

Program Change Request

Date Submitted: 01/09/24 3:18 pm

Viewing: **SC-MS-MATH : Mathematics, MS**

Last approved: 02/15/19 3:36 pm

Last edit: 02/27/24 3:32 pm

Changes proposed by: jbazaz

Catalog Pages Using this Program

[Mathematics, MS](#)

No Longer
Anticipated closure
date (i.e., calendar
Rationale for

Are you completing this form on someone else's behalf?

Yes

Requestor:

In Workflow

1. MATH Chair

2. SC Curriculum Committee

3. SC Assistant Dean

4. Assoc Provost-Graduate

5. Registrar-Programs

Approval Path

1. 01/09/24 4:31 pm
Maria Emelianenko (memelian):
Approved for MATH Chair

2. 01/11/24 1:38 pm
Gregory Craft (gcraft): Approved for SC Curriculum Committee

3. 01/11/24 1:56 pm
Jennifer Bazaz Gettys (jbazaz):
Approved for SC Assistant Dean

4. 02/27/24 12:49 pm
Laurence Bray (lbray2): Rollback to SC Assistant Dean for Assoc Provost-Graduate

History

1. Nov 10, 2017 by clmig-jwehrheim

2. Mar 8, 2018 by pchampan

3. Feb 15, 2019 by
pxiong

Name	Extension	Email
Rebecca Goldin	1480	rgoldin

Effective Catalog: 2024-2025

Program Level: Graduate

Program Type: Master's

Degree Type: Master of Science

Title: Mathematics, MS

- Approval Criteria**
- 1. What was the process used within your academy?
 - 2. Who was involved in approving the badge?
 - 3. What evidence was used to identify need/demand for this badge?
 - 4. How will you ensure the badge is unique?
 - a. Have you ensured there are no other existing badges?
 - b. Has CPE confirmed the proposed badge does not duplicate existing content?
 - c. Has the instructor(s) for this badge experience been documented?
 - d. Is there a contact hour minimum?
 - e. Is an assessment required?
 - f. Does this badge provide a benefit for current or future students?
 - 5. Is this badge co-sponsored with another organization, association, or unit? (If you would like an endorsement, please provide details.)
 - a. What is the organization, program, or department?

Earning Criteria

- Course:
- Badge:
- Participant:
- Document:
- Portfolio:
- Presentation:
- Assessment:
- Credential:
- Education
- Other:
- Project:
- Professional
- Schedule/Registration:
- Volunteer:

Skills Tag

Skills Tag

- Badge Attributes**
- Please select one from each category:
- Achievement Type:**
- Mastery Level:**
- Time Commitment:**
- Cost:**
- Industry Standards:**
- Recommendations:**

Issuance information and Pricing

Estimated Number of Badges Expected to be Issued:**Notes:**

- All badge requests will be routed to CPE for review and approval. Please allow 7
- A Mason Digital Credentials Advisory Group may be developed to review badge

Banner Title: Mathematics, MS

Is this a retitling of an existing program?

Existing Program

Registrar/OAPI Use Only – SCHEV Status Approved

Registrar's Office Use Only – Program Start Term

Registrar/OAPI Use Only – SCHEV Letter

Registrar/OAPI Use Only – SACSCOC Status

Concentration(s):

INTO Major(s):

Registrar/IRR Use Only – Concentration CIP Code

College/School: College of Science

Department / Academic Unit: Mathematical Sciences

Jointly Owned Program? No

Participating

Participating

Justification

What: Add MATH 798 in as an option for fulfilling thesis option credits.

Why: To enable a path for students to transfer their completed MATH 798 credits to another "Research and Creative Component" option if the thesis option turns out to be less preferred.

What: Referring applicants to central admissions language and removing extraneous wording.

Why: To make the program more adaptable to changes in university policies.

Catalog Published Information

Total Credits Required: Total credits: 30

Registrar's Office Use Only - Program Code:
SC-MS-MATH

Registrar/IRR Use Only – Program CIP Code

Admission Requirements:

Admissions

University-wide admissions policies can be found in [Graduate Admissions Policies](#).

