Catalog of Postgraduate Programs and Curricula

Curriculum for PhD(AES)
(For students admitted in 2010-11)

Program Requirements for Doctor of Philosophy (PhD) Program in Atmospheric Environmental Science

Credits

1. Students admitted **with a first degree** only are required to complete **at least 12 credits** of coursework, including:
   - 6 credits of core courses;
   - 3 credits from the Atmospheric Environmental Science elective course list; and
   - 3 credits from either the Atmospheric Environmental Science elective course list or the Marine Environmental Science elective course list.

2. Students admitted to the program **with a relevant master's degree** are required to complete **at least 7 credits** of coursework. Subject to approval of the PG Coordinator, a credit transfer up to a maximum of 4 credits may be granted.

Courses

1. Core Courses (6 credits):

ENVR	605	*Introduction to Oceanography*; and
MATH	560	*Weather, Climate and Pollution*

2. Elective Courses (6 credits):

Atmospheric Environmental Science:-

CHEM	541	*Atmospheric Chemistry*
ENVR	602	*Special Topics in Atmospheric Environmental Science*
ENVR	608	*Dynamics of Marine Ecosystems*
EVSM	607	*Environmental Impact Assessment*
MATH	535	*Computational Fluid Dynamics for Inviscid Flows*
MATH	546*	*Time Series Analysis*
MATH	551	*Mathematical Methods in Science and Engineering I*
MATH	685O	*Topics in Applied Mathematics: Numerical Ocean Circulation Modeling*
MECH	521	*Fluid Dynamics*
MECH	526	*Air Pollution Meteorology*

** This course may be replaced by ISOM 553 Multivariate Data Analysis.*

Marine Environmental Science:-

BISC	530	*Conservation Biology*
BISC	532	*Ecotoxicology*
BISC	621	*Special Topics in Marine Biology*
CHEM	544	*Bioanalytical Chemistry*
ENVR	521	*Environmental Microbiology*
ENVR	603	*Special Topics in Marine Environmental Science*
ENVR	608	*Dynamics of Marine Ecosystems*

EVSM	522	*Advanced Environmental Chemistry*
EVSM	607	*Environmental Impact Assessment*
MATH	685O	*Topics in Applied Mathematics: Numerical Ocean Circulation Modeling*

Postgraduate Seminar

Students are required to register in ENVS 6011 *Postgraduate Seminar* whenever it is offered. Credits earned from ENVS 6011 cannot be counted toward the credit requirements.

Qualifying Examination

To pass a qualifying examination.

Research and PhD Thesis Examination

1. To conduct research and enroll in ENVS 7990 *Doctoral Thesis Research*; and

2. To defend the PhD thesis successfully.