

# BIOLOGY - MARINE BIOLOGY AND FRESHWATER ECOLOGY EMPHASIS REQUIREMENTS (BA/BS)

Code	Title	Units
<b>Major Requirements<sup>2</sup></b>		
BIOLOGY 141	INTRODUCTORY BIOLOGY I	5
BIOLOGY 142	INTRODUCTORY BIOLOGY II	5
BIOLOGY 190	BIOLOGY FORUM	1
BIOLOGY 251	INTRODUCTION TO GENETICS	4
BIOLOGY 257	INTRODUCTION TO ECOLOGY	3
BIOLOGY 258	ECOLOGICAL FIELD METHODS	2
BIOLOGY 370	AQUATIC BIOLOGY	4
BIOLOGY 457	WILDLIFE ECOLOGY	4
or BIOLOGY 459	COMMUNITY ECOLOGY	
<b>Organismal Course Elective - select one of the following:</b>		<b>3</b>
BIOLOGY 340	COMPARATIVE VERTEBRATE ANATOMY	
BIOLOGY 345	ANIMAL PHYSIOLOGY	
BIOLOGY 351	THE PLANT KINGDOM	
BIOLOGY 353	PLANT TAXONOMY	
BIOLOGY 359	AQUATIC PLANT BIOLOGY	
BIOLOGY 375	INVERTEBRATE ZOOLOGY	
BIOLOGY 380	VERTEBRATE ZOOLOGY	
BIOLOGY 450	INTRODUCTORY ENTOMOLOGY	
<b>Chemistry Elective - select one of the following:</b>		<b>3</b>
CHEM 251	ORGANIC CHEMISTRY - I	
CHEM 260	INORGANIC CHEMISTRY	
CHEM 352	QUANTITATIVE ANALYSIS	
<b>Biology Elective - select at least one of the following:</b>		<b>3</b>
BIOLOGY 253	INTRODUCTION TO CELL BIOLOGY	
COMPSCI/ BIOLOGY 312	INTERMEDIATE DATA SCIENCE	
BIOLOGY 340	COMPARATIVE VERTEBRATE ANATOMY	
BIOLOGY 351	THE PLANT KINGDOM	
BIOLOGY 353	PLANT TAXONOMY	
ENVSCI/BIOLOGY 357	CONSERVATION BIOLOGY	
BIOLOGY 359	AQUATIC PLANT BIOLOGY	
BIOLOGY 375	INVERTEBRATE ZOOLOGY	
BIOLOGY 380	VERTEBRATE ZOOLOGY	
PSYCH/BIOLOGY 416	ADVANCED AND MULTIVARIATE DATA ANALYSIS FOR THE LIFE SCIENCES	
BIOLOGY 430	ANIMAL BEHAVIOR	
BIOLOGY 442	ENVIRONMENTAL TOXICOLOGY	
BIOLOGY 446	ORGANIC EVOLUTION	
COMPSCI/ BIOLOGY 448	BIOINFORMATICS	
BIOLOGY 450	INTRODUCTORY ENTOMOLOGY	
BIOLOGY 457	WILDLIFE ECOLOGY	

BIOLOGY 459	COMMUNITY ECOLOGY	
<b>Breadth Elective - select one of the following:</b>		<b>3</b>
GEOGRPY 270	GIS I: MAPPING OUR WORLD	
GEOGRPY 323	WATER RESOURCES	
GEOGRPY 423	RIVERS AND FLOODS	
GEOLGY 300	PRINCIPLES OF OCEANOGRAPHY	
CHEM 251	ORGANIC CHEMISTRY - I	
CHEM 252	ORGANIC CHEMISTRY - II	
CHEM 260	INORGANIC CHEMISTRY	
CHEM 261	ORGANIC CHEMISTRY LABORATORY	
CHEM 270	INTRODUCTION TO GREEN CHEMISTRY	
CHEM 352	QUANTITATIVE ANALYSIS	
CHEM 454	BIOCHEMISTRY OF MACROMOLECULES	
CHEM/BIOLOGY 456	BIOCHEMISTRY OF METABOLISM AND SIGNALING	
Select Biology or Deakin courses, numbered above 300, except for BIOLOGY 303, to total 54 units in the major.		<b>14</b>
Satisfaction of this emphasis requires two semesters of study at Deakin University in Australia		

**Total Units** **54**

Code	Title	Units
<b>Unique and Writing Requirements</b>		
BIOLOGY 303	BIOSTATISTICS	3-4
or PSYCH 215	BASIC STATISTICAL METHODS	
CHEM 102	GENERAL CHEMISTRY I	5
CHEM 104	GENERAL CHEMISTRY II	5
Select one of the following:		<b>3</b>
BIOLOGY 200	WRITING IN BIOLOGY	
or PWP 371	WRITING IN THE SCIENCES	
Select one of the following		<b>5-7</b>
MATH 142 & MATH 151	COLLEGE ALGEBRA and TRIGONOMETRY	
or MATH 152	PRECALCULUS	
or MATH 243	CALCULUS FOR BUSINESS AND SOCIAL SCIENCES	
or MATH 250	APPLIED CALCULUS SURVEY FOR BUSINESS AND SOCIAL SCIENCES	
<b>Total Units</b>		<b>21-24</b>

<sup>1</sup> Typically these credits will consist of transfer credits from Deakin including Marine Biology and Water Quality which are required.

<sup>2</sup> No minor is required.