MEES Marine-Estuarine-Environmental Sciences Fall 2016

MEES498I Topics in Marine-Estuarine-Environmental Sciences; Chesapeake Bay Health
Credits: 3
Grading Method: Regular, Pass-Fail, Audit

*Lecture and/or laboratory series organized to study a selected area of marine-estuarine-environmental sciences not otherwise considered in formal courses.*

Also offered as MEES698I. Credit granted for MEES498I or MEES698I. Taught at the Chesapeake Biological Laboratory and on the Interactive Video Network.

<table>
<thead>
<tr>
<th>Section</th>
<th>Instructor</th>
<th>Seats (Total: 20, Open: 20, Waitlist: 0)</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0101</td>
<td>Carys Mitchelmore</td>
<td></td>
<td>TuTh 2:00pm - 3:30pm</td>
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MEES606 Cell and Molecular Biology for Environmental Scientists
Credits: 4
Grading Method: Regular, Audit

*Prerequisite: An undergraduate course in cell biology or biochemistry. Credit only granted for: MEES698C or MEES606. Formerly: MEES698C.*

*An invisible world courses through every living thing. This is the world of molecules, tiny machines millions of time smaller than the machines we are most familiar with, like automobiles. Individually, each of the molecules is a delicate instrument, measuring, making, weighing, and building the thing we call life. The molecules of living things are unique among the molecules of the Earth. These tiny molecular messengers, engines, and machines are built to perform highly specific tasks unlike the molecules formed by physical processes.*

Taught at the Institute of Marine & Environmental Technology and on the Interactive Video Network.

<table>
<thead>
<tr>
<th>Section</th>
<th>Instructor, Address</th>
<th>Seats (Total: 20, Open: 20, Waitlist: 0)</th>
<th>Time</th>
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<tbody>
<tr>
<td>0101</td>
<td>Rosemary Jagus, Allen Place</td>
<td></td>
<td>TuTh 8:00am - 10:00am</td>
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MEES607 Quantitative Methods in Environmental Sciences
Credits: 3
Grading Method: Regular, Audit

*Prerequisite: MATH220 and MATH221; or students who have taken courses with comparable content may contact the department. Credit only granted for: MEES607 or MEES698G. Formerly: MEES698G.*

*Mathematical approaches and solutions (both analytical and numerical) that cut across environmental disciplines, and will introduce analytical techniques.*
### MEES608B Seminar in Marine-Estuarine-Environmental Sciences; Responsible Conduct of Research

<table>
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<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Grading Method</th>
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<td>MEES608B</td>
<td>Seminar in Marine-Estuarine-Environmental Sciences; Responsible Conduct of Research</td>
<td>1</td>
<td>Regular, Audit</td>
<td>HJP 1213B</td>
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### MEES608D Seminar in Marine-Estuarine-Environmental Sciences; Scientific Writing and Communication

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<td>Seminar in Marine-Estuarine-Environmental Sciences; Scientific Writing and Communication</td>
<td>2</td>
<td>Regular, Audit</td>
<td>HJP 1213C</td>
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### MEES608O Seminar in Marine-Estuarine-Environmental Sciences; Current Topics in Omics: Cell Biology, Genetics and Genomics

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<th>Credits</th>
<th>Grading Method</th>
<th>Seats (Total: 10, Open: 10, Waitlist: 0)</th>
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<td>MEES608O</td>
<td>Seminar in Marine-Estuarine-Environmental Sciences; Current Topics in Omics: Cell Biology, Genetics and Genomics</td>
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<td>Regular, Audit</td>
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### MEES608W Seminar in Marine-Estuarine-Environmental Sciences; Classic Readings in Ecology

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<th>Grading Method</th>
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<td>Seminar in Marine-Estuarine-Environmental Sciences; Classic Readings in Ecology</td>
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<td>HJP 1213B</td>
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<td>Course</td>
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<td>Grading Method</td>
<td>Instructor</td>
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<tr>
<td>MEES621</td>
<td>Biological Oceanography</td>
<td>4</td>
<td>Regular, Audit</td>
<td>Katharina Engelhardt</td>
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<td>MEES626</td>
<td>Environmental Geochemistry I</td>
<td>3</td>
<td>Regular, Audit</td>
<td>Judith O'Neil, Louis Plough, Raleigh Hood</td>
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<td>MEES650</td>
<td>Wetland Ecology</td>
<td>3</td>
<td>Regular</td>
<td>Andrew Baldwin</td>
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MEES698B  Special Topics in Marine-Estuarine-Environmental Sciences; Environmental Statistics I

Credits: 3  
Grading Method: Regular, Audit

Credit according to time schedule and course organization. Lecture and/or laboratory series organized to study selected areas of environmental science not otherwise considered by existing courses. May be repeated for credit since topic coverage will change.

Taught at the Chesapeake Biological Laboratory and on the Interactive Video Network.

<table>
<thead>
<tr>
<th>Course</th>
<th>Instructor</th>
<th>Seats (Total:</th>
<th>Open:</th>
<th>Waitlist:</th>
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<tr>
<td>0101</td>
<td>Dong Liang</td>
<td>30</td>
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<td></td>
<td>MW 10:00am - 11:30am</td>
<td>HJP 1213B</td>
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MEES698E  Special Topics in Marine-Estuarine-Environmental Sciences; Principles and Practices of Ecosystem Restoration

Credits: 3  
Grading Method: Regular, Audit

Credit according to time schedule and course organization. Lecture and/or laboratory series organized to study selected areas of environmental science not otherwise considered by existing courses. May be repeated for credit since topic coverage will change.

