Florida International University
Department of Biological Sciences

Effective for new majors in Fall 2009

MARINE BIOLOGY
BACHELOR OF SCIENCE
PROGRAM OF STUDY

Students are encouraged plan their own course selections; PLEASE go to AND READ COURSE DESCRIPTIONS in the UNDERGRADUATE COURSE CATALOG. Most elective courses have prerequisites that must be taken BEFORE you take the elective course. To see your own progress, you can see and print out your own Degree Audit (SASS report) from the FIU website. If you need assistance or have any questions you are encouraged to see an advisor prior to each registration period. There is a dedicated Marine Biology Advising Office at the Biscayne Bay Campus (MS 352, tel 305-919-4793, e-mail mbioadv@fiu.edu). Faculty in Biological Sciences, including Marine Biology faculty, are also available to provide academic and career advising. All Science and Math courses must be completed with a grade of "C" or better to satisfy the requirements.

LOWER DIVISION PROGRAM – MARINE BIOLOGY

UCC –University Core Curriculum (Note: Transfer students with an AA degree from a Florida State System Community College or University are exempt from the UCC)

Must pass the CLAST requirement

Students entering the University with fewer than 60 hours must complete 9 hours of coursework during the summer semester

Foreign Language requirements (see page 3)

General science requirements

General Science Courses	FIU *( ) = credit hours*	MDC equivalent
General Biology I and II	BSC 1010(3)+Lab(1) BSC 1011(3)+Lab(1)	BSC 2010+Lab or BOT 1010+Lab BSC 2011+Lab ZOO 1010+Lab
General Chemistry I and II	CHM 1045(3)+Lab(1) CHM 1046(3)+Lab(1)	CHM 1040+Lab or CHM 1045+Lab CHM 1041+Lab CHM 1046+Lab
Organic Chemistry I and II	CHM 2210(4)+Lab(1) CHM 2211(3)+Lab(1)	CHM 2210+Lab CHM 2211+Lab
General Physics I and II	PHY 2053(4)+2048L(1) PHY 2054(4)+2049L(1) without Calculus or PHY 2048(4)+Lab(1) PHY 2049(4)+Lab(1) with Calculus	PHY 2053+Lab PHY 2054+Lab PHY 2048+Lab PHY 2049+Lab
Mathematics - Students must complete sub-requirements (A) and (B)		
(A) Calculus I	MAC 2311(4)	MAC 2311
(B) Calculus II	MAC 2312(4)	MAC 2312
or		
Statistics I and II	STA 2122(3) & 3123(3) or STA 3111(4) & 3112(2)	

Note: Calculus I and Statistics I together do not satisfy the requirement
STUDENTS WHO TAKE STATISTICS I AND II MUST ALSO COMPLETE CALCULUS I

UPPER DIVISION PROGRAM – MARINE BIOLOGY

□ Required Courses		Credits	Prerequisites (grades of C or higher)
□ Ecology	PCB 3043	3	BSC 1010 + BSC 1011
□ Genetics	PCB 3063	3	BSC 1010
□ Cell Biology	PCB 4023	3	BSC 1010, CHM 1046
□ Evolution	PCB 4674	3	PCB 3063 + PCB 3043
□ Marine Biology and Oceanography	OCB 3043 ■	3	BSC 1010 + BSC 1011
□ Marine Biology and Oceanography Lab	OCB 3043L ■	1	OCB 3043 (coreq. or prereq.)
□ Senior Seminar	BSC 4931	1	Senior standing (≥ 90 credits)

□ 5 Upper Division Marine Electives (at least 15 credits from among the following courses)

