

Program Change Request

Date Submitted: 02/23/24 4:06 pm

Viewing: **SC-MS-ESSC : Earth Systems Science, MS**

Last approved: 05/17/22 8:52 am

Last edit: 03/01/24 10:34 am

Changes proposed by: jbazaz

Catalog Pages

Using this Program

[Earth Systems Science, MS \(AOES\)](#)

[Earth Systems Science, MS \(GGS\)](#)

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

No

Effective Catalog: 2024-2025

Program Level: Graduate

Program Type: Master's

Degree Type: Master of Science

Title:

Earth Systems Science, MS

Banner Title: Earth Systems Science, MS

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):

In Workflow

1. GGS Chair
2. AOES Chair
3. SC Curriculum Committee
4. SC Assistant Dean
5. Assoc Provost-Graduate
6. Registrar-Programs

Approval Path

1. 03/15/24 11:34 am
Nathan Burtch
(nburtch): Approved
for GGS Chair
2. 03/15/24 12:55 pm
Mark Uhen
(muhen): Approved
for AOES Chair

History

1. Oct 30, 2017 by
clmig-jwehrheim
2. Jan 29, 2018 by
rzachari
3. Feb 15, 2018 by
rzachari
4. Mar 7, 2018 by
pchampan
5. Mar 5, 2020 by
Jennifer Bazaz
Gettys (jbazaz)
6. Feb 23, 2021 by
jriemen
7. Apr 8, 2022 by
Nathan Burtch

**Registrar/IRR Use
Only –
Concentration CIP
Code**

(nburtch)

8. May 17, 2022 by

Tory Sarro (vsarro)

College/School: College of Science

**Department /
Academic Unit:** Geography & Geoinformation Science

**Jointly Owned
Program?** Yes

**Participating
Colleges**

	College
1	College of Science

**Participating
Departments**

	Department
1	Atmospheric, Oceanic, & Earth Sciences

Justification

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

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

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

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

**Registrar/IRR Use
Only – Program CIP
Code**

**Admission
Requirements:**

Admissions

University-wide admissions policies can be found in [the Graduate Admissions Policies section of this catalog](#). : [International students and students having earned international degrees should also refer to Admission of International Students for additional requirements.](#)

Eligibility

In addition to the university-wide requirements, applicants for this master's should have earned a BS degree in atmospheric, Earth, environmental, geological, geographical, ocean, or physical [science from an institution of higher education accredited by a Mason-recognized U.S. science: institutional accrediting agency or international equivalent.](#)

Application Requirements

To apply for this program, prospective students should submit the George Mason University Admissions Application and its required supplemental documentation, two letters of recommendation, and a goals statement.

~~A current résumé, two letters of recommendation and a goals statement are also required.~~ GRE scores are not required for admission into this program, but are encouraged if the student is seeking internal funding.

~~To apply for this program, please complete the George Mason University Admissions Application.~~

Program-Specific

Policies:

Policies

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

Transferring Previous Graduate Credit into this Program

Previously earned and relevant graduate credits may be eligible for transfer into this program; details can be found in the Credit by Exam or Transfer section of this catalog.

Degree Requirements:

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

Candidates must complete 10 credits of GGS courses and 10 credits of GEOL/CLIM courses toward their requirements. ("Culminating Experience" credits do not count towards this requirement).

Earth Science Core

Select one course from each of the following groups: 9

Atmosphere:

[CLIM 610](#) Introduction to the Physical Climate System

[CLIM 614](#) Land-Climate Interactions

[GEOL 532](#) Paleoclimatology

[GGS 670](#) Introduction to Atmosphere and Weather

[PHYS 575](#) Atmospheric Physics

Hydrosphere:

[CLIM 512](#) Physical Oceanography

[CLIM 712](#) Physical and Dynamical Oceanography

[GEOL 513](#) Hydrogeology

[GEOL 565](#) Paleooceanography

[GGS 656](#) The Hydrosphere

Lithosphere:

[GEOL 506](#) Soil Science

[GGS 657](#) The Lithosphere

or [GEOL 601](#) The Lithosphere

Total Credits

9

Techniques

Select two courses from the following: 1 6

[GGS 553](#) Geographic Information Systems

[GGS 560](#) Quantitative Methods

[GGS 579](#) Remote Sensing

[GGS 680](#) Earth Image Processing

[GGS 754](#) Earth Science Data and Advanced Data Analysis

Total Credits 6

1

Other courses can be substituted with advisor approval.

Colloquium

[GGS 900](#) Geography and Geoinformation Science Colloquium 1

Select one from the following: 1

[GEOL 536](#) Paleontology Seminar

[GEOL 792](#) Seminar in Earth Systems Science, Geology, Earth Science

[CLIM 991](#) Climate Dynamics Seminar

Total Credits 2

Electives

Select 10 credits from courses at the 500 to 900-level (excluding 700, 798, and 799 courses) 10

[CLIM Courses](#)

[GEOL Courses](#)

[GGS Courses](#)

[EVPP Courses](#)

Total Credits 10

Culminating Experience

Choose the culminating experience of either a thesis or a project (either must total 3 credits):

Thesis

Select 3 credits from the following: 3

[GGS 799](#) Thesis

[GEOL 799](#) Master's Thesis in Earth Systems Science

[CLIM 799](#) Master's Thesis in Climate

Total Credits 3

Project

Select one from the following: 1

[GGS 700](#) Comprehensive Exam

[GEOL 700](#) Comprehensive Exam

[CLIM 700](#) Climate Comprehensive Exam

Select one from the following:

2

[GGS 798](#) Master's Research Project

[GEOL 798](#) Master's Research Project in Earth Systems Science

[CLIM 798](#) Master's Climate Research Project

Total Credits

3

**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?**

Both Face-to-Face and Distance

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**

SCHEV Proposal

Executive Summary

**Reviewer
Comments**

**Additional
Comments**

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

%wi_required.eshtml%

Key: 87