### Program Learning Outcomes for the MSEADM Degree

Upon completing the MSEADM Degree, students will:

1. Be able to apply technical and analytical skills and scientific evaluation methods to help solve problems affecting the environment.
2. Demonstrate written, oral, and visual communication strategies required to work effectively across science, business, and government.
3. Possess business and management skills and professional ethics to be effective in a business environment.

### Requirements for the MSEADM Degree

The MSEADM degree is a non-thesis master’s degree. For general university requirements, please see Non-Thesis Master’s Degrees ([ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-non-thesis-masters-degrees](ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-non-thesis-masters-degrees)). Students pursuing the MSEADM degree must complete:

- A minimum of 14 courses (39 credit hours) to satisfy degree requirements.
- A 3-6 month internship. At the conclusion of their internship, students must present a summary of their internship project in both oral and written form as part of the professional master’s seminar.
- A minimum of 30 credit hours at the 500-level or above.

The courses listed below satisfy the requirements for this degree program. In certain instances, courses not on this official list may be substituted upon approval of the PSM (Professional Science Masters) program director and the MSEADM advisor (or official certifier). Students and their academic advisors should identify and clearly document the courses to be taken.

#### Summary

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tr>
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<td>Total Credit Hours Required for the MSEADM Degree</td>
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#### Degree Requirements

**Core Requirements**

- **Required Science Core Courses**
  - CEVE 501 CHEMISTRY FOR ENVIRONMENTAL ENGINEERING AND SCIENCE 3
  - or CEVE 510 PRINCIPLES OF ENVIRONMENTAL ENGINEERING 3
  - EBIO 570 ECOSYSTEM MANAGEMENT 3
  - STAT 685 ENVIRONMENTAL STATISTICS AND DECISION MAKING 3

<table>
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<th>Title</th>
<th>Credit Hours</th>
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<tr>
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<td>PROFESSIONAL MASTER’S SEMINAR (2 semesters required, 1st semester)</td>
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<tr>
<td>NSCI 501</td>
<td>PROFESSIONAL MASTER’S SEMINAR (2 semesters required, 2nd semester)</td>
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<td>NSCI 511</td>
<td>SCIENCE POLICY, AND ETHICS</td>
<td>3</td>
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<td>NSCI 512</td>
<td>PROFESSIONAL MASTER’S PROJECT</td>
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<tr>
<td>NSCI 610 / ENGI 610</td>
<td>MANAGEMENT FOR SCIENCE AND ENGINEERING</td>
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**Three to Six Month Internship**

A three to six month internship is required.

**Elective Requirements**

Select a minimum of 7 courses as electives from the 3 focus areas listed below:

- **Environmental Sustainability**
  - CEVE 501 CHEMISTRY FOR ENVIRONMENTAL ENGINEERING AND SCIENCE
  - CEVE 502 SUSTAINABLE DESIGN
  - CEVE 507 ENERGY AND THE ENVIRONMENT
  - CEVE 508 INTRODUCTION TO AIR POLLUTION CONTROL
  - CEVE 509 HYDROLOGY AND WATER RESOURCES ENGINEERING
  - CEVE 511 ATMOSPHERIC PROCESSES
  - CEVE 512 ADVANCED HYDROLOGY AND HYDRAULICS
  - CEVE 520 ENVIRONMENTAL REMEDIATION RESTORATION
  - CEVE 534 FATE AND TRANSPORT OF CONTAMINANTS IN THE ENVIRONMENT
  - CEVE 536 ENVIRONMENTAL BIOTECHNOLOGY AND BIOREMEDIATION
  - CEVE 550 ENVIRONMENTAL ORGANIC CHEMISTRY
  - EBIO 329 ANIMAL BIOLOGY AND PHYSIOLOGY
  - EBIO 336 PLANT DIVERSITY
  - EBIO 523 CONSERVATION BIOLOGY
  - EBIO 524 CONSERVATION BIOLOGY LAB
  - EBIO 525 ECOLOGY
  - EBIO 540 GLOBAL BIOGEOCHEMICAL CYCLES
  - EBIO 560 ENVIRONMENTAL IMPACT STATEMENTS AND PERMITTING
  - EBIO 563 TOPICS IN ECOLOGY
  - EBIO 566 APPLIED PHYCOLOGY
  - EBIO 568 TOPICS IN BIOLOGICAL DIVERSITY
  - EBIO 569 CORE COURSE IN ECOLOGY AND EVOLUTIONARY BIOLOGY
  - EBIO 579 LAB MODULE IN AQUATIC ECOLOGY WITH SCUBA
  - EBIO 580 SUSTAINABILITY DEVELOPMENT AND REPORTING
  - ESCI 618 QUANTITATIVE HYDROGEOLOGY
  - ESCI 650 REMOTE SENSING
  - ESCI 654 GEOGRAPHIC INFORMATION SCIENCE
### Policies for the MSEADM Degree

#### Environmental Analysis and Decision Making Graduate Program Handbook

The General Announcements (GA) is the official Rice curriculum. As an additional resource for students, Environmental Analysis and Decision Making publishes a graduate program handbook, which can be found here: [http://gradhandbooks.rice.edu/2017_18/Professional_Science_Masters_Handbook.pdf](http://gradhandbooks.rice.edu/2017_18/Professional_Science_Masters_Handbook.pdf)

#### Admission

Admission to graduate study in Environmental Analysis and Decision Making is open to qualified students holding a bachelor’s degree in a related field that includes general biology, chemistry, calculus, differential equations, and linear algebra. Department faculty evaluate the previous academic record and credentials of each applicant individually.

#### Transfer Credit

For Rice University’s policy regarding transfer credit, see [Transfer Credit](ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-non-thesis-masters-degrees). Some departments and programs have additional restrictions on transfer credit. Students are encouraged to meet with their academic program’s advisor when considering transfer credit possibilities.

#### Opportunities for the MSEADM Degree

**Fifth-Year MSEADM Degree Option for Rice Undergraduate Students**

Rice undergraduate students have an option to pursue the MSEADM degree by adding an additional fifth year to their four undergraduate years of science studies. Advanced Rice students in good academic standing may apply to the graduate program during their junior year. Upon acceptance, depending on course load, financial aid status, and other variables, they may then start taking required core courses of the Environmental Analysis and Decision Making program during their senior year. A plan of study based on their particular focus area will need to be approved by the PSM (Professional Science Masters) program director and the MSEADM advisor.

As part of this option and opportunity, Rice undergraduate students:

- must complete the requirements for their bachelor’s degree and the MSEADM degree independently of each other (i.e., no course may be counted toward the fulfillment of both degrees).
- should be aware that there could be financial aid implications, if the conversion of undergraduate coursework to that of graduate-level reduces their earned undergraduate credit for any semester below that of full-time status (12 credit hours).

For additional information, please see the Environmental Analysis and Decision Making website: [https://profms.rice.edu/](https://profms.rice.edu/)

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### Footnotes and Additional Information

1. At the conclusion of the internship, students must present a summary of their internship project in both oral and written form as part of the professional master’s seminar. Part-time students who already work in their area of study may fulfill the internship requirements by working on an approved project with their current employer.

2. 3 additional courses (9 credit hours) must be selected from one of the focus areas listed. At least 1 course (3 credit hours) must be completed from CEVE, EBIO, and STAT course offerings for a total of 3 courses (9 credit hours). At least 1 course (3 credit hours) must be completed from the Management and Policy focus area.

3. Only 1 of these 2 courses may be counted toward the degree.