

BIOLOGY DEGREE REQUIREMENTS

GENERAL EDUCATION REQUIREMENTS (38 – 40 Hours)		
College Preparation*		3-6
Writing and Communicating Effectively*		10
Humanities and Social Sciences*		12
Mathematics		6
Natural Science†		8
†Biology majors must take BSC 2010 and BSC 2011 as their natural science requirements (Please see the introductory biology requirements).		
Mathematics		
Foreign Language**		6
** EWC students who have not met the State of Florida Foreign Language requirement in high school will be required to take the following:		
SPN 1120	Elementary Spanish I	3
SPN 1121	Elementary Spanish II	3
INTRODUCTOY BIOLOGY REQUIREMENTS		
BSC 2010	Biology I – Cell Processes	3
BSC 2010L	Biology I – Cell Processes Lab	1
BSC 2011	Biology II – Diversity of Life	3
BSC 2011L	Biology II – Diversity of Life Lab	1
MAJOR REQUIREMENTS (35 hours)		
ZOO 2010	General Zoology	3
ZOO 2010L	General Zoology Lab	1
BOT 3015	Botany	3
BOT 3015L	Botany Lab	1
PCB 3063	Genetics	3
PCB 3063L	Genetics Lab	1
BSC 2093C	Human Anatomy & Physiology I Combined Lab	4
BSC 2094C	Human Anatomy & Physiology II Combined Lab	4
MCB 3020	Microbiology	3
MCB 3020L	Microbiology Lab	1
PCB 3043	Ecology	3
PCB 3043L	Ecology Lab	1
PCB 3023	Cell Biology	3
PCB 3023L	Cell Biology Lab	1
BSC 4905	Biology Seminar/Exit Exam	3
CORE REQUIREMENTS (31 – 37 hours)		
CHM 2045	General Chemistry I	3
CHM 2045L	General Chemistry I Lab	1
CHM 2046	General Chemistry II	3
CHM 2046L	General Chemistry II Lab	1
CHM 2210	Organic Chemistry I	3
CHM 2210L	Organic Chemistry I Lab	1

CHM 2211	Organic Chemistry II	3
CHM 2211L	Organic Chemistry II Lab	1
PHY 2053	General Physics I	3
PHY 2053:	General Physics I Lab	1
PHY 2054	General Physics II	3
PHY 2054L	General Physics II Lab	1
MAC 1114	Trigonometry	3
MAC 1145	Pre-Calculus	3
STA 2023	Elementary Statistics	3
MAC 2311	Calculus w/Analytical Geometry I	4
CONCENTRATIONS ELECTIVE (Choose one of the following concentrations)		
Allied Health/Biomedical Applications Concentration Electives Hours (Minimum Total Required – 18 hrs.)		
BSC 4434	Introduction to Bioinformatics	3
MCB 4503	Virology	3
ZOO 4752	Histology	4
PCB 4109	Biology of Cancer	3
BSC 4910	Biology Research*	3
BSC 2930	Special Topics in Biology	1-6
BSC 3023L	Biochemistry Lab*	1
CHS 3549	Introduction to DNA Forensics	3
HSC 2620	African American Health	3
PCB 3244	Biology of Aging	3
PCB 4523C	Developmental Biology w/Lab	4
<i>The courses listed above with asterisk (*) are mandatory – total of 11 credit hours</i>		
Biotechnology Concentration Electives (Minimum Total Required – 18 hrs.)		
BSC 4434	Introduction to Bioinformatics*	3
BIO 380	Research Methods in Biology*	3
MCB 4503	Virology	3
BSC 4910	Biology Research*	3
BSC 2930	Special Topics in Biology	1-6
PCB 4233	Immunology	3
BCH 3023	Biochemistry*	3
BSC 3023L	Biochemistry Lab*	1
CHS 3549	Introduction to DNA Forensics	3
BSC 2420	Introduction to Biotechnology*	3
<i>The courses listed above with asterisk (*) are mandatory – total of 16 credit hours</i>		
Environmental Biology/Ecology Concentration Electives (Minimum Total Required – 18 hrs.)		
BSC 3402	Research Methods in Biology	3
BSC 2930	Special Topics in Biology	1-6
XXX XXX	Field Methods in Urban Ecology*	4
XXX XXX	Marine Biology*	4
BSC 4910	Biology Research*	3
BCH 3023	Biochemistry	3
BCH 3023L	Biochemistry Lab	1

PCB 3244	Biology of Aging	3
PCB 4523C	Developmental Biology	4
<i>The courses listed above with asterisk (*) are mandatory – total of 14 credit hours</i>		
Total to graduate (including 38 - 40 hours of General Education) (Without Experiential Learning)		122 – 130 Hours
Total to graduate (including 44 - 46 hours of General Education) (Including Experiential Learning)		128 – 136 Hours

ALLIED HEALTH-BIOMEDICAL CONCENTRATION

Core Requirements		Prerequisite
BIO 251	General Biology I with Lab	4
BIO 252	General Biology II with Lab	4
MAJOR REQUIREMENTS		
BIO 305	Zoology with Lab	4
BIO 306	Botany with Lab	4
BIO 310	Genetics with Lan	4
BIO 321	Human Anatomy & Physiology I with Lab	4
BIO 322	Human Anatomy and Physiology II with Lab	4
BIO 330	Microbiology with Lab	4
BIO 400	Ecology	3
BIO 412	Cell Biology with Lab	4
Total Minimum Requirements for the Minor in Biology		20
BIOTECHNOLOGY CONCENTRATION INTRODUCTOY BIOLOGY REQUIREMENTS		
BIO 251	General Biology I	3
	General Biology I lab	1
BIO 252	General Biology II	3
	General Biology II lab	1
MAJOR REQUIREMENTS (49 hours)		
BIO 305	General Zoology	3
	General Zoology Lab	1
BIO 306	Botany	3
	Botany Lab	1
BIO 310	Genetics	3
	Genetics Lab	1
BIO 321	Human Anatomy & Physiology I	3
	Human Anatomy & Physiology I Lab	1
BIO 322	Human Anatomy & Physiology II	3
	Human Anatomy & Physiology II Lab	1
BIO 330	Microbiology	3
	Microbiology Lab	1

