

Program Change Request

Date Submitted: 02/28/20 11:37 am

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

Last approved: 03/07/18 9:14 pm

Last edit: 02/28/20 11:53 am

Changes proposed by: jbazaz

Catalog Pages [Earth Systems Science, MS \(AOES\)](#)
Using this Program [Earth Systems Science, MS \(GGS\)](#)

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

No

Effective Catalog: 2020-2021

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 Only – SCHEV Status Approved

Registrar's Office Use Only – Program Start Term

Registrar/OAPI Use Only – SCHEV Letter

Concentration(s):

Registrar/IRR Use Only – Concentration CIP Code

College/School: College of Science

Department / Academic Unit: Atmospheric, Oceanic, & Earth Sciences

Jointly Owned Program? Yes

Participating Colleges

In Workflow

1. **AOES Committee**

2. **AOES Chair**

3. **GGS Chair**

4. **SC Curriculum Committee**

5. SC Associate Dean

6. SC CAT Editor

7. Assoc Provost-Graduate

8. Registrar-Programs: Duration

9. Registrar-Programs

Approval Path

1. 02/28/20 1:37 pm

Barry Klinger

(bklinger):

Approved for AOES Committee

2. 02/28/20 2:32 pm

Jim Kinter (ikinter):

Approved for AOES Chair

3. 02/28/20 4:19 pm

Ruixin Yang (ryang):

Approved for GGS Chair

History

1. Oct 30, 2017 by clmig-jwehrheim

2. Jan 29, 2018 by Rebekah Zacharias (rzachari)

3. Feb 15, 2018 by Rebekah Zacharias (rzachari)

	College
1	College of Science

**Participating
Departments**

	Department
1	Geography & Geoinformation Science

Academic Themes:

Justification

CLIM 710 was replaced with CLIM 610, and CLIM 714 was replaced with CLIM 614.

**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 [Graduate Admissions Policies](#).

To apply for this program, please complete the [George Mason University Admissions Application](#).

Eligibility

Applicants should have earned a BS degree in atmospheric, Earth, environmental, geological, geographical, ocean, or physical science. 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 a regionally accredited U.S. institution. 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

Course List		
Code	Title	Credits
Select one course from each of the following groups:		9
Atmosphere:		
CLIM 710	Course CLIM 710 Not Found	
CLIM 714	Course CLIM 714 Not Found	
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	
GGS 656	The Hydrosphere	
Lithosphere:		
GEOL 506	Soil Science	
GGS 657	The Lithosphere	
or GEOL 601	The Lithosphere	
Total Credits		9

Techniques1

Course List		
Code	Title	Credits
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

Course List		
Code	Title	Credits
GGS 900	Geography and Geoinformation Science Colloquium	1
Select one from the following:		1

Code	Title	Credits
GEOL 536	Paleontology Seminar	
GEOL 792	Seminar in Earth Systems Science, Geology, Earth Science	
CLIM 991	Climate Dynamics Seminar	
Total Credits		2

Electives

Course List		
Code	Title	Credits
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

Course List		
Code	Title	Credits
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

Course List		
Code	Title	Credits
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	Research Project in Earth Systems Science	
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:

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

Are you changing the total number of credits required for this program?

Are you changing the delivery format in any way (e.g adding an online option)?

Are you adding/removing a licensure option which was approved by SCHEV?

Will any portion of this program be offered at an off-campus location?

Are you adding significant new content areas to the program?

Will this program change affect any specialized accreditation?

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%