~~To apply for this program, please complete the George Mason University Admissions Application. Applicants interested in this program must submit three letters of recommendation. GRE scores are not required.~~ **Eligibility**

Students must have taken an upper-division course in advanced calculus (equivalent to [MATH 315 Advanced Calculus I](#)), ~~MATH 315 Advanced Calculus I~~; an abstract algebra course (equivalent to [MATH 321 Abstract Algebra](#)) ~~MATH 321 Abstract Algebra~~ and an upper-division course in linear algebra (equivalent to [MATH 322 Advanced Linear Algebra](#)). ~~MATH 322 Advanced Linear Algebra~~; Students should also have some computer knowledge.

Application Requirements

To apply for this program, prospective students should submit ~~please complete~~ the George Mason University Admissions Application and its required supplemental documentation, and three letters of recommendation. ~~Application:~~ The GRE is not required for admission into this program.

Program-Specific Policies:

Policies

For policies governing all graduate programs, including the transfer of credit into this program, see ~~programs, see~~ [AP.6 Graduate Policies](#).

MATH 500 through MATH 614 cannot be used for credit, with the exception of [MATH 555](#) Actuarial Modeling I and [MATH 556](#) Actuarial Modeling II.

Degree Requirements:

Students should refer to the [Admissions & Policies](#) tab for specific policies related to this program.

Coursework

Required Courses

MATH 675	Linear Analysis	3
--------------------------	-----------------	---

Coursework Options

Select three from the following:	9
----------------------------------	---

MATH 621	Algebra I
MATH 631	Topology I: Topology of Metric Spaces
MATH 677	Ordinary Differential Equations
MATH 685	Numerical Analysis

Additional Approved Coursework	12
--------------------------------	----

Select four approved graduate courses, at least two of which are MATH courses. 1	12
---	---------------

Select 12 credits of approved graduate courses, at least 6 credits of which must be in MATH courses. 1

Total Credits	24
---------------	----

1

- All twelve credits must be approved by the student's advisor. Courses not listed as MATH courses must be approved by the graduate committee.
- Different rules apply if the student wishes to count graduate actuarial courses toward their degree (consult the graduate coordinator).
- Please note that no more than 6 total credits of [MATH 798](#) Directed Reading or Research and [MATH 799](#) MS Thesis may be applied to this program.

Research and Creative Component

A student may fulfill the research and creative component in one of three ways: [Thesis Option](#), [Paper Presentation Option](#), or [Preliminary Exams for the PhD](#).

Thesis Option

~~Select one of the Research and Creative Component options outlined below~~6

Total Credits	6
--------------------------	--------------

~~Thesis Option~~

In preparation for this option, the student must form a committee comprising a chair and two other faculty members. The chair and at least one other member must be from the [Department of Mathematical Sciences](#), one member may be from a related field.

The student completes a thesis by taking 6 credits under the direction of [MATH 798 Directed Reading or Research](#) and [MATH 799 MS Thesis under the direction of](#) the committee chair. It is recommended that students complete 3 credits of [MATH 798 Directed Reading or Research](#) before completing the required minimum 3 credits of [MATH 799 MS Thesis](#).

~~The thesis work is typically completed while students are registered for 6 credits of [MATH 799 MS Thesis](#).~~ A thesis proposal and thesis must be ~~are~~ submitted in accordance with [AP.6 Graduate Policies](#). The student must give an oral defense of the thesis to the committee and the George Mason University community at large. Students are expected to respond to questions on the thesis and related material. The committee determines whether the defense is satisfactory.

Thesis Option	6
--------------------------	--------------

<u>Select 6 credits from the following: 1</u>	<u>6</u>
---	----------

[MATH 798 Directed Reading or Research](#)

[MATH 799](#) MS Thesis (for at least 3 of the 6 credits)

Total Credits	6
---------------	---

1

Please note that no more than 6 total credits of MATH 798 Directed Reading or Research and MATH 799 MS Thesis may be applied to this program.

Paper Presentation Option

In preparation for this option, the student must form a committee comprising a chair and two other faculty members. The chair and at least one other member must be from the [Department of Mathematical Sciences](#), one member may be from a related field. The student gives an oral presentation of a paper (or series of papers or book chapter) chosen in consultation with the chair of the committee and approved by the full committee. The chosen material must be distinct from work completed in fulfillment of course requirements. The oral presentation is given to the committee and the Mason community at large. Students are expected to respond to questions on the paper and related material. The committee determines whether the defense is satisfactory.

