



# Program Approval Form

For approval of new programs and deletions or modifications to an existing program.

## Action Requested:

- ☐ Create New (SCHEV approval required except for minors)
- ☐ Inactivate Existing
- ☒ Modify Existing (check all that apply)
- ☐ Title (SCHEV approval required except for minors)
- ☒ **Concentration** (Choose one): ☐ Add ☐ Delete ☒ Modify
- ☒ Degree Requirements
- ☐ Admission Standards/ Application Requirements
- ☐ Other Changes: \_\_\_\_\_

## Type (Check one):

- ☒ B.A. ☐ B.S. ☐ Minor
- ☐ M.A. ☐ M.S. ☐ M.Ed.
- ☐ Ph.D.
- ☐ Undergraduate Certificate\*
- ☐ Graduate Certificate\*
- ☐ Other:

**College/School:** College of Science **Department:** MATH

**Submitted by:** Jen Gettys **Ext:** 3.5302 **Email:** jbazaz@gmu.edu

**Effective Term:** Fall 2015 **Please note:** For students to be admitted to a new degree, minor, certificate or concentration, the program must be fully approved, entered into Banner, and published in the University Catalog.

## Justification: (attach separate document if necessary)

- Option of MATH 302 or MATH 312
- Adding "Mason Core and Elective Credits" and "Mason Core" sections in order to have the catalog listing clearly show how the degree equals 120 credits and how the Mason Core requirements can be fulfilled.

## Program Title: (Required)

Title must identify subject matter. Do not include name of college/school/dept.

## Concentration(s):

## Admissions Standards / Application Requirements:

(Required only if different from those listed in the University Catalog)

## Degree Requirements:

Consult University Catalog for models, attach separate document if necessary using track changes for modifications

**Courses offered via distance:**  
(if applicable)

**TOTAL CREDITS REQUIRED:**

Existing	New/Modified
Mathematics, BA	
1. MTHE	
1. MATH 302 2. [Mason Core and Electives section not included]	1. MATH 302 or MATH 312 2. See the bottom portion of the degree listing attached.

\*For Certificates Only: Indicate whether students are able to pursue on a ☐ Full-time basis ☐ Part-time basis

## Approval Signatures

Department \_\_\_\_\_ Date \_\_\_\_\_ College/School \_\_\_\_\_ Date \_\_\_\_\_ Provost's Office \_\_\_\_\_ Date \_\_\_\_\_  
*Required for Minors and Interdisciplinary Programs*

If this program may impact another unit or is in collaboration with another unit at Mason, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

## For Graduate Programs Only

Graduate Council Member \_\_\_\_\_ Provost Office \_\_\_\_\_ Graduate Council Approval Date \_\_\_\_\_

**For Registrar Office's Use Only:** Received \_\_\_\_\_ Banner \_\_\_\_\_ Catalog \_\_\_\_\_ *revised 6/7/12*

## **Program Proposal Submitted to the College of Science Curriculum Committee (COSCC)**

The form above is processed by the Office of the University Registrar. This second page is for the COSCC's reference.  
Please complete the applicable portions of this page to clearly communicate what the form above is requesting.

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### **FOR ALL PROGRAMS** (required)

Program Title: Mathematics, BA

Date of Departmental Approval: 3/11/2015

### **FOR INACTIVATED PROGRAMS** (required if inactivating a program)

- Reason for Inactivation:

### **FOR MODIFIED PROGRAMS** (required if modifying a program)

- Summary of the Modification: Option of MATH 302 or MATH 312 and adding "Mason Core and Elective Credits" and "Mason Core" sections.
- Text before Modification (title, degree requirements, etc.): Sections weren't included.
- Text after Modification (title, degree requirements, etc.): See attached.
- Reason for the Modification: In order to have the catalog listing clearly show how the degree equals 120 credits and how the Mason Core requirements can be fulfilled.

### **FOR NEW PROGRAMS** (required if creating a new program)

- Reason for the New Program:
- Relationship to Existing Programs:
- Relationship to Existing Courses:
- Semester of Initial Offering:
- Insert Tentative SCHEV Proposal Below

## Mathematics, BA

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### Banner Code: SC-BA-MATH

This program of study is offered by the [Department of Mathematical Sciences](#) in the [College of Science](#).

Students may select an optional concentration in mathematics education; students who do not select this concentration study traditional mathematics.

Students must fulfill all [requirements for bachelor's degrees](#). In addition to satisfying the [Mason Core](#) and [College of Science Bachelor of Arts requirements](#), students must satisfy the requirements listed below.

[MATH 290](#) meets the writing intensive requirement for this major.

Note: Students intending to enter graduate school in mathematics are strongly advised to take [MATH 315](#) and [MATH 321](#).

