MARINE BIOLOGY DEGREE (AY 2015-2016) Revised January 2016

GENERAL EDUCATION CURRICULUM (See Undergraduate Bulletin for full description of GEC)

GEC 01. Written and Oral Communications (2 courses)

01. ENG 101 - Composition One
02. ENG 102 - Composition Two

GEC 02. Basic Science Requirement (2 courses & 2 labs)

BSC 110/L+ - Principles of Biological Sciences I & Lab 3/1
BSC 111/L+ - Principles of Biological Sciences II & Lab 3/1
*This particular course is required for this major.

GEC 03. Humanities (3 courses)

01. REQUIRED: ENG 203 - World Literature 3
02. SELECT 2 courses from the following list. It is REQUIRED that one of the selected courses be a History course.
   HIS 101 - World Civilizations: Beginning to 1500 C.E.
   HIS 102 - World Civilizations: 1500 C.E. to the Present
   PHI 151 - Introduction to Philosophy
   PHI 171 - Ethics and Good Living
   REL 131 - Comparative Religions

GEC 04. Aesthetic Values. SELECT 1 course from the following list.

ART 130 - Art Appreciation
DAN 130 - Dance Appreciation
MUS 165 - The Enjoyment of Music
THE 100 - Theatrical Expressions

GEC 05. Social and Behavioral Sciences. SELECT 2 courses from the following list.

ANT 101 - The Human Experience
COH 100 - Concepts of Wellness
ECO 101 - Basic Economics
GHY 101 - World Regional Geography
PS 101 - American Government
PSY 110 - General Psychology
SOC 101 - Understanding Society

GEC 06. Mathematics Requirement. SELECT 1 of the following calculus courses.**

MAT 114 - Calculus for Arts and Sciences OR
MAT 167 - Calculus I with Analytical Geometry 3

**Calculus is required for this major. MAT 114 is recommended for biology majors. MAT 167 is generally taken by student desiring a minor in mathematics or by students with a second major in mathematics. Students may enroll in MAT 114 if their ACT mathematics subtest score is 24 or higher. Students enrolling in MAT 167 must have an ACT mathematics subtest score of 26 or higher. Students entering USM with an ACT mathematics subtest score of 20 to 23 must complete MAT 101 (College Algebra), with a C or better before taking MAT 114. Students entering USM with an ACT mathematics subtest score of less than or equal to 19 must take MAT 099 (Intermediate Algebra) during their first semester and earn at least a C prior to enrolling in MAT 101 (which must also be completed satisfactorily prior to enrolling in MAT 114). MAT 103 (Trigonometry) is recommended for students lacking a good background in mathematics.

GEC 06B. Computer Competency Requirement. SELECT 1 course from the following list.

CSS 211 - Statistical Methods
CSS 240 - FORTRAN Programming
CSS 330 - Introduction to Programming
CSS 333 - Problem-Solving Using C, I
PSY 350 - Introduction to Statistics for the Behavioral Sciences

GEC 07. Writing-intensive (WI) Requirement. Prerequisites = ENG 101 & ENG 102.

GEC 08. Oral Communication Requirement. SELECT 1 course.
CMS 111 - Oral Communication
CMS 305 - Interpersonal Communication
CMS 320 - Business and Professional Speaking
CMS 330 - Small Group Communication

GEC 09. Capstone Requirement (Major Area)
BSC 497* - Senior Practicum
*This course is required for this major and should be taken during the senior year.

PROGRAM CURRICULUM

DEG 01. Major Area of Study Requirements
01. BSC 197 - First Year Foundations 3
02. BSC 201/L - General Zoology & Lab 3/1
03. BSC 370 - Genetics 4
04. BSC 380/L - General Microbiology & Lab 3/1
05. BSC 445/L - Marine Biology & Lab (WI) 3/1

06. Physiology Electives. SELECT 1 course.
BSC 360 - Cell Biology 3 BSC 452 – Environmental Physiology 3
BSC 450 - Comparative Animal Physiology 3 BSC 453 - Invertebrate Physiology 3
BSC 451 - Human Physiology 3

07. Ecology/Organisms/Technology Electives. SELECT at least 1 course and the corresponding labs (if offered).
BSC 382 - Microbial Ecology 3 BSC 436/L - Conservation Biology & Lab 3/1
BSC 407/L - Biology of Vertebrates & Lab 3/1 BSC 440/L - Ecology & Lab 3/1
BSC 408/L - Invertebrate Zoology I & Lab 3/1 BSC 441/L - Population & Community Ecology & Lab 3/1
BSC 409/L - Invertebrate Zoology II & Lab 3/1 BSC 476 - Molecular Biology 3
BSC 414/L - Ichthyology & Lab 2/2 BSC 478/L - Methods in Biotechnology & Lab 3/1
BSC 415/L - Biology of Fishes & Lab 2/2 BSC 487/L - Microbial Physiology & Lab 3/1
BSC 430/L - Aquatic & Marsh Plants & Lab 2/2 BSC 489/L - Environmental Microbiology & Lab 3/1

08. Marine Biology Electives. SELECT at least 10 hours to be taken during the summer at the Gulf Coast Research Laboratory in Ocean Springs.
COA 300/L - Marine Science I: Oceanogr. & Lab 3/2 COA 428/L - Marine Invertebrate Zoology & Lab 3/3
COA 416/L - Marine Fish, Management & Lab 3/2 COA 443/L - Marine Mammals & Lab 3/2
COA 421/L - Marine Ichthyology & Lab 3/3 COA 446/L - Marine Ecology & Lab 3/2
COA 422/L - Elasmobranch Biology & Lab 3/2 COA 453/L - Parasites of Marine Animals & Lab 3/3
COA 424/L - Marine Aquaculture 3/3 COA 470 - Elasmobranch Physiology 3/1

DEG 02. Additional Requirements (6 courses & 6 labs)
01. CHE 106/L - General Chemistry I & Lab 3/1
02. CHE 107/L - General Chemistry II & Lab 3/1
03. CHE 255/L - Organic Chemistry I & Lab 3/1
04. CHE 256/L - Organic Chemistry II & Lab OR CHE 420/L - Principles of Biochemistry & Lab 3/1
05. PHY 111/L - General Physics I & Lab 3/1
06. PHY 112/L - General Physics II & Lab 3/1

DEG 03. Minor Area of Study (Optional)

DEG 04. Electives – Choose as needed (see hours to degree below).

Hours to Degree at The University of Southern Mississippi (USM): 124 credit hours are needed to graduate with a B.S. in Biological Sciences. At least 50% of the hours applied to the degree at USM must be earned in a senior college and a minimum of 45 of these hours must be in courses numbered 300 or above. Students must earn at least 25% of the credit hours needed for their degree from USM. Students must earn at least 21 of the last 30 hours of course work from USM. Students must also earn at least 12 hours at the 300-400 course level in their major field of study from USM. The capstone course required for a student's degree must also be completed at USM.