

**Bachelor of Science in Marine & Conservation Biology (MCON)** From the **2017-2018** Catalog • 5/3/17

In order to earn the Bachelor of Science in Marine & Conservation Biology degree, students must complete at least 180 quarter credits with a cumulative and major grade point average of 2.0, including these courses:

			prereqs	credits	quarter?
<b>I. Core Curriculum Requirements:</b>	UCOR 1100	Academic writing seminar	–	5	
	UCOR 1300	Creative expression and interpretation	–	5	
	UCOR 1400	Inquiry seminar in humanities	–	5	
	UCOR 1600	Inquiry seminar in social sciences	–	5	
	UCOR 2100	Theological explorations	UCOR 1100	5	
	UCOR 2500	Philosophy of the human person	UCOR 1100	5	
	UCOR 2900	Ethical reasoning	UCOR 2500	5	
	UCOR 3100	Religion in a global context	UCOR 2100	5	
	UCOR 3400	Humanities and global challenges	75 credits + UCOR 1300,1400	5	
UCOR 3600	Social Science and global challenges	75 credits + UCOR 1300,1600	5		

Note: UCOR 1200 and UCOR 1800 are not listed above; they are fulfilled by other Biology major requirements.

<b>II. Major Curriculum Requirements: *§</b>	BIOL 1610+1611	General Biology I + Lab I	4+1	FW	
	BIOL 1620+1621	General Biology II + Lab II	4+1	WS	
	BIOL 1630+1631	General Biology III + Lab III	4+1	SF	
	BIOL 2600	Fundamentals of Ecology	5	FS	
	BIOL 2700 or 3500	Genetics or Evolution	5	FWS/F	
	BIOL 3650 or 3660	Marine Biology or Conservation Biology	5	S/W	
<b>Comparative Biodiversity</b>	BIOL 2350, 2360, 2520, 2530, or 3250	Invert. Zool., Marine Invert. Zool., Plant Taxonomy*, Marine Botany*, Vert. Anatomy	5	F/Su/S Su/W	
<b>Organismal Function</b>	BIOL 3300, 3820, 3850, 3880, or 3890	Developmental Bio., Neurobio., Plant Phys.*, Animal Physiology, Environ. Physiology	5	W/W/F F/Su	
<b>Ecological Dynamics</b>	BIOL 3800, 4620, 4640, or 4660	Animal Behavior, Marine Ecology, Aquatic Ecology, Tropical Ecology	5	S/Su/ Su/Su	
		<i>Natural Sciences Elective</i> (ex: BIOL≥2350, CHEM>2000, PHYS>2000; ENSC>3000)	5		
		<i>Social Sciences or Humanities Elective</i> (ex: EVST 3500, HIST 3510, PLSC 3000)	5		
<b>Senior Synthesis:</b> (6 req'd credits; 2 per Q)	BIOL 4991	Senior Synthesis I	2	F	
	BIOL 4992	Senior Synthesis II	2	W	
	BIOL 4993	Senior Synthesis III	1	S	
	BIOL 4996	Biology Senior Synthesis Seminar	1	S	

*****	<b>Biology and major elective requirements:</b>	<b>61</b>
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Notes: \* 61 credits in biology are required, which must include one plant science (either BIOL 2520, 2530, or 3850).

In prerequisite courses, grades of at least C are required in biology and at least a C- are required in other sciences.

§ Candidacy is required to apply an education abroad experience towards Biology Senior Synthesis credit. See p. 2.

CHEM 1500+1501	General Chemistry I + Lab I	4+1	FW	
CHEM 1510+1511	General Chemistry II + Lab II	4+2	WS	
CHEM 1520	General Chemistry III	4	SF	
CHEM 2500+2501	Foundations of Organic Chemistry I + Lab	4+2	FW	
CHEM 2510+2511	Foundations of Organic Chemistry II + Lab	4+2	WS	

MATH 1210	Statistics for Life Sciences	5	FWS	
MATH 1230/1334	Calculus for Life Sciences <b>OR</b> Calculus I	5	FW/FWS	

**\* Choose one (a or b) from the options below:**

<b>Physics a:</b>	PHYS 1050+1051	Mechanics	4+1	F	
	PHYS 1060+1061	Waves, Sound, Electricity, and Magnetism	4+1	W	
	PHYS 1070+1071	Thermodynamics, Optics, and Modern Physics	4+1	S	
<b>Physics b:</b>	PHYS 1210+1211	Mechanics	4+1	WS	
	PHYS 1220+1221	Electricity and Magnetism	4+1	SF	
	PHYS 1230+1231	Waves and Optics	4+1	FW	

*****	<b>Chemistry/Math/Physics requirements:</b>	<b>52</b>
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<b>*** Total Major Curriculum Requirement credits required for graduation:</b>	<b>113</b>
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## Blakely Island Field Station & Study Abroad Opportunities

MCON students are encouraged to take courses at Blakely Island Field Station north of Seattle (during summer quarter for SU) and another more distant site (for example, during summer+fall or winter+spring quarters). Site and course options that have been pre-screened for course verification and transfer are shown below; other programs may be eligible for transfer with approval of department. At left are the verified SU course numbers for the indicated courses.

