

**The Marine Science Institute**  
**SCHEDULE OF COURSE OFFERINGS**  
for MS/Ph.D. Marine Science Programs  
(Marine Biology, Marine Physical Sciences and Marine Biotechnology)

**Undergraduate Offering:**

MS 101	Oceans	<b>LTDavid, CMFerrera, FPSiringan, CLVillanoy, ATYñiguez</b>
MS 102	The Marine Sciences	<b>PCCabaitan, MAJMeñez, DFLonda</b>
MS 1	Oceans and Us	<b>CGConaco, LTDavid, RRGotanco, CBJaraula, MJRPante, LSReyes, IBRodriguez, MVBRodriguez, WJESantiañez, FPSiringan, ATYñiguez, ETYu, RAAbesamis, MDMalay</b>

**Graduate Offering:**

**Courses offered during the 1<sup>st</sup> semester:**

<b>CORE COURSES</b>		
MS 201	Ocean Physics and Chemistry	<b>CBJaraula / LTDavid / CRepollo</b>
MS 210	Physical Oceanography	<b>CVillanoy / LTDavid / CRepollo</b>
MS 220	Chemical Oceanography	<b>CMFerrera / IBRodriguez</b>
MS 240	Biological Oceanography	<b>DFonda / CConaco / MYRoleda / ATYñiguez</b>
MS 270	Biochemistry of Marine Organisms	<b>LSReyes / IBRodriguez / ETYu</b>
<b>ELECTIVES</b>		
MS 214	Waves and Tides (on demand)	<b>CLVillanoy / LTDavid</b>
MS 221	Marine Geochemistry	<b>CBJaraula</b>
MS 226	Marine Pollution Chemistry	<b>CMFerrera / IBRodriguez</b>
MS 226.1	Marine Pollution Chemistry laboratory	<b>CMFerrera / IBRodriguez</b>
MS 253	Marine Chemical Ecology	<b>LSReyes / MVBRodriguez</b>
MS 255	Coral Reef Ecosystems	<b>PCCabaitan</b>
MS 256	Marine Algae	<b>WJESantiañez</b>
MS 261	Physiology of Marine Algae	<b>MYRoleda</b>
MS 385	Marine Toxinology	<b>LSReyes / DFLonda</b>
MS 397	Special Topics: Behavioral Ecology	<b>MAJMeñez</b>
MS 397	Special Topics: Genome Biology of Marine Organisms	<b>CGConaco</b>
MS 397	Special Topics: Gene Expression Control	<b>CGConaco</b>
MS 397	Special Topics: Ecological Modeling	<b>ATYñiguez</b>
MS 397	Special Topics: Ecological Restoration	<b>MVBRodriguez</b>
MS 397	Special Topics: Molecular Ecology and Evolution	<b>RRGotanco/MDMalay</b>
MS 397	Special Topics: Biological-Social Structures	<b>MHTYap</b>
MS 397	Special Topics: Ecological Assessment with Algae	<b>MYRoleda</b>
MS 397	Special Topics: Marine Organic Geochemistry	<b>CBJaraula</b>
MS 397	Special Topics: Submarine Groundwater Discharge	<b>FPSiringan</b>
MS 397	Special Topics: Molecular Biology and Bioinformatics of the Biosynthesis of Natural Products	<b>AOLuisma</b>

MS 397	Special Topics: Environmental Metallomics and Biotechnology	<b>IBRodriguez</b>
MS 397	Special Topics: Marine Invertebrate Zoology	<b>MDMalay</b>
MS 398	Advanced Methods in Marine Science: Quantitative Methods in Microbial Ecology	<b>DFLOnda</b>
MS 398	Advanced Methods in Marine Science: Biostatistics	<b>MJRPante</b>
MS 398	Advanced Methods in Marine Science: Practical Scientific Programming (every odd year)	<b>AOLluisma</b>
MS 398	Advanced Methods in Marine Science: Data Analysis Methods in Oceanography	<b>CLVillanoy / LTDavid / CRepollo</b>
MS 398	Advanced Methods in Marine Science: Ocean Remote Sensing & Image Analysis	<b>LTDavid</b>
MS 398	Advanced Methods in Marine Science: Marine Natural Products & Biomedical Research	<b>LSReyes</b>
<b>SEMINAR</b>		
MS 396	Seminar 1: Current Topics in Marine Science (for all MS students)	<b>All MSI Faculty</b>
MS 396	Seminar (Marine Biology)	