This undergraduate program offers students the option of applying to the [Mathematics, BA or BS/Curriculum and Instruction, Accelerated MEd, \(Secondary Education Mathematics Concentration\)](#). See listing for specific requirements.

**Students should carefully read the [General Notes on Undergraduate MATH Courses](#) section of this catalog before registering for courses.**

## Degree Requirements

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Note: A maximum of 6 credits of grades below 2.00 in coursework designated MATH may be applied toward the major.

### Core Courses (26 credits)

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- [MATH 113 - Analytic Geometry and Calculus I](#) Credits: 4 ([Mason Core: Quantitative Reasoning](#) course)
- [MATH 114 - Analytic Geometry and Calculus II](#) Credits: 4
- [MATH 125 - Discrete Mathematics I](#) Credits: 3 ([Mason Core: Quantitative Reasoning](#) course)
- [MATH 203 - Linear Algebra](#) Credits: 3
- [MATH 213 - Analytic Geometry and Calculus III](#) Credits: 3 **or** [MATH 215 - Analytic Geometry and Calculus III \(Honors\)](#) Credits: 3
- [MATH 214 - Elementary Differential Equations](#) Credits: 3 **or** [MATH 216 - Theory of Differential Equations](#) Credits: 3
- [MATH 290 - Introduction to Advanced Mathematics](#) Credits: 3 (fulfills writing intensive requirement)
- [MATH 322 - Advanced Linear Algebra](#) Credits: 3

### BA without Concentration

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In addition to completing the core courses above, students not selecting the concentration option must complete 12 additional traditional mathematics credits in MATH courses numbered above 300 (excluding [MATH 400](#)).

## BA without Concentration Total: 12 credits

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## BA with Concentration

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In addition to completing the core courses above, students may select an optional concentration in mathematics education.

### ▲ Concentration in Mathematics Education (MTHE)

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Students selecting the mathematics education concentration take the following 33 credits of coursework. A grade of 'C' or better is required for all licensure coursework.

- [MATH 302 - Foundations of Geometry](#) Credits: 3 **or** [MATH 312 - Geometry](#) Credits: 3
- [MATH 315 - Advanced Calculus I](#) Credits: 3
- [MATH 321 - Abstract Algebra](#) Credits: 3
- [MATH 351 - Probability](#) Credits: 3
- [EDCI 372 - Teaching Mathematics in the Secondary School](#) Credits: 3
- [EDCI 472 - Advanced Methods for Teaching Mathematics in the Secondary School](#) Credits: 3
- [EDCI 490 - Student Teaching in Education](#) Credits: 6 ([Mason Core: Synthesis](#) course)
- [EDRD 419 - Literacy in the Content Areas](#) Credits: 3
- [EDUC 372 - Human Development, Learning, and Teaching](#) Credits: 3 ([Mason Core: Social and Behavioral Science](#) course)
- [EDUC 422 - Foundations of Secondary Education](#) Credits: 3

### MTHE Concentration Total: 33 credits

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## Mason Core and Elective Credits (61-82 credits)

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The remaining credits (see below for specific credit counts) are available to fulfill any remaining [Mason Core](#) requirements (outlined below). Once those and all [requirements for bachelor's degrees](#) and [College of Science Bachelor of Arts requirements](#) are met, any remaining credits may be completed by elective courses. Students are strongly encouraged to consult with their advisor to ensure that they fulfill all requirements.

- Without concentration: 82 credits
- With concentration: 61 credits

## Mason Core

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Please note that some [Mason Core](#) requirements may already be fulfilled by the major requirements listed above.

Expand each item below for a link to specific course lists for each category:

### Foundation Requirements (15-19 credits)

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- [Mason Core UWCU - Written Communication](#) Credits: 6
- [Mason Core UOC - Oral Communication](#) Credits: 3
- [Mason Core UQR - Quantitative Reasoning](#) Credits: 3

- [Mason Core UITC - Information Technology Credits: 3-7](#)

## **Core Requirements (22 credits)**

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- [Mason Core UFA - Arts Credits: 3](#)
- [Mason Core UGU - Global Understanding Credits: 3](#)
- [Mason Core ULIT - Literature Credits: 3](#)
- [Mason Core UNSL - Natural Science Credits: 7](#)
- [Mason Core USBS - Social and Behavioral Sciences Credits: 3](#)
- [Mason Core UWC - Western Civilization/Western History Credits: 3](#)

## **Synthesis/Capstone Requirement (minimum 3 credits)**

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- [Mason Core USYN - Synthesis/Capstone Credits: minimum 3](#)

## **Degree Total: Minimum 120 credits**

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