MCON Candidacy is required in order to apply an education abroad research experience towards Biology Research credit. Candidacy is achieved by successfully completing: BIOL 1610/1611, 1620/1621, 1630/1631, and CHEM 1520/1521, all with C or better; BIOL 2600, 2700, 3500, 3650, and/or 3660 with a C or better; and a minimum biology major grade point average of 2.8.

### SUMMER QUARTER

(COURSES AT BLAKELY ISLAND ARE ONLY OFFERED IN SUMMER QUARTER.)

#### **Blakely Island Field Station – San Juan Islands, WA State**

(All are 2-week intensive 5 credit courses.)

BIOL 2360	Marine Invertebrate Zoology
BIOL 2530	Marine Botany
BIOL 3650	Marine Biology
BIOL 3660	Conservation Biology
BIOL 3890	Environmental Physiology
BIOL 4620	Marine Ecology
BIOL 4640	Aquatic Ecology
BIOL 4660	Forest Ecology

### YEAR-ROUND COURSES

(COURSES OFFERINGS PER QUARTER WILL VARY AMONG THE SITES.)

#### **Monteverde (Costa Rica) (a CIEE Program)**

BIOL Elective	BIOL 3001 MVCR Tropical Diversity
BIOL 4660	ECOL 3001 MVCR Tropical Community Ecology
BIOL 4990	BIOL 3002 MVCR Independent Study in Biology/Ecology
BIOL 4990	ECOL 3002 MVCR Independent Study in Biology/Ecology
Soc Sci Elective	ECOL 3003 MVCR Humans in the Tropics
General Elective	SPAN 1001 MVCR Spanish Language

#### **Bonaire (Caribbean) (a CIEE Program)**

BIOL 4620	ECOL 3001 BONA Coral Reef Ecology
BIOL 4660	ENVI 3002 BONA Tropical Marine Conservation Biology
BIOL 4660	MARI 3003 BONA Tropical Marine Conservation Biology
BIOL 4990	BIOL 3001 BONA Independent Research in Marine Biology and Ecology
BIOL 4990	INDE 3003 BONA Independent Research in Marine Biology and Ecology
Soc Sci Elective	ECOL 3003 BONA Cultural and Environmental History of Bonaire
General Electives:	MARI 3004 BONA Advanced Scuba
	MARI 3005 BONA Marine Ecology Field Research Methods

(continued)

**WINTER + SPRING QUARTERS (CONTINUED)**

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***Murdoch University (Perth, Australia) (a CIEE Program)***

BIOL 2520	Plant Diversity [BIO265]
BIOL 2530	Plant Diversity (Marine Science) [BIO287]
BIOL 3650	Marine and Estuarine Biology [BIO384]
BIOL 3650	Tropical Marine Biology [BIO383]
BIOL 3660	Conservation Biology [BIO368]
BIOL 3250	Vertebrate Evolution and Adaptation [BIO209]
BIOL Electives:	Animal Diversity [BIO261]
	Fish and Fisheries Biology [BIO205] [BIO505]
	Introduction to Australian Biodiversity [BIO157]
	Special Topics in Biological Sciences and Biotechnology [BIO280]
	Wildlife Biology [BIO317]
Soc Sci Elective	--Multiple options

***University of Cape Town (South Africa) (a CIEE Program)***

BIOL 2350	BIO2009S	Invertebrates
BIOL 2520/2530	BIO2006S	Marine and terrestrial plant diversity
BIOL 3500	BIO2008F	Principles of Evolution
BIOL 3500	BIO3010F	Systematics & Macro Evolution
BIOL 3250	BIO3012F	Vertebrates: biology and behaviour
BIOL 2600	BIO2004F	Principles of Ecology
BIOL 2600	BIO3006F	Ecosystem Ecology
BIOL 2600	BIO3011S	Global Change Ecology
BIOL 4620	BIO3002S	Marine Ecology
BIOL 4640	BIO3003S	Inland Water Ecosystems
BIOL Elective	BIO2003S	Ecophysiology - form & function
Soc Sci Elective		--Multiple options

***Galapagos Islands (an IES Program)******Evolution, Ecology, & Conservation***

BIOL 2520/Elective	BIO 420	Native and Introduced Plants of the Galapagos
BIOL 4660	ECL 440	Tropical Ecology
BIOL 3500	BIO 414	Evolutionary Biology
BIOL Elective	ECL 464	Introduction to Marine Life of the Galapagos Islands
Soc Sci Elective	ANT 385	Human Ecology and Maritime Communities

***Marine Ecology***

BIOL Elective	BIO 327	Biology of Fish and Fisheries
BIOL Elective	ECL 335	Techniques of Marine Research
BIOL 3650	ECL 322	Introduction to Marine Ecosystems
BIOL Elective	REC 355	Marine Conservation Biology
Soc Sci Elective	ANT 385	Human Ecology and Maritime Communities