

BIOLOGICAL SCIENCES DEGREE: Licensure Emphasis Plan (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)	Credit Hours
01. ENG 101 - Composition One	3
02. ENG 102 - Composition Two	3
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 both courses listed below; HIS 101 and 102 are both required for Teaching Licensure.	
HIS 101 - World Civilizations: Beginning to 1500 C.E.	3
HIS 102 - World Civilizations: 1500 C.E. to the Present	3
GEC 04. Aesthetic Values. SELECT 1 course from the following list.	
ART 130 - Art Appreciation	3
DAN 130 - Dance Appreciation	3
MUS 165 - The Enjoyment of Music	3
THE 100 - Theatrical Expressions	3
GEC 05. Social and Behavioral Sciences. SELECT 2 courses from the following list.	
01. REQUIRED: PSY 110 - General Psychology (required course for Teaching Licensure).	3
02. SELECT 1 course from the following list.	
ANT 101 - The Human Experience	3
GHY 101 - World Regional Geography	3
SOC 101 - Understanding Society	
GEC 06. Mathematics Requirement. SELECT 1 of the following calculus courses.**	
MAT 114 - Calculus for Arts and Sciences OR	3
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 (satisfy one of the following).	
IC3 - Internet & Computing Core Certification (www.certiport.com)	
IT 365 - Computer Applications in Education	3
GEC 07. Writing-Intensive Requirement. SELECT course and lab below.	
BSC 495/L - Application of Basic Concepts for Secondary School (WI)	3/2
GEC 08. Oral Communication Requirement. SELECT 1 course.	
CMS 111 - Oral Communication	3
CMS 305 - Interpersonal Communication	3
CMS 320 - Business and Professional Speaking	3
CMS 330 - Small Group Communication	3
GEC 09. Capstone Requirement (Major Area). Must be taken in the last semester of the senior year.	
SME 489 - Student Teaching in Science I	6
SME 490 - Student Teaching in Science II	6

PROGRAM CURRICULUM

DEG 01. Major Area of Study Requirements (in addition to BSC 110/L and BSC 111/L which are listed above.)

Students must complete a minimum of two laboratory-based BSC courses at the 300-400 levels. General Microbiology & Lab - DEG. 01.07) may be used as one of the two upper level lab courses if taken at the 300 level. BSC 492 (Special Problems) may be substituted with Departmental permission. Non-majors courses such as BSC 392/L or BSC 399/L cannot be used for this purpose.

01. BSC 197 - First Year Foundations			1
02. BSC 201/L - General Zoology & Lab			3/1
03. BSC 226/L - General Botany & Lab			3/1
04. BSC 340 - Introductory Ecology			3
05. BSC 360 - Cell Biology			3
06. BSC 370 - Genetics			4
07. BSC 380/L - General Microbiology & Lab			3/1

08. Physiology Electives. SELECT 1 course.

BSC431/L - Plant Physiology & Lab	3/1	BSC 452 - Environmental Physiology	3
BSC 450 - Comparative Animal Physiology	3	BSC 453 - Invertebrate Physiology	3
BSC 451 - Human Physiology	3	BSC 487/L - Microbial Physiology & Lab	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. Select one 2-course sequence in Physics from the two choices below.			
PHY 111/L - General Physics I & Lab (3/1) and PHY 112/L - General Physics II & Lab (3/1) OR			
PHY 201/L - General Physics I w/ Calculus & Lab (4/1) and PHY 202/L - General Physics II w/ Calculus & Lab (4/1)			

DEG 03. Teacher Licensure Requirements (27 hours). Certain courses are restricted to Gold Card recipients (see Bulletin for details).

01. CIS 302 - Classroom Management	3		
02. CIS 313 - Principles of Teaching High School	3		
03. REF 469 - Tests and Measurements	3		
04. SME 460 - Methods in Teaching Science – Secondary	3		
05. SME 489 - Student Teaching in Science I (also listed under GEC 09 Capstone Requirement - above).	6		
06. SME 490 - Student Teaching in Science II (also listed under GEC 09 Capstone Requirement - above).	6		
07. SPE 400 - Psychology and Education of Exceptional Children	3		
08. Teacher education majors are required to take the Praxis II content and the PLT tests, and have the scores reported to the University of Southern Mississippi (ID code #1479) prior to graduation.			

DEG 04. Electives: If not completing a secondary Licensure option, choose electives needed with advisor's approval. REF 400, GLY 101, or CHE 471/L are recommended (see Hours to Degree below).

DEG 05. Secondary Licensure Option. Students are not required to obtain a second licensure, but are strongly advised to do so. Second licensure options require at least 21 hours. **Chemistry Option includes:** CHE 471/L - Teaching Chemistry in the Secondary Schools & Lab (3/1). **Physics Option includes:** PHY 201/L & PHY 202/L, General Physics I and II w/ Calculus (4/1; 4/1); PHY 327/L - Electronics I & Lab (3/1); PHY 341/L - Optics & Lab (3/1); and PHY 361/L - Elementary Modern Physics I & Lab (3/1). **General Science Option includes:** GLY 101 - Physical Geology (3) and GLY103 - Historical Geology (3).

Grade Requirements: A grade of C or better is required in all content courses in the major as well as in all professional education courses. An overall GPA of 2.5 or higher is also required.

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.