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: 09/07/22 10:50 am

Changes proposed by: jbazaz

Catalog Pages
Using this Program
Computational Science, MS

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

Yes

Requestor:

Name	Extension	Email
Eduardo Lopez	5916	elopez22@gmu.edu

Effective Catalog: 2023-2024

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

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)

Program Level:	Graduate
Program Type:	Master's
Degree Type:	Master of Science
Title:	Computational Science, MS
Banner Title:	MS Computational Science
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):	
Registrar/IRR Use Only – Concentration CIP Code	
College/School:	College of Science
Department / Academic Unit:	Computational & Data Sciences
Jointly Owned Program?	No

Justification

What: Requiring that students with a bachelor's or master's in biology (as opposed to the other admissions fields) submit GRE scores.

Why: There is no universal expectation that students with a biology background will have been exposed to the expected level of mathematics as those in the other fields.

Total Credits Required:	Total credits: 30

Registrar's Office Use Only - Program Code:

SC-MS-CSIM

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

Code

**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 academic backgrounds in the following appropriate fields: physical or biological sciences, engineering, mathematics, or computer science. They should have an 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. In addition, applicants should have taken at least one course in differential equations and have facility in using 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 and an official report of scores on the GRE-GEN. The GRE-SUB is recommended if it is given in the student's undergraduate major. 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 physical sciences, engineering, mathematics, or computer science (biological science majors are required to submit a GRE score).** ~~the appropriate fields listed above.~~ 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

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

Select 6 credits from the following:		6
CSI 690	Numerical Methods	
CSI 695	Scientific Databases	
CSI 702	High-Performance Computing	
CSI 703	Scientific and Statistical Visualization	
Total Credits		6

Computational Extended Core

Select 15 credits from any graduate-level CSI, CDS, or CSS courses 1	15
CDS	
CSI	
CSS	
Total Credits	15

1Not 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

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

1Typically chosen from computational sciences and informatics, chemistry, mathematics, physics, engineering, information technology, and statistics courses.

2Students 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:

CSI 796	Directed Reading and Research	1-6
CSI 798	Research Project	1-3
CSI 799	Master's Thesis	1-6

Retroactive Requirements Updates:

Plan of Study:

Program Outcomes

Additional Program Information

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

Courses offered via distance (if applicable):

What is the primary delivery format for the program?

Face-to-Face Only

Does any portion of this program occur off-campus?

No

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

No

Related Departments

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

No

Are you adding or removing a licensure component?

No

Additional SCHEV & SACSCOC Information

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

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

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

Will any additional faculty be required?

No

Will any additional financial resources be needed?

No

Additional library/learning resources needed?

No

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Green Leaf Program Designation

Is this a Green Leaf program? No

Does this program cover material which crosses into another department?

No

Additional Attachments ms computational science_001.pdf

SCHEV Proposal

Executive Summary

Reviewer Comments

Additional Comments

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

%wi_required.eschtml%

Key: 24