

Program Change Request

Date Submitted: 02/09/22 1:44 pm

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

Last approved: 02/23/21 4:48 pm

Last edit: 02/09/22 1:44 pm

Changes proposed by: nburtch

Catalog Pages Using this Program

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

No Longer Accounting Students 2022-2023
Anticipated closure date (i.e., calendar date students are Rationale for

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

No

Requestor:

Effective Catalog: 2022-2023

Program Level: Graduate

Program Type: Master's

Degree Type: Master of Science

Title:

Earth Systems Science, MS

Banner Title: Earth Systems Science, MS

In Workflow

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

Approval Path

1. 02/16/22 3:36 pm
Barry Klinger (bklinger): Approved for AOES Committee
2. 02/16/22 3:39 pm
Mark Uhen (muhen): Approved for AOES Chair
3. 02/16/22 9:10 pm
Nathan Burtch (nburtch): Approved for GGS 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 Johanna Riemen (jriemen)

Is this a retitling of an existing

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: **Geography & Geoinformation Science**
~~Atmospheric, Oceanic, & Earth Sciences~~

Jointly Owned Program? Yes

Participating Colleges

	College
1	College of Science

Participating Departments

	Department
1	Atmospheric, Oceanic, & Earth Sciences Geography & Geoinformation Science

Justification

What: Remove GRE requirements for admission of all GGS MS programs including ESS MS (shared with AOES). Reduce the required number of recommendation letters from three to two for all GGS MS programs.

Why: Usage of the GRE declined in admission decision and the GRE scores were not an indicator of student success. For reducing letters of recommendation, most MS students chose the non-thesis option. Letters are helpful only for research-oriented students.

Catalog Published Information

Total Credits Total credits: 30

Required:

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 [Graduate Admissions Policies](#).

~~To apply for this program, please complete the George Mason University Admissions Application.~~ **In addition to the university-wide requirements, applicants for this master's should** ~~Eligibility Applicants should~~ have earned a BS degree in atmospheric, Earth, environmental, geological, geographical, ocean, or physical science. **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](#).

~~Previous coursework should include two semesters each of calculus, chemistry, and physics, and one semester of statistics. Applicants should have a minimum GPA of 3.00 in their undergraduate degree. Application Requirements Official transcripts from each college and graduate institution attended, a current résumé, and a goals statement are required. Applicants also need three letters of recommendation and an official report of scores obtained on the GRE-GEN. The GRE requirement for admission may be waived if the student holds a master's degree from an institution of higher education accredited by a Mason-recognized U.S. institutional accrediting agency or international equivalent. TOEFL scores are required of all international applicants.~~

**Program-Specific
Policies:**

Policies

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

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 I

Hydrosphere:

[CLIM 512](#) Physical Oceanography

[CLIM 712](#) Physical and Dynamical Oceanography

[GEOL 513](#) Hydrogeology

[GEOL 565](#) **Paleoceanography**

[GGS 656](#) The Hydrosphere

Lithosphere:

[GEOL 506](#) Soil Science

[GGS 657](#) The Lithosphere

or [GEOL 601](#) The Lithosphere

Total Credits

9

Techniques1

Select two courses from the following:

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:

~~Also effective in previous catalog year: 2019-2020~~

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?**
Both Face-to-Face and Distance

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

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

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

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 one 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

Additional Comments

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

%wi_required.eshtml%

Attached Document