□ Marine Botany	BOT 4402C ◊	3-4	BSC 1011
□ Phycology	BOT 4404	3	BSC 1010 + BSC 1011
□ Ecology of Marine Vascular Plants	BOT 5647	3	
□ Marine Chemistry	CHM 4XXX ■	3	
□ Drugs from the Sea	CHM 5XXX	3	
□ Marine Geology	GLY 4730	3	(OCE 3014 or OCP 3002), GLY 1010
□ Coral Reef Biology	OCB 3264 ■	3	BSC 1011
□ Biological Oceanography at Sea I	OCB 4004	3	OCB 3043
□ Biological Oceanography at Sea II	OCB 4005C	4	OCB 4004
□ Coastal Marine Conservation	OCB 4070 ◊	3	(OCB 3043 or PCB 3043)
□ Biology of Marine Mammals	OCB 4303 ■	3	BSC 1010 + BSC 1011,(PCB 3043 or OCB 3043)
□ Marine Microbial Ecology	OCB 4632 ■	3	BSC 1010 + BSC 1011, OCB 3043
□ Marine Community Ecology	OCB 4XXX	3	PCB 3043
□ Oceanography**	OCE 3014** ◊ ■	3	none
□ Physical Oceanography**	OCP 3002** ■	3	CHM 1045, (PHY 2048 or PHY 2053)
□ Marine Protected Areas	PCB 4467C ■	3-4	none
□ Animal Physiology	PCB 4723 ■	3	BSC 1010 + BSC 1011, CHM 2211
□ Comparative Physiology	PCB 4724 ◊	3	BSC 1010 + BSC 1011, CHM 2210
□ Endocrinology	PCB 4805 ◊	3	BSC 1011, CHM 2211
□ Invertebrate Zoology	ZOO 3203C	4	BSC 1010 + BSC 1011
□ Fish Biology	ZOO 4454 ■	3	BSC 1010 + BSC 1011, PCB 3043

◊ offered in Fall 2009; ■ offered in Spring 2010

**Either OCP 3002 Physical Oceanography or OCE Oceanography, but not both, may count toward the 15 credits of Upper Division Marine Electives. The preferred course for Marine Biology majors is OCP 3002.

Other courses, *as approved in advance* by the Marine Biology Undergraduate Program Director, may also be used.

□ 4 Upper Division Labs – OCB 3043L plus 3 additional upper division labs. Labs may be selected from any Upper Division Required or Marine Elective courses (corequisite or prerequisite: the corresponding lecture course). Course numbers followed by the letter C count as both a lecture and a lab.

□ 9 credit hours of courses outside the major (see page 3) within the last 60 hours of enrollment

□ 120 total credit hours required for graduation, including a minimum of 48 upper division (3000- and 4000-level courses)

Students interested in teacher certification should contact the College of Education at 305-348-2768.

GENERAL REMARKS – MARINE BIOLOGY

- Total number of credit hours needed for graduation 120

- Number of upper division credit hours needed 48
- Upper division credit hours with
  10 biology or marine courses, 4 labs and Senior Seminar 35
  (Note, transfer students with >60 credits, must take
  half of their upper division credits at FIU)
- Credit hours needed outside major (see below) in last 60 hours
  of enrollment 9

Note: For the B.S. in Marine Biology, "outside the major" means outside the prefixes APB, BCH, BOT, BSC, ENY, MCB, OCB, PCB, ZOO, plus CHM 4XXX Marine Chemistry, CHM 5XXX Drugs from the Sea, GLY 4730, OCE 3014, OCP 3002. Take these 9 credit hours outside the major from upper division courses to help you reach the 48 hours needed for graduation

Ex. 35 + 9 = 44 upper division credit hours

- Foreign Language requirements - You must satisfy the following two requirements:

1) FIU Flent/Flex requirement – 2 years of high school foreign language satisfy Flent/Flex
2) College of Arts & Sciences (CAS) requirement – With a grade of C or better, the student may meet the requirement by completing
   a) the second semester of a two semester sequence of a basic language course (Ex. Spanish II)
   b) any second or third year foreign language course…..or:

   The CAS foreign language requirement may also be met by acceptable scores in
   a) the AP exam (minimum score of 4)
   b) the CLEP exam (minimum score of 66 for Spanish, 62 for French) – University Testing Center, GL 120
   c) the SAT II exam (minimum score of 699)
   d) any other approved tests

- Minor in Marine Biology

BSC 1010 and BSC 1011 with labs, OCB 3043 plus lab, and at least two Upper Division Marine Elective courses. Total upper division credits for OCB 3043 plus lab and Upper Division Marine Electives must number 10 or more. Grades of "C"or better are required for all courses and the labs.