BIO 400	Ecology	3
	Ecology Lab	1
BIO 412	Cell Biology	3
	Cell Biology Lab	1
BIO 470	Biology Seminar/Exit Exam	3
BIO 480	Biology Research	3
BIO 482	Immunology	3
	Immunology w/Lab	1
MAT 300	Biostatistics	3
CHE 311	Biochemistry	3
	Biochemistry Lab	1
CORE REQUIREMENTS (31 – 37 hours)		
CHE 251	General Chemistry I	3
	General Chemistry I Lab	1
CHE 252	General Chemistry II	3
	General Chemistry II Lab	1
CHE 301	Organic Chemistry I	3
	Organic Chemistry I Lab	1
CHE 302	Organic Chemistry II	3
	Organic Chemistry II Lab	1
PHY 251	General Physics I	3
	General Physics I Lab	1
PHY 252	General Physics II	3
	General Physics II Lab	1
MAT 251	Trigonometry	3
MAT 255	Pre-Calculus	3
MAT 260	Elementary Statistics	3
MAT 271	Calculus w/Analytical Geometry I	4
SUGGESTED ELECTIVES (Minimum Total Required – 8 hours)		
BIO 340	Introduction to Bioinformatics	3
BIO 410	Bacteriology	3
BIO 420	Virology	3
BIO 425	Histology with Lab	4
BIO 450	Biology of Cancer	3
BIO 480	Biology Research	3
BIO 490	Special Topics in Biology	1-6
BIO 204	Introduction to DNA Forensics	3
BIO 290	African American Health	3
BIO 302	Biology of Aging	3
BIO 325	Developmental Biology w/Lab	4

**Total to graduate (including 38 - 40 hours of General Education) 126 – 132 Hours
(Without Experiential Learning)**

**Total to graduate (including 44 - 46 hours of General Education) 132 – 138 Hours
(Including Experiential Learning)**

Environmental Concentration

INTRODUCTORY BIOLOGY REQUIREMENTS		
BIO 251	General Biology I	3
	General Biology I lab	1
BIO 252	General Biology II	3
	General Biology II lab	1
MAJOR REQUIREMENTS (52 hours)		
BIO 305	General Zoology	3
	General Zoology Lab	1
BIO 306	Botany	3
	Botany Lab	1
BIO 310	Genetics	3
	Genetics Lab	1
BIO 321	Human Anatomy & Physiology I	3
	Human Anatomy & Physiology I Lab	1
BIO 322	Human Anatomy & Physiology II	3
	Human Anatomy & Physiology II Lab	1
BIO 330	Microbiology	3
	Microbiology Lab	1
BIO 340	Introduction to Bioinformatics	3
BIO 380	Research Methods in Biology	3
BIO 400	Ecology	3
	Ecology Lab	1
BIO 412	Cell Biology	3
	Cell Biology Lab	1
BIO 470	Biology Seminar/Exit Exam	3
BIO 480	Biology Research	3
MAT 300	Biostatistics	3
CHE 311	Biochemistry	3
	Biochemistry Lab	1
CORE REQUIREMENTS (31 – 37 hours)		
CHE 251	General Chemistry I	3
	General Chemistry I Lab	1
CHE 252	General Chemistry II	3
	General Chemistry II Lab	1
CHE 301	Organic Chemistry I	3
	Organic Chemistry I Lab	1
CHE 302	Organic Chemistry II	3
	Organic Chemistry II Lab	1
PHY 251	General Physics I	3
	General Physics I Lab	1
PHY 252	General Physics II	3
	General Physics II Lab	1
MAT 251	Trigonometry	3

MAT 255	Pre-Calculus	3
MAT 260	Elementary Statistics	3
MAT 271	Calculus w/Analytical Geometry I	4
SUGGESTED ELECTIVES (Minimum Total Required – 8 hours)		
BIO 410	Bacteriology	3
BIO 420	Virology	3
BIO 425	Histology with Lab	4
BIO 450	Biology of Cancer	3
BIO 480	Biology Research	3
BIO 490	Special Topics in Biology	1-6
BIO 204	Introduction to DNA Forensics	3
BIO 290	African American Health	3
BIO 302	Biology of Aging	3
BIO 325	Developmental Biology w/Lab	4
Total to graduate (including 38 - 40 hours of General Education) 129 – 135 Hours (Without Experiential Learning)		
Total to graduate (including 44 - 46 hours of General Education) 135 – 141 Hours (Including Experiential Learning)		

Minor in Biology

The purpose of this minor is to prepare undergraduate students in the discipline of biology while the student is pursuing a major in another field of study. This minor would apply to students majoring in the following disciplines but is not limited to these fields only: Mathematics, Criminal Justice, Elementary Education, Psychology, and Business Administration.

For a minor in biology, students must successfully complete at least 19/20 semester hours including the laboratory activities. The following table provides the required and other suggested additional courses for the designation of a minor in biology. Students who want to seek a minor in biology must meet the pre-requisite requirement prior to taking the courses listed below. Please see the catalog description for each course listed below to obtain information regarding pre-requisite(s).