MINOR IN EARTH AND ATMOSPHERIC SCIENCES

The School of Earth and Atmospheric Sciences offers a minor with seven different tracks. These specific tracks are designed to give non-majors a background in the environmental and global change issues that face the world. This background both allows a broader exposure and gives a strategic background for many careers. The seven tracks are:

- Climate Change
- Earth System Physics
- Environmental Chemistry
- Environmental Science
- Geophysics
- Meteorology
- Ocean Sciences

Program of Study - Climate Change Track

The EAS minor with a Climate Change track is for students in majors outside of EAS who have an interest in understanding Climate Change and issues surrounding it. Prerequisites required for some of the classes listed below. This minor must comprise at least 15 credit hours, of which at least 9 credit hours are upper-division coursework (numbered 3000 or above).

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAS 2750</td>
<td>Physics of the Weather</td>
<td>3</td>
</tr>
<tr>
<td>EAS 4410</td>
<td>Climate and Global Change</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select three electives with a minimum of 3 credit hours from each of the following areas:

- EAS Electives
- Electives

**Total Credit Hours** 15

Program of Study - Earth System Physics

The EAS minor with an Earth System Physics track is for students in majors outside of EAS interested in applying physical and mathematical principles to environmental problems. Prerequisites required for some of the classes listed below. This minor must comprise at least 15 semester hours, of which at least 9 semester hours are upper-division coursework (numbered 3000 or above).

**Required Courses**

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<th>Credits</th>
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<tbody>
<tr>
<td>EAS 3610</td>
<td>Introduction to Geophysics</td>
<td>3</td>
</tr>
<tr>
<td>EAS 4655</td>
<td>Atmospheric Dynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select three of the following:

- EAS 2750 Physics of the Weather
- EAS 3603 Thermodynamics of Earth Systems
- EAS 4312 Geodynamics
- EAS 4331 Physical Volcanology
- EAS 4360 Space Physics and Space Instrumentation
- EAS 4370 Physics of Planets
- EAS 4410 Climate and Global Change
- EAS 4450 Synoptic Meteorology

**Total Credit Hours** 15

1 A maximum of 3 credit hours of EAS 4699 may be included in the EAS minor program.

Program of Study - Environmental Chemistry

The EAS minor with an Environmental Chemistry track is for students in majors outside of EAS that seek to understand and address environmental problems within the context of chemical systems. Prerequisites required for some of the classes listed below. This minor must comprise at least 15 credit hours, of which at least 9 credit hours are upper-division coursework (numbered 3000 or above).

**Required Courses**

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<tr>
<td>EAS 3620</td>
<td>Geochemistry</td>
<td>4</td>
</tr>
<tr>
<td>EAS 4740</td>
<td>Atmospheric Chemistry Laboratory</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Select 8 credit hours from the following:

- EAS 3110 Energy, Environment, and Society
- EAS 4420 Environmental Field Methods
- EAS 4602 Biogeochemical Cycles
- EAS 4610 Earth System Modeling
- EAS 4699 Undergraduate Research
- EAS 4795 Groundwater Hydrology

**Total Credit Hours** 15

1 A maximum of 3 credit hours of EAS 4699 may be included in the EAS minor program.
Program of Study - Environmental Science

The EAS minor with an Environmental Science track is for students in majors outside of EAS who have an interest in understanding the Environment and Issues surrounding it. Prerequisites required for some of the classes listed below. This minor must comprise at least 15 credit hours, of which at least 9 credit hours are upper-division coursework (numbered 3000 or above).

Required Course
EAS 1600  Introduction to Environmental Science  4
or EAS 1601  Habitable Planet

Electives
Select 11 credit hours from the following: 11
EAS 2600  Earth Processes
EAS 2750  Physics of the Weather, Physics Of The Weather
EAS 3110  Energy, Environment, and Society
EAS 3620  Geochemistry
EAS 4410  Climate and Global Change
EAS 4420  Environmental Field Methods
EAS 4300  Introduction to Physical and Chemical Oceanography
EAS 4350  Paleoclimatology and Paleoceanography
EAS 4699  Undergraduate Research
EAS 4740  Atmospheric Chemistry Laboratory

Total Credit Hours  15

A maximum of 3 credit hours of EAS 4699 may be included in the EAS minor program.

