MESM Track

Environmental Policy and Management
Overview

- This interdisciplinary track prepares students for positions requiring an ability to integrate natural science into policy development and implementation affecting ecosystems, landscapes, land use and development, environmental regulation of industry, and conservation of biological diversity or environmental quality.

- Students take coursework in social sciences, such as policy and economics; and natural sciences such as geology, hydrology, soil science, conservation ecology, remote sensing, or spatial analysis.

- Track Chair: Dr. Peter August
  - [http://nrs.uri.edu/people/faculty/august.html](http://nrs.uri.edu/people/faculty/august.html)
Track Requirements

Core courses (21 cr):

**Social Sciences** (9 credits)
- Courses from Policy, Management, Law, Economics, Research Methods

**Natural Sciences** (9 credits)
- Courses from Geology, Hydrology, Soil Science, Ecology & Management, Remote Sensing & Spatial Analysis

**Quantitative Methods** (3 credits)

Elective courses (10 credits)

**Independent study** (Major Paper) (3 credits: EVS 598)

Graduate seminar (2 credits)
### Sample Classes

#### Natural Science Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRS 407</td>
<td>Endangered Species Conservation</td>
<td>3 cr.</td>
</tr>
<tr>
<td>NRS 450</td>
<td>Soil Conservation and Land Use</td>
<td>3 cr.</td>
</tr>
<tr>
<td>NRS 423</td>
<td>Wetland Ecology</td>
<td>3 cr.</td>
</tr>
<tr>
<td>NRS 501</td>
<td>Foundations of Restoration Ecology</td>
<td>4 cr.</td>
</tr>
<tr>
<td>NRS 509</td>
<td>Concepts of GIS and Remote Sensing</td>
<td>4 cr.</td>
</tr>
<tr>
<td>NRS 517</td>
<td>Herpetology</td>
<td>4 cr.</td>
</tr>
<tr>
<td>NRS 518</td>
<td>Ecohydrology</td>
<td>3 cr.</td>
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</table>

#### Social Science Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>NRS 445</td>
<td>Invasive Species Mgt and Policy</td>
<td>3 cr.</td>
</tr>
<tr>
<td>NRS 555</td>
<td>Applied Coastal Ecology</td>
<td>3 cr.</td>
</tr>
<tr>
<td>EEC 432</td>
<td>Environmental Economics and Policy</td>
<td>3 cr.</td>
</tr>
<tr>
<td>MAF 461</td>
<td>Coastal Zone Management</td>
<td>3 cr.</td>
</tr>
<tr>
<td>MAF 526</td>
<td>Management of Marine Protected Areas</td>
<td>3 cr.</td>
</tr>
<tr>
<td>CPL 539</td>
<td>Environmental Law</td>
<td>3 cr.</td>
</tr>
<tr>
<td>CPL 485</td>
<td>Environmental Planning</td>
<td>3 cr.</td>
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</table>

#### Quantitative Methods Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>STA 409</td>
<td>Statistical Methods in Research</td>
<td>3 cr.</td>
</tr>
<tr>
<td>STA 411</td>
<td>Biostatistics</td>
<td>3 cr.</td>
</tr>
<tr>
<td>STA 550</td>
<td>Ecological Statistics</td>
<td>3 cr.</td>
</tr>
<tr>
<td>STA 515</td>
<td>Spatial Data Analysis</td>
<td>3 cr.</td>
</tr>
</tbody>
</table>
Internship Opportunities

- Coastal Resources Management Council
- RI Department of Environmental Management
- RI Natural History Survey
- Environmental Protection Agency
- Coastal Resources Center
- NOAA National Marine Fishery Service
- National Park Service
- US Fish & Wildlife Service
- The Nature Conservancy
- Save The Bay
- Natural Resources Conservation Service
- Senate Offices
## Recent Major Paper Topics

<table>
<thead>
<tr>
<th>Name</th>
<th>Topic</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rachel Sholly</td>
<td>A Clean Transportation Policy for URI</td>
<td>URI Administration</td>
</tr>
<tr>
<td>Brendan Marsello</td>
<td>Storm Water Utility Districts</td>
<td>Save the Bay Management</td>
</tr>
<tr>
<td>Maria Andrea Urrutia</td>
<td>A Blueprint for Farmers’ Markets: A Market Manager’s Approach</td>
<td>Municipalities</td>
</tr>
<tr>
<td>Matt Wallace</td>
<td>Monitoring Approaches for the Treatment of Non-Native <em>Phragmites australis</em> in Rhode Island</td>
<td>CRMC</td>
</tr>
<tr>
<td>Sabrina Ulmasova</td>
<td>The Hydro-Electrical Power Sector in Bhutan: An Economic Assessment</td>
<td>World Bank</td>
</tr>
</tbody>
</table>
Careers

• Graduates are prepared for careers in federal, state, or municipal government, nonprofit organizations, and private consulting firms requiring professionals who can bring science to bear on policy and management solutions that succeed in a modern political and economic setting.
Student Stories

Rachel Sholly
RI Energy Office

Classes

**Quant:**
STA 409, Stat Methods in Research

**Nat Science:**
NRS 514 Climate Change
NRS 509 GIS Concepts
NRS 534 Landscape Ecology

**Policy:**
PSC 466 Urban Problems
LAR 444 Landscape Architecture Studio
EEC 532 Land Resource Economics
CPL 410 Community Planning Practice
Student Stories

Austin Becker

Stanford Univ
URI Prof

Classes

Quant:
NRS 520, Quant Techniques in Nat Res Mgt

Electives:
NRS 410, Basic GIS Lab
NRS 509, GIS Lecture
NRS 522, GIS Lab
NRS 524 GPS/GIS

Policy:
MAF 521 Coastal Zone Law
CPL 511 Planning and Natural Environmental Systems
MAF 465 GIS Applications in Coastal Zone
MAF 564 Port Operations
CPL 410 Community Planning Practice
Student Stories

Sabrina Ulmasova
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
Project Coordinator for Ecosystem Restoration through Integrated Natural Resource Management, Sustainable Pasture Management.

Classes

**Quant:**
STA 409 Statistical Methods in Rsrch
EEC 502 Res Method in Natural Res l Econ

**Nat Science:**
NRS 509 GIS Concepts
NRS 407 Nongame & Endangered Spec Mgt

**Policy:**
EEC 440 Cost Benefit Analysis
CPL 539 Environmental Law
EEC 514 Economics of Marine Resources
EEC 529 Game Theory
Student Stories

Matt Wallace

*Environmental Scientist*
*Roux Associates, Inc.*

Classes

**Quant:**
STA 409 Statistical Methods in Rsrch

**Nat Science:**
NRS 505 Biology and Mgt of Migratory Birds
NRS 509 Concepts of GIS in Env Science
NRS 522 Adv GIS Analysis of Environmental Data

**Policy:**
CPL 485 Environmental Planning
MAF 475 Human Resp/ Coastal Hazards
MAF 526 Mgt of Marine Protected Areas

**Major Paper:** Monitoring Approaches for the Treatment of Non-Native *Phragmites australis* in Rhode Island
Student Stories

Becca Trietch

Energy Policy and Planning Mgr
RI Office of Energy Resources

Classes

Quant:
STA 409 Statistical Methods in Rsrch

Nat Science:
NRS 471 Soil Morphology and Mapping
NRS 423 Wetland Ecology
NRS 450 Soil Conservation & Land Use

Policy:
CPL 434 Environmental Law
EEC 535 Environmental Economics
NRS 501 Restoration Ecology

Major Paper:
Agriculture and Energy: A Guide to Developing an Energy Efficiency Program for Rhode Island Farms