Also offered as GEOL453 and GEOL789L. Overview of critical ecosystem functions across biomes/geologic settings emphasizing tradeoffs in restoration designs. Case studies illuminate structure's influence over biophysical and biogeochemical processes supporting ecosystems; then show how properties of physical, chemical, and ecosystem processes can be altered by different restoration strategies, to optimize ecosystem services and habitat quality. Includes a semester research project.

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<thead>
<tr>
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<th>Instructor</th>
<th>Seats (Total:</th>
<th>Open:</th>
<th>Waitlist:</th>
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</thead>
<tbody>
<tr>
<td>0101</td>
<td>Sujay Kaushal</td>
<td>20</td>
<td>20</td>
<td>0</td>
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<tr>
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<td></td>
<td>Tu 3:30pm - 6:30pm</td>
<td>BPS 1232</td>
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MEES698I  Special Topics in Marine-Estuarine-Environmental Sciences; Chesapeake Bay Health

Credits: 3  
Grading Method: Regular, Audit

Credit according to time schedule and course organization. Lecture and/or laboratory series organized to study selected areas of environmental science not otherwise considered by existing courses. May be repeated for credit since topic coverage will change.

Also offered as MEES498I. Credit granted for MEES498I or MEES698I. Taught at the Chesapeake Biological Laboratory and on the Interactive Video Network.
MEES698N  
**Special Topics in Marine-Estuarine-Environmental Sciences; Seminar in Ecological and Environmental Genomics**

Credits: 2  
Grading Method: Regular, Audit

*Credit according to time schedule and course organization. Lecture and/or laboratory series organized to study selected areas of environmental science not otherwise considered by existing courses. May be repeated for credit since topic coverage will change.*

Taught at the Horn Point Laboratory and on the Interactive Video Network.

0101  
Louis Plough  
Seats (Total: 20, Open: 20, Waitlist: 0)  
MW 2:00pm - 3:00pm  
HJP 1213B

MEES698R  
**Special Topics in Marine-Estuarine-Environmental Sciences; Stable Isotopes in Environmental Research**

Credits: 3  
Grading Method: Regular, Audit

*Credit according to time schedule and course organization. Lecture and/or laboratory series organized to study selected areas of environmental science not otherwise considered by existing courses. May be repeated for credit since topic coverage will change.*

Taught at the Appalachian Laboratory over the Interactive Video Network.

0101  
David Nelson, Lee Cooper  
Seats (Total: 20, Open: 20, Waitlist: 0)  
TuTh 2:00pm - 3:30pm  
HJP 1213C

MEES698W  
**Special Topics in Marine-Estuarine-Environmental Sciences; Chemistry of Natural Waters**

Credits: 3-4  
Grading Method: Regular, Audit

*Credit according to time schedule and course organization. Lecture and/or laboratory series organized to study selected areas of environmental science not otherwise considered by existing courses. May be repeated for credit since topic coverage will change.*

Also offered as ENCE651. Application of principles from chemical thermodynamics and kinetics to the study and interpretation of the chemical composition of natural waters is rationalized by considering metal ion solubility controls, pH, carbonate equilibria, adsorption reactions, redox reactions and the kinetics of oxygenation reactions which occur in natural water environments.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Seats</th>
<th>Grading Method:</th>
<th>Credits</th>
<th>Lectures, experimental courses and other specialized graduate training in various relevant disciplines.</th>
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<tbody>
<tr>
<td>MEES699</td>
<td>Special Problems in Marine-Estuarine-Environmental Sciences</td>
<td>Alba Torrents</td>
<td>Open</td>
<td>Regular, Audit</td>
<td>1-3</td>
<td>Research on specialized topics under the direction of individual faculty members. Contact department for information to register for this course.</td>
</tr>
<tr>
<td>MEES708F</td>
<td>Advanced Topics in Marine-Estuarine-Environmental Science; Ethical Aspect of Environmental Science</td>
<td>Cynthia Palinkas</td>
<td>Open</td>
<td>Regular, Audit</td>
<td>1</td>
<td>Lectures, experimental courses and other specialized graduate training in various relevant disciplines. Taught at the Horn Point Laboratory and on the Interactive Video Network.</td>
</tr>
<tr>
<td>MEES708G</td>
<td>Advanced Topics in Marine-Estuarine-Environmental Science; Sea Level Rise and Coastal Habitats</td>
<td>Keryn Gedan</td>
<td>Open</td>
<td>Regular, Audit</td>
<td>2</td>
<td>Lectures, experimental courses and other specialized graduate training in various relevant disciplines. Taught at UMCP over the Interactive Video Network.</td>
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<tr>
<td>MEES708K</td>
<td>Advanced Topics in Marine-Estuarine-Environmental Science; Scientific Basis for a Chesapeake Headwaters Report Card</td>
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<td>Lectures, experimental courses and other specialized graduate training in various relevant disciplines.</td>
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</table>
William Dennison, Robert Hilderbrand, Andrew Elmore, Eric Davidson

Seats (Total: 20, Open: 20, Waitlist: 0)

W 11:30am - 1:30pm

HJP 1213B

Taught at the Appalachian Laboratory and on the Interactive Video Network.

### MEES799
**Masters Thesis Research**

- Credits: 1-6
- Grading Method: Regular

*Contact department for information to register for this course.*

### MEES898
**Pre-Candidacy Research**

- Credits: 1-8
- Grading Method: Regular

*Contact department for information to register for this course.*

### MEES899
**Doctoral Dissertation Research**

(Perm req)

- Credits: 6
- Grading Method: Regular

*Contact department for information to register for this course.*