

# INTERDISCIPLINARY MARINE AND ESTUARINE SCIENCES

## College of Science and Engineering

Dean: Dr. Carmen Domingo

### Administered by the Estuary & Ocean Science Center

Website: <http://imes.sfsu.edu> (<http://riptides.sfsu.edu>)

Graduate Coordinator: Ellen M. Hines ([ehines@sfsu.edu](mailto:ehines@sfsu.edu))

The Masters of Science (MS) in Interdisciplinary Marine and Estuarine Sciences (IMES) program is an interdisciplinary program offered at San Francisco State University (SF State) by the College of Science and Engineering, administered by the Estuary & Ocean Science Center (EOS Center; <http://eoscenter.sfsu.edu> (<http://eoscenter.sfsu.edu/>)). Faculty mentors in the program are from a range of Departments including Biology, Chemistry and Biochemistry, Physics, Geography & Environment, and Earth & Climate Sciences.

### Program Scope

The MS in IMES program provides the opportunity for students to develop a transdisciplinary knowledge base at the intersection of global change, coastal marine and estuarine ecosystems, and societal challenges faced in urbanized areas. Students develop an applied knowledge in one or more fields of marine and estuarine sciences through conducting independent research under the guidance of faculty from a broad spectrum of physical, biological, and social sciences. That applied knowledge is combined with professional internships and training in professional skills to prepare graduates for a range of careers including scientific research, natural resource management, and science communication. Through the EOS Center, the program provides extensive laboratory resources and access to field sites for advanced study in marine and estuarine sciences.

## Master of Science in Interdisciplinary Marine and Estuarine Sciences

### Admission to the Program

Prospective students from a variety of undergraduate backgrounds are encouraged to apply. Applications are administered by the EOS Center and must comply with the application procedures and deadlines outlined here: <http://imes.sfsu.edu/admissions> (<http://riptides.sfsu.edu/admissions/>). Note, the MS in IMES is distinct from the MS in Biology with a Concentration in Marine Biology, though some faculty may participate in both programs.

### Program Learning Outcomes

- Design a research project incorporating complex information involving coastal and marine ecosystems, communities, and organisms, using logic and evidence to answer research questions.
- Facilitate and engage in productive and diplomatic work relationships with peers, supervisors, and other professionals. Articulate how information and tools from different disciplines can be used together to generate novel insights and solutions.
- Demonstrate mastery of a suite of technical and statistical skills appropriate to address the research topic.

- Effectively communicate the research project to different audiences using clear, appropriate, and effective language and delivery style.

## Interdisciplinary Marine and Estuarine Sciences (M.S.) – 32 units minimum

### Core Requirements (25 units)

Code	Title	Units
BIOL 708	Scientific Methods for Professional Aquatic Scientists	3
MSCI 709	Foundations in Interdisciplinary Marine & Estuarine Science	4
MSCI 715	Writing for Interdisciplinary Marine and Estuarine Scientists	3
MSCI 717	Professional Skills Workshop I: Data Analysis and Visualization	2
MSCI 718	Writing and Professional Skills Workshop II	2
MSCI 788	Professional Internship in Marine and Estuarine Sciences	3
MSCI 885	Seminar in Interdisciplinary Marine and Estuarine Science (2 unit course taken twice)	4
MSCI 897	Research	4

### Electives (4-6 units)

Students can choose from a wide range of upper-division or graduate-level courses in consultation with their advisor. **At least one course must be a graduate seminar such as from the list below:**

Code	Title	Units
BIOL 863	Advances in Marine Biology	2
ERTH 795	Selected Topics in the Geosciences	3
GEOG 857	Issues in Marine and Estuarine Conservation	3

### Culminating Experience (3-4 units)

Select One:

Code	Title	Units
MSCI 895	Field Study or Applied Research Project	3
MSCI 898	Master's Thesis	4

### Moss Landing Marine Laboratories Courses

Most courses for the MS in Interdisciplinary Marine and Estuarine Sciences are offered at SF State's Estuary and Ocean Science Center and on the main campus. Students may also take elective courses at the Moss Landing Marine Laboratories on advisement. Consult the current Moss Landing Marine Laboratories course schedule for more information: <https://gradprog.mlml.calstate.edu/class-schedule> (<https://gradprog.mlml.calstate.edu/class-schedule/>).