly encouraged to take Math 4312. Other suggested electives include Math 3309, Math 3312, Math 4306, Math 4307, or Math 4308.

Urban Education Concentration
Students seeking Secondary (7–12) Certification in mathematics through the Urban Education Department must meet with a CST advisor as well as complete a formal application in the Urban Education Department. The current Urban Education Department requirements for this Concentration must be completed. The student teaching portion of the field experience must include fulfilling all Senior Project requirements in Mathematics. *At least one semester prior to taking PED 3305, students should speak with an Urban Education advisor to make certain that all concentration requirements are met.*

Minor (18 approved hours minimum)
Any university approved Teaching Certification or Minor from the College of Business, the College of Humanities and Social Sciences, or the College of Public Service. Students seeking Secondary (7-12) Certification in Mathematics must be advised by the Urban Education Department.

Free Electives (sufficient hours to complete a minimum of 120 hours total)