

# OCEANIC AND ATMOSPHERIC SCIENCES

## Lower Division Requirements (All courses must be taken for a Letter Grade)

Math	20A _____	20B _____	20C _____	20D _____	20E _____	18 _____
Chemistry	6A _____	6B _____	6C _____	7L _____		
Physics	2A _____	2B _____	2C _____	(or 4A _____ 4B _____ 4C _____)		
Physics Lab	2BL _____	2CL _____				
SIO	60 _____					

## Upper Division Requirements (All courses must be taken for a Letter Grade)

### Group A: Core Requirements (all courses are required):

SIO 171	_____	Introduction to Physical Oceanography
SIO 172	_____	Physics of the Atmosphere
SIO 174	_____	Chemistry of the Ocean and Atmosphere

### Group B: Upper-Division Restricted Electives (choose at least 4 of the following):

SIO 111	_____	Introduction to Ocean Waves
SIO 117	_____	The Physical Basis of Global Warming
SIO 141	_____	Chemical Principles of Marine Systems
SIO 143	_____	Ocean Acidification
SIO 173	_____	Dynamics of Atmosphere and Climate
SIO 175	_____	Analysis of Oceanic and Atmospheric Data
SIO 176	_____	Observational Physical Oceanography
SIO 177	_____	Fluid Dynamics
SIO 178	_____	Geophysical Fluid Dynamics

### Group C: Upper-Division Restricted Electives (choose at least 5 of the following):

Student may use any additional course(s) from the Restricted Electives list (Group B, above) as a Group C elective

SIO 101 _____	California Coastal Oceanography	MATH 110A _____	Intro to Partial Differential Equations
SIO 108 _____	Introduction to Paleoclimatology	MATH 110B _____	Elements of Partial Differential Equations and Integral Equations
SIO 110 _____	Introduction to GIS & GPS for Scientists	MATH 120A _____	Elements of Complex Analysis
SIO 113 _____	Introduction to Computational Earth Sciences	MATH 120B _____	Applied Complex Analysis
SIO 115 _____	Ice and the Climate System	MATH 180A _____	Introduction to Probability
SIO 134 _____	Introduction to Biological Oceanography	PHYSICS 110A _____	Mechanics I
SIO 135 _____	Satellite Remote Sensing	PHYSICS 110B _____	Mechanics II
SIO 160 _____	Introduction to Tectonics	PHYSICS 140A _____	Statistical and Thermal Physics I
SIO 199 _____	Independent Study	PHYSICS 140B _____	Statistical and Thermal Physics II
CHEM 127 _____	Physical Chemistry	MAE 101A _____	Introductory Fluid Mechanics
CHEM 130 _____	Chemical Physics: Quantum Mechanics	CENG 101A _____	Introductory Fluid Mechanics
CHEM 131 _____	Chemical Physics: Stat Thermo I		
CHEM 132 _____	Chemical Physics: Stat Thermo II		
CHEM 171 _____	Environmental Chemistry I		
CHEM 173 _____	Atmospheric Chemistry		

All Upper Division courses are 4 units unless otherwise indicated.

\*\*For students entering UC San Diego Fall 2017 and later\*\*