

# Program Change Request

Date Submitted: 09/07/22 10:50 am

Viewing: **SC-MS-CSIM : Computational Science, MS**

Last approved: 04/27/22 3:43 pm

Last edit: 10/27/22 3:33 pm

Changes proposed by: jbazaz

Catalog Pages  
Using this Program  
[Computational Science, MS](#)

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

Yes

Requestor:

## In Workflow

1. CDS Chair
2. SC Curriculum Committee
3. SC Associate Dean
4. Assoc Provost-Graduate
5. Registrar-Programs

## Approval Path

1. 09/08/22 1:03 pm  
Jason Kinser (jkinser): Approved for CDS Chair
2. 09/30/22 11:12 am  
Gregory Craft (gcraft): Approved for SC Curriculum Committee
3. 10/05/22 6:02 pm  
Jennifer Bazaz Gettys (jbazaz): Rollback to SC Curriculum Committee for SC Associate Dean

## History

1. Oct 23, 2017 by clmig-jwehrheim
2. Jan 11, 2018 by rzachari
3. Feb 14, 2018 by rzachari

- 4. Feb 22, 2018 by rzachari
- 5. Feb 23, 2021 by jriemen
- 6. Apr 13, 2022 by Tory Sarro (vsarro)
- 7. Apr 27, 2022 by Tory Sarro (vsarro)

Name	Extension	Email
Eduardo Lopez	5916	elopez22@gmu.edu

**Effective Catalog:** 2023-2024

**Program Level:** Graduate

**Program Type:** Master's

**Degree Type:** Master of Science

**Title:** Computational Science, MS

**5. Is this badge co-sponsored?**

Yes  
 No

Education  
 Professional  
 Voluntary  
 Skills Tax  
 Badge Attributes  
 Achievement Type:  
 Mastery Level:  
 Time Commitment:  
 Cost:  
 Industry Standard:  
 Recommendations:  
**Issuance information and Pricing**  
 Pricing: See <https://www.gmu.edu/digitalbadgespricing/> for more information.  
**Estimated Number of Badges Expected to be Issued:**

**Notes:**

- A Mason Digital Credentials Advisory Group may be developed.

**Banner Title:**

## MS Computational Science

Is this a retitling of  
an existing

## Existing Program

Registrar/OAPI Use    Approved  
Only – SCHEV  
Status

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:        Computational & Data Sciences

Jointly Owned  
Program?                No

Participating  
Participating

## Justification

What:

- a) Eliminating the requirement of submitting GRE-GEN or GRE-SUB scores. Clarifying the sentence about an appropriate academic background.
- b) Directing students to university requirements re: English proficiency.

Why:

- a) Simplifying the existing catalog paragraph to assert that the GRE-GEN and GRE-SUB scores are not required (modified catalog description is below). The requirement of GRE tests is disappearing across the Nation in universities and fellowships, including Mason.
- b) To reduce the chance of conflicting language- we defer to the university re: English proficiency.

### Catalog Published Information

**Total Credits** Total credits: 30  
**Required:**

**Registrar's Office Use Only - Program Code:**

SC-MS-CSIM

**Registrar/IRR Use Only – Program CIP Code** 30.0801 - Mathematics and Computer Science.

**Admission Requirements:**

## Admissions

University-wide admissions policies can be found in the [Graduate Admissions Policies](#) section of this catalog. To apply for this program, please complete the [George Mason University Admissions Application](#).

### Eligibility

Applicants to all graduate programs at George Mason University must meet the admission standards and application requirements for graduate study as specified in the [Graduate Admissions Policies](#) section of this catalog. Applicants to the Computational Science, MS should have **an academic background backgrounds in one of the following fields: physical sciences, life sciences, engineering, mathematics, or computer science. appropriate fields: physical or biological sciences, engineering, mathematics, or computer science.** They should have an **earned baccalaureate undergraduate degree** from an institution of higher education accredited by a [Mason-recognized U.S. institutional accrediting agency or international equivalent with a GPA of at least 3.00 in their last 60 credits of study. institutional accrediting agency, or international equivalent, verified from official transcripts with a GPA of](#) **In addition, applicants should have taken at least 3.00 one course in their last 60 credits of study. In addition, applicants should have taken at least one course differential equations and have facility in differential equations and have facility in using a a high-level computer programming language.**

### Application Requirements

To apply, prospective students should complete the [George Mason University Admissions Application](#), supply two copies of official transcripts from each university attended, a current résumé, and an expanded goals statement. Applicants should also provide two letters of **recommendation. recommendation and an official report of scores on the GRE-GEN:**

**International applicants must provide Mason with verification of their proficiency in English for admission consideration. The GRE-SUB is recommended if it is given in the student's undergraduatemajor. The GRE requirement will be waived if the student holds a bachelor's or a master's degree from an institution of higher education accredited by a Mason-recognized U.S. institutional accrediting agency or international equivalent in the appropriate fields listed above. For Acceptable TOEFL scores (as determined by university policy) are required of all international applicants; for more information visit [Admission of International Students](#). -The ETS code for Mason is 5827.**

## Program-Specific Policies:

# Policies

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For policies governing all graduate degrees, see [AP.6 Graduate Policies](#).

### Degree Requirements:

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

## Core Courses

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Select 6 credits from the following:	6
<a href="#">CSI 690</a> Numerical Methods	
<a href="#">CSI 695</a> Scientific Databases	
<a href="#">CSI 702</a> High-Performance Computing	
<a href="#">CSI 703</a> Scientific and Statistical Visualization	
Total Credits	6

## Computational Extended Core

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Select 15 credits from any graduate-level CSI, CDS, or CSS courses 1	15
<a href="#">CDS</a>	
<a href="#">CSI</a>	
<a href="#">CSS</a>	
Total Credits	15

1 Not including the following research courses: [CSI 796](#) Directed Reading and Research, [CSI 798](#) Research Project, [CSI 799](#) Master's Thesis, [CSI 898](#) Research Colloquium in Computational Sciences and Informatics, [CSI 899](#) Colloquium in Computational and Data Sciences, [CSI 991](#) Seminar in Scientific Computing, [CSI 996](#) Doctoral Reading and Research, or from courses previously taken.

## Electives

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Select 9 credits of electives 1,2,3	9
Total Credits	9

1 Typically chosen from [computational sciences and informatics](#), [chemistry](#), [mathematics](#), [physics](#), [engineering](#), [information technology](#), and [statistics courses](#).

2 Students should create a curriculum plan for an area of emphasis or combined areas of emphases in consultation with their academic advisor.

3 No more than 6 credits may be chosen from areas outside of CSI.

Elective credits may also include:

<a href="#">CSI 796</a> Directed Reading and Research	1-6
<a href="#">CSI 798</a> Research Project	1-3
<a href="#">CSI 799</a> Master's Thesis	1-6

**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

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*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

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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

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Comments or Notes

### Green Leaf Program Designation

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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*

Relationship to Existing Courses

**Relationship to**

**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**

[ms computational science\\_001.pdf](#)

**SCHEV Proposal**

**Executive Summary**

**Reviewer Comments**

**Jennifer Bazaz Gettys (jbazaz) (10/05/22 6:02 pm):** Rollback: Tabled at meeting; for Oct. agenda.

**Additional Comments**

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

%wi\_required.eshtml%

**Attached Document**