~~Select 6 additional credits of electives~~ 6

Select 6 credits from the following: 1 6

MATH 798 Directed Reading or Research

Select other elective courses in consultation with an advisor.

Total Credits 6

1

Please note that no more than 6 total credits of MATH 798 Directed Reading or Research and MATH 799 MS Thesis may be applied to this program.

Preliminary Exams for the PhD

The research and creative component can also be fulfilled by passing three preliminary written examinations, as required for the [Mathematics, PhD](#) degree.

Select 6 credits of electives in consultation with an advisor. 16

Total Credits 6

1

MATH 798 Directed Reading or Research may count toward fulfilling this requirement.

Please note that no more than 6 total credits of MATH 798 Directed Reading or Research and MATH 799 MS Thesis may be applied to this program.

**Retroactive
Requirements
Updates:**

Plan of Study:

**Honors
Information:**

Accelerated
Description/Dual
Degree
Description:

INTO-Mason
Requirements:

College
Requirements &
Policies:

Department /
Academic Unit
Requirements &
Policies:

Program Outcomes

Additional Program Information

This information is required by the Office of Accreditation and Program Integrity.

Courses offered via distance (if applicable):

Indicate whether students are able

What is the primary delivery format for the program?

Face-to-Face Only

Does any portion of this program occur off-campus?

No

Off-campus details:

Are you working with a vendor / other collaborators to offer your program?

No

Please explain:

Related Departments

Could this program prepare students for any type of professional licensure, in Virginia or elsewhere?

No

Please explain:

Are you adding or removing a licensure component?

No

Please explain:

Additional SCHEV & SACSCOC Information

Is the content of the new program closely related to that of an existing approved program at the same instructional level (i.e., baccalaureate, master's, doctoral)?

Which existing approved program(s)?

Is this new program considered to be "advancing the degree level of a currently approved program" (i.e. existing content is at lower degree level, new content is at the higher degree level)?

Which existing approved program(s)?

Is this new program considered to be "lowering the degree level of a currently approved program" (i.e. existing content is at higher degree level, new content is at the lower degree level)?

Which existing approved program(s)?

Is this a re-opening of a program that was closed to admission within the last five years?

Date of Program Closure

What are the methods of delivery for the program?

Does this program include a course/credit-based competency-based education delivery option?

Is this change a simple retitling of an existing program, with no other changes, to any existing program content, curriculum requirements, etc?

No

Does this change represent a repackaging of content in an existing approved degree/certificate program at the same instructional level (i.e., baccalaureate, master's, or doctoral)?

No

Which existing approved program(s)?

Percentage of total credits containing new course content. ("New course content" is defined by SACSCOC as content that is not currently included in an existing approved degree/certificate program at the same instructional level. Do not exclude gen ed credits in calculations for undergraduate programs.)

0%-24%

Does this change include the addition of a distance education or face-to-face method of delivery for this program?

No

What is the new method of delivery?

Does this change include the addition of a course/credit-based competency-based education delivery option?

No

Will any additional equipment/facilities be needed?

No

Description of institutional impact:

Will any additional faculty be required?

No

Description of institutional impact:

Will any additional financial resources be needed?

No

Description of institutional impact:

Additional library/learning resources needed?

No

Description of institutional impact:

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Green Leaf Program Designation

Is this a Green Leaf program? No

Green Leaf Designation

Sustainability-focused academic programs require at least one green leaf course. Either that course is itself sustainability-focused or else the program requires a set of sustainability-related courses with aggregated substance equivalent to a sustainability focused course.

Relationship to Existing Courses

Relationship to Existing Programs

List sustainability-focused courses currently required in the degree

Sustainability-related academic programs either require at least one sustainability-related course or else offer any green leaf course as an option or elective *

List sustainability-related courses currently required in the degree

Does this program cover material which crosses into another department?

No

Impacted Departments

Additional Attachments

SCHEV Proposal

Executive Summary

Reviewer Comments Laurence Bray (lbray2) (02/27/24 12:49 pm): Rollback: Rolling back per our conversation.

Additional Comments

Is this course required of all students in this degree program?

%wi_required.eshtml%

**Attached
Document**

[%attach_document.eshtml%](#)

Key: 306