Masters in Environmental Science and Management (MESM)  
Sustainable Systems Option  
University of Rhode Island  

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MESM Sustainable Systems

• Unique focus on (but not exclusive):
  – Food systems (coastal focus)
    • From wild-caught fisheries to agriculture
    • Plants and animals
    • Marine and terrestrial
    • Local to global
  – Sustainability and resilience
  – Systems-based approach
  – Intersection between natural and social systems
Sustainable Systems @ URI

UNDERGRADUATE PROGRAMS

ANIMAL SCIENCE AND TECHNOLOGY
AQUACULTURE AND FISHERIES TECHNOLOGY
SUSTAINABLE AGRICULTURE AND FOOD SYSTEMS

Plant Sciences and Entomology

MASTER OF ENVIRONMENTAL SCIENCE AND MANAGEMENT (MESM)

Graduate Programs

Biological and Environmental Sciences
Environmental Science and Management
Environmental & Natural Resource Economics
Marine Affairs

SUSTAINABLE AGRICULTURE AND FOOD SYSTEMS (SAFS)

Biological and Environmental Sciences M.S., Ph.D. Specialization: Sustainable Agriculture and Food Systems (SAFS) The Sustainable Agriculture and Food Systems (SAFS) graduate specialization takes a systems-based, interdisciplinary approach
MESM SS curriculum

Core Courses

Natural Sciences (12 – 16 cr)
At least 3 credits in Managed Ecosystems (AFS, AVS, CMB, PLS) and 3 credits in Natural Ecosystems (BIO, NRS, OCG)

Social Sciences (6 cr)
Social, Political, Economic, Marketing aspects of sustainable systems (e.g. MAF, ENRE, SOC, APG)

Numerical Methods (3 cr)
(e.g. CSC, CMB, STA)

Independent Study (3 cr) and Graduate Seminar (2 cr)
Learning how to address complex challenges in Sustainable Systems through an independent project or working in interdisciplinary teams on a common project
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<th>Faculty in Sustainable Systems</th>
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<tr>
<td>Marine Affairs</td>
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<tr>
<td>Tracey Dalton</td>
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<td>Robert Thompson</td>
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<td>Natural Resources Science</td>
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<td>Jose Amador</td>
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<td>Mark Stolt</td>
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<td>Nutrition and Food Science</td>
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<tr>
<td>Geoffrey Greene</td>
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<td>Ingrid Lofgren</td>
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<td>Kathleen Melanson</td>
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<td>Alison Tovar</td>
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<td>Plant Science and Entomology</td>
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<tr>
<td>Steve Alm</td>
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<td>Rebecca Brown</td>
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<td>Richard Casagrande</td>
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<td>Brian Maynard</td>
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<td>Nathaniel Mitkowski</td>
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<td>Bridget Ruemmele</td>
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<tr>
<td>Sociology and Anthropology</td>
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<tr>
<td>Carlos Garcia–Quijano</td>
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<tr>
<td>Rosaria Pisa</td>
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| Biological Sciences           |
| Marian Goldsmith              |
| Evan Preisser                 |
| Cell and Molecular Biology    |
| Albert Kausch                 |
| Lenore Martin                 |
| Environmental & Natural Resource Economics |
| Emi Uchida                    |
| Hirotugu Uchida               |
| Thomas Sproul                 |
| Fisheries, Animal and Veterinary Science |
| David Bengtson                |
| Terence M. Bradley            |
| Marta Gomez–Chiari            |
| Katherine Petersson           |
| Michael Rice                  |
| Becky Sartini                 |
| Austin Humphries              |
| Landscape Architecture        |
| Will Green                    |
| Richard Sheridan              |
Some areas of expertise

- Soil systems
- Urban Agriculture
- Vegetable Crops
- Pollinators; pest control
- Aquaculture Development
- Ecosystem-based fisheries Management
- Local Ecological Knowledge
- Disease Management (aquaculture and ruminants)
- Animal Reproduction
- Pasture Management
- Food safety
- Nutrition and health
Program Resources

- Peckham Farm (farm animals)
- Agronomy Farm (plants)
- East Farm (horticulture, freshwater aquaculture, fisheries)
- Bay Campus (marine aquaculture)
- Rhode Island Agricultural Experiment Station
- Rhode Island Sea Grant
- Coastal Resources Center
- Coastal Institute
- EPA, NOAA at the Bay Campus
- USDA NRCS, RI DEM, RI CRMC
International Experience:
Mexico, Italy, Africa, South East Asia
Examples of projects in Sustainable Systems
Update to the RI Food Assessment:
2011 - 2016 and Beyond
Careers in Food Systems in RI

**THE RHODE ISLAND FOOD SYSTEM**

- **DISTRIBUTION**
  - United Natural Foods*
  - A.T. Siravo

- **CONSUMPTION**
  - RI Restaurant Association
  - Matunuck Oyster Bar*
  - Farm Fresh RI
  - Supermarkets (i.e., Roch’s Dave’s)

- **FUNDERS**
  - US Department of Agriculture
  - RI Foundation
  - van Beuren Charitable Foundation

- **PROCESSING**
  - Daniele*
  - Blount*
  - Seafreeze*

- **ENTERPRISE**
  - Social Enterprise Greenhouse
  - Hope & Main*
  - Eat Drink RI*

- **EDUCATION**
  - University of Rhode Island

- **POLICY**
  - RI Food Policy Council*
  - RI Dept. Of Health*
  - City of Providence
  - DEM—Div. of Agriculture*

- **RESOURCE RECOVERY**
  - The Compost Plant

- **PRODUCTION & HARVESTING**
  - Wishing Stone Farm
  - Matunuck Oyster Farm*
  - American Mussel Harvesters*

Examples of careers: from the Rhode Island Food Systems (adapted from the Rhode Island Food Council; rifoodcouncil.org)