



Program Approval Form

For approval of new programs and deletions or modifications to an existing program.

Registrar.

Action Requested:

- Create New (SCHEV approval required except for concentration, minors, and certificates)
- Delete Existing
- Modify Existing (check all that apply)
 - Title (SCHEV approval required except for concentration, minors, certificates)
 - Degree Requirements Admission Standards
 - Application Requirements
 - Other Changes: _____

Type (Check one):

- B.A. B.S. Minor
- Undergraduate Certificate
- M.A. M.S. M.Ed.
- Ph.D. Graduate Certificate
- Concentration
- Other: _____

College/School:	College of Science	Department:	George Mason University
Submitted by:	Julia Nord	Ext:	3-3395 Email: jnord@gmu.edu

Effective Term: Fall **Please note:** For students to start a new degree, minor, certificate or concentration, the program must be fully approved, entered into Banner, and published in the University Catalog.

Justification: (attach separate document if necessary)

The creation of the new concentration in Atmospheric Science and the CLIM courses to support this concentration has stimulated a lot of interest from students. In addition, climate change is an area of focus for the University. This Minor will enable students with a strong science background to achieve some mastery of Atmospheric Science topics beyond the introductory level. In addition, it may attract students with a strong Math / Physics background into the field of atmospheric and climate research and better prepare such students for GMU's Climate Dynamics doctoral program.

Program Title: (Required)
Use title to identify subject matter. Do not include name of college/school or department.

Concentration Title(s):

Admissions Standards / Application Requirements:
(Required only if different from those listed in the University Catalog)

Degree Requirements:
Consult University Catalog for models, attach separate document if necessary using track changes for modifications

Courses offered via Distance:
(if applicable)

TOTAL CREDITS REQUIRED:

Existing	New/Modified
	Minor in Atmospheric Science
	Core (14 credits): CLIM 101, CLIM 111/112 and CLIM 301 Electives (6 credits from the following): CLIM/GGS 314, CLIM 411, CLIM 412, CLIM/CHEM 438, CLIM 408 or PHYS 475
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Approval Signatures

Department	Date	College/School	Date	Provost's Office	Date
<i>Required for Undergraduate Programs Only</i>					

If this program may impact another unit or is in collaboration with another unit at Mason, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

Atmospheric Science Minor

Atmospheric science is an exciting field which is as practical as tomorrow's weather forecast, as important as understanding climate change, and as scientifically challenging as quantifying the predictability of coupled ocean-atmosphere-land variations. George Mason University is home to cutting-edge research in climate dynamics, atmosphere and ocean modeling, remote sensing, and planetary atmosphere research.

Students in physics, math, engineering, and computational sciences may be attracted to this minor because it provides a compelling application of the fundamental methods of analysis learned in their major. Such students are ideal candidates for research in atmospheric science and climate dynamics and the minor will facilitate entry into graduate studies in these fields.

Students in Earth Science, Geography and Geoinformation Science, and Environmental Science may find this minor useful because the atmosphere is an important influence on geography, ecosystems, geological strata, and plays an important role in global change. The minor is not open to students in the Atmospheric Sciences concentration of the Earth Science major.

Core Courses - 11 credits

CLIM 101. Global Warming: Climate, Weather and Society (3)

CLIM 111/112 Introduction to the Fundamentals of Atmospheric Science (4)

CLIM 301 Weather Analysis and Prediction (4)

Prereqs: MATH 113 or equivalent; one of CLIM/PHYS 111/112 or EOS 121 or GGS 121.

Electives - Choose 6 credits from the following courses.

CLIM-314/GGS-314 Severe and Extreme Weather (3)

Prereqs: MATH 113 or equivalent; CLIM/PHYS 111/112 or GGS 121.

CLIM-411 Introduction to Atmospheric Dynamics (3)

Prereqs: PHYS 260, PHYS 261, MATH 214, MATH 313.

CLIM 412 Physical Oceanography

Prereqs: MATH 113 or MATH 115, and PHYS 160 or PHYS 243, or permission of instructor

CHEM/CLIM-438 Atmospheric Chemistry (3)

Prereqs: CHEM 331 and 332 or permission of instructor.

CLIM 408 Senior Research

Prereqs: Maybe additional prerequisites depend on faculty and level of research.

PHYS-475 Atmospheric Physics (3)

Prereqs: PHYS 260, 262, and 305 or equivalent.