

**University of Southern Mississippi
Department of Marine Science**

**SPRING 2008
Course List**

MAR 401 / 501	Biological Oceanography	Tuesday	12:30 - 3:20pm
MAR 401L / 501L	Biological Oceanography Lab	Tuesday	3:30 - 6:30pm
MAR 409 / 509	Marine Microbiology	Mon - Wed	3:50 - 5:00pm
MAR 481 / 581	Geological Oceanography	Mon - Wed	9:00 - 10:30am
MAR 481L / 581L	Geological Oceanography Lab	Wed or Thurs	1:00 - 4:00pm
MAR 655	Estuaries	Tues - Thurs	12:30 - 3:20pm
MAR 665	Ocean Data Analysis	Thurs - Fri	12:30 - 1:45pm
MAR 682	Molecular Techniques - Marine Science	Mon - Wed	1:00 - 2:15pm
MAR 685	Data Assimilation	Mon - Wed	9:00 - 10:20am
MAR 689	Marine Seminar	Friday	2:30 - 4:00 pm
MAR 689	Marine Seminar	Thursday	4:00 - 5:00pm
MAR 761	Numerical Modeling of Ocean Currents	Mon - Wed	11:00 - 12:30 pm
MAR 151	Introduction to Ocean Science	Tues - Thurs	9:30 - 10:45 am
MAR 151L	Introduction to Ocean Science Lab	Thursday	2:25 - 6:30 pm
MAR 210	The Oceans	Tuesday	1:00 - 3:40pm
MAR 412	Introduction to Hydrography	Friday	2:00 - 4:45pm
HYD 601	Hydro Data Management	Mon - Wed	9:00 - 10:20am
HYD 603	Law & Policy for Hydrographers	Friday	9:00 - 11:00am
HYD 604	Kinematic Positioning	Tues - Thurs	9:00 - 10:20am
HYD 605	Applied Bathymetry	Mon - Wed	12:00 - 1:20pm
HYD 611	Remote Sensing for Hydrographers	Tues - Thurs	1:00 - 2:20pm
HYD 612	Water Levels	Monday	2:30 - 4:40pm

Note: Admission to Hydrographic Science (HYD) courses are limited. Please contact the USM Dept. of Marine Science at 228-688-3175 for more information.

Course Descriptions

MAR 401 / 501	Biological Oceanography	Tuesday	12:30 - 3:20pm
	Instructor: Don Redalje		
	3 hrs. Prerequisite: Permission of instructor. Biological processes in the ocean and the influence of biotic and abiotic factors on these processes.		
MAR 401L / 501L	Biological Oceanography Lab	Tuesday	3:30 - 6:30pm
	Instructor: Alan Shiller		
	1 hr. A laboratory designed to accompany MAR 401 / 501		
MAR 409 / 509	Marine Microbiology	Mon - Wed	3:50 - 5:00pm
	Instructor: Jay Grimes		
	3 hrs. Prerequisite: General Microbiology. An introduction to the role of microorganisms in the overall ecology of the oceans and estuaries. May be taken as BSC 590 or COA 571.		

MAR 481 / 581	Geological Oceanography Instructor: Charlotte Brunner	Mon – Wed	9:00 – 10:30am
	3 hrs. Prerequisite: Permission of instructor. Study of the formation and deformation of the oceanic crust and the distribution and character of marine sediments.		
MAR 481L / 581L	Geological Oceanography Lab Instructor: Charlotte Brunner	Wed or Thurs	1:00 – 4:00pm
	1 hr. A laboratory for MAR 481 / 581.		
MAR 655	Estuaries Instructor: Alan Shiller	Tues – Thurs	12:30 – 3:20pm
MAR 665	Ocean Data Analysis Instructor: Dr. Teng	Thurs – Fri	12:30 – 1:45pm
MAR 682	Molecular Techniques Instructor: Karen Orcutt	Mon - Wed	11:00 – 12:30pm
MAR 685	Data Assimilation Instructor: Dmitri Nechaev	Mon – Wed	9:00 – 10:20am
	1-9 hrs. Prerequisite: Permission. Study of a selected area in physical marine science.		
MAR 689	Marine Seminar Instructors: Alan Shiller	Friday	2:30 – 4:00pm
	1 hr. Prerequisite: Permission of instructor. Current topics in marine science explored via student discussion and presentation. May be repeated.		
MAR 689	Marine Seminar – Proposal Writing Instructor: Kevin Yeager and L. Guo	Thursday	4:00 – 5:00pm
	1 hr. Prerequisite: Permission of instructor. Current topics in marine science explored via student discussion and presentation. May be repeated.		
MAR 761	Numerical Modeling of Ocean Currents Instructor: Vladimir Kamenkovich	Mon - Wed	11:00 – 12:30pm
	4 hrs. Course is based on a thorough analysis of the Princeton Ocean Model, provides the basic concepts of numerical modeling and numerical algorithms used in ocean general circulation models.		
MAR 151	Introduction to Ocean Science Instructor: Vernon Asper	Tues – Thurs	9:00 – 10:20am Hattiesburg
	3 hrs.		
MAR 210	The Oceans Instructor: Scott Milroy	Tuesday	1:00-3:40pm Gulfpark

MAR 412	Introduction to Hydrography Instructor: Charles Meador	Friday	2:00 - 4:45pm Gulfpark
HYD 601	Hydro Data Management Instructor: David Dodd 3 hrs. Prerequisite: Permission of instructor. The methods of data acquisition and control, capture, processing, and analysis applied to construction of navigational charts.	Mon – Wed	9:00 – 10:20am
HYD 603	Law & Policy for Hydrographers Instructor: Young 1 hr. Prerequisite: Permission of instructor. The course focuses on law and ocean policy issues, in seminars and classroom discussions, which are relevant to Hydrographic Science.	Friday	9:00 – 11:00am
HYD 604	Kinematic Positioning Instructor: David Wells 3 hrs. Prerequisite: Permission of instructor. The use of satellites in geodesy, positioning, navigation, and altimetry demonstrated through classroom lectures and practical exercises.	Tues – Thurs	9:00 – 10:20am
HYD 605	Applied Bathymetry Instructor: David Wells 3 hrs. Prerequisite: MAR 581 or MAR 666 or equivalent. An application of ocean acoustic and transducer principles to the methods of measuring and recording the shape of the sea bed.	Mon – Wed	12:00 – 1:20pm
HYD 611	Remote Sensing for Hydro Instructor: Steve Lohrenz 3 hrs. Prerequisite: Permission of instructor. Remote sensing principles and photogrammetry for coastline delineation, ice mapping, bathymetry, and water column and surface properties.	Tues – Thurs	1:00 – 2:20pm
HYD 612	Water Levels Instructor: Stephan Howden Tidal fundamentals, tidal measurements, using tide gauges, tidal streams, measuring currents, tidal analysis and prediction, use of tide tables, cotidal charts, use of numerical tidal models, non-tidal water level variations, wave characteristics, types of waves, deep-water waves, shallow-water waves, diffraction, dispersion, wave energy, forecasting, generation, interference, measurement, momentum, reflection, refraction, spectra, wave generation theories, and wave velocities.	Monday	2:30 – 4:30pm