Program of Study - Geophysics

The EAS minor with a Geophysics track is for students in majors outside of EAS majoring in science and engineering. Prerequisites required for some of the classes listed below. This minor must comprise at least 15 credit hours, of which at least 9 credit hours are upper-division coursework (numbered 3000 or above).

Required Courses
EAS 2600  Earth Processes  4
EAS 3610  Introduction to Geophysics  3

Electives
Select 8 credit hours from the following: 8
EAS 4312  Geodynamics
EAS 4314  Seismology
EAS 4331  Physical Volcanology
EAS 4360  Space Physics and Space Instrumentation
EAS 4370  Physics of Planets
EAS 4699  Undergraduate Research
EAS 4795  Groundwater Hydrology

Total Credit Hours  15

A maximum of 3 credit hours of EAS 4699 may be included in the EAS minor program.

Program of Study - Meteorology

The EAS minor with a Meteorology track is for students in majors outside of EAS majoring in science and engineering. Prerequisites required for some of the classes listed below. This minor must comprise at least 15 credit hours, of which at least 9 credit hours are upper-division coursework (numbered 3000 or above).

Required Courses
EAS 2551  Introduction to Meteorological Analysis  1
EAS 2750  Physics of the Weather, Physics Of The Weather  3
EAS 4655  Atmospheric Dynamics  3

Electives
Select 8 credit hours from the following: 8
EAS 3603  Thermodynamics of Earth Systems
EAS 4410  Climate and Global Change
EAS 4450  Synoptic Meteorology
EAS 4460  Satellite and Radar Meteorology
EAS 4470  Large-scale Atmospheric Circulations
EAS 4480  Environmental Data Analysis
EAS 4610  Earth System Modeling
EAS 4656  Atmospheric Dynamics Practicum
EAS 4670  Atmospheric Dynamics II
EAS 4699  Undergraduate Research

Total Credit Hours  15

A maximum of 3 credit hours of EAS 4699 may be included in the EAS minor program.

Program of Study - Ocean Sciences

The EAS minor with an Ocean Sciences track is for students in majors outside of EAS majoring in Biology, Civil and Environmental Engineering, Chemistry and Biochemistry, and Chemical and Biomolecular Engineering. Prerequisites required for some of the classes listed below. This minor must comprise at least 15 credit hours, of which at least 9 credit hours are upper-division coursework (numbered 3000 or above).

Required Courses
EAS 4300  Introduction to Physical and Chemical Oceanography  3

Select one of the following: 4
EAS 1600  Introduction to Environmental Science
EAS 1601  Habitable Planet
EAS 2600  Earth Processes

Electives
Select 8 credit hours from the following: 8
EAS 3620  Geochemistry
EAS 4350  Paleoclimatology and Paleoceanography
EAS 4410  Climate and Global Change
EAS 4420  Environmental Field Methods
EAS 4480  Environmental Data Analysis
EAS 4610  Earth System Modeling
EAS 4655  Atmospheric Dynamics
EAS 4699  Undergraduate Research
BIOL 4221  Biological Oceanography

Total Credit Hours  15

A maximum of 3 credit hours of EAS 4699 may be included in the EAS minor program.
1. All courses counting toward the minor must be taken on a letter-grade basis and must be completed with a grade of C (2.00) or better.

2. A maximum of 3 credit hours of transfer credit may be used to satisfy the course requirements for a minor. This includes courses taken at another institution or credit earned through the AP or IB program, assuming the scores meet Georgia Tech minimum standards.

3. It is the major advisor’s responsibility to verify that students are using only courses from the designated block(s) from the student’s major field of study that are allowed to satisfy a minor program, that they are not using any Core Area A-E courses (including humanities and social sciences), and that they are not using any courses for more than one minor or certificate. Any free elective course used to satisfy the course requirements of the student’s major degree program may also be used to satisfy the course requirements for a minor.

Minor Program of Study & Guidelines (http://www.catalog.gatech.edu/academics/minors)

EAS Minor Information (http://www.eas.gatech.edu/academics/minor)