### Courses Offered during the 2<sup>nd</sup> semester:

<b>CORE COURSES</b>		
MS 230	Geological Oceanography	<b>FPSiringan / CBJaraula</b>
MS 240	Biological Oceanography	<b>DFonda / CConaco</b>
MS 272	Marine Biotechnology 1	<b>AOLluisma</b>
<b>ELECTIVES</b>		
MS 213	Dynamics of Oceans	<b>CLVillanoy</b>
MS 216	Numerical Ocean Modeling (on demand)	<b>CLVillanoy / LTDavid</b>
MS 217	Coastal and Estuarine Oceanography	<b>LTDavid</b>
MS 222	Chemistry of Marine Coastal Environments (every odd year)	<b>CMFerrera / CBJaraula</b>
MS 242	Marine Microbiology	<b>CGConaco</b>
MS 246	Marine Phytoplankton	<b>DFLOnda</b>
MS 250	Marine Ecology	<b>MYRoleda/RAAbesamis</b>
MS 251	Population Biology of Marine Organisms	<b>PCCabaitan</b>
MS 252	Marine Biogeography	<b>MPAtrigenio/MDMalay</b>
MS 254	Seagrasses and Mangroves	<b>MYRoleda</b>
MS 258	Marine Fishes	<b>RAAbesamis</b>
MS 260	Marine Biodiversity	<b>ATYñiguez / RRGotanco / MVBRodriguez/RRAbesamis/MDMalay</b>
MS 273	Marine Biotechnology II (every odd year)	<b>ETYu</b>
MS 278	Marine Natural Products	<b>LSReyes</b>
MS 280	Management of Marine Resources (every even year)	<b>MAJMeñez / MVBRodriguez / MPAtrigenio</b>
MS 283	Marine Agronomy	<b>WJESantiañez</b>
MS 361	Reproductive Biology	<b>MAJMeñez</b>
MS 366	Population Genetics of Marine Organisms	<b>RRGotanco</b>
MS 397	Special Topics: Seaweed Utilization	<b>IBRodriguez</b>
MS 397	Special Topics: Physical-Biological Interactions in the	<b>ATYñiguez</b>

	Oceans	
MS 397	Special Topics: Algal Life Histories and Reproduction	<b>WJESantiañez</b>
MS 397	Special Topics: Algal Photobiology and Photochemistry	<b>MYRoleda</b>
MS 397	Special Topics: Application of Satellite Altimetry (as needed)	<b>CLVillanoy</b>
MS 397	Special Topics: Mixing in Estuarine and Coastal Waters	<b>LTDavid</b>
MS 397	Special Topics: Applications of Isotope Geochemistry in Marine Sciences	<b>CBJaraula</b>
MS 397	Special Topics: Marine Observation Systems -	
MS 397	Special Topics: Ocean Energy	<b>LTDavid</b>
MS 398	Advanced Methods in Marine Science: Applied Multivariate Data Analysis	<b>MJRPante</b>
MS 398	Advanced Methods in Marine Science: Seaweed and Seagrass Research Methods	<b>MYRoleda</b>
MS 398	Advanced Methods in Marine Science: Techniques in Coral Reef Ecology	<b>PCCabaitan</b>
MS 398	Advanced Methods in Marine Science: Molecular Biology Methods for Marine Science	<b>CGConaco / RRGotanco</b>
MS 398	Advanced Methods in Marine Science: Elucidation of Natural Products (on demand)	<b>LSReyes</b>
MS 398	Advanced Methods in Marine Science: Practical Mass Spectrometry	<b>ETYu</b>
<b>SEMINAR</b>		
MS 396	Seminar (Marine Biotechnology)	
MS 396	Seminar (Physical Sciences)	

**Courses Offered for Midyear:**

MS 397 Special Topics: Microbial Oceanography **DFLOnda**

**Courses offered previously, no current schedule indicated**

MS 397 Special Topics: Coastal Geomorphology **FPSiringan**  
MS 397 Special Topics: The Sediment Record of Environmental Change **FPSiringan**  
MS 398 Advanced Methods in Marine Science: Analysis of Molecular Sequences (every even year)

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