

BIOLOGY - PRE-HEALTH PROFESSIONAL BIOLOGY (BACHELOR OF SCIENCE)

Pre-Health Professional Biology is for those majors who intend to seek admission to such health professions as medicine, dentistry, physical therapy, etc., or graduate study in the biomedical sciences.

A minor in Chemistry is recommended for the Pre-Health Professional Biology program.

Course	Title	Credits
Jax MIX General Education Curriculum		41

The requirements for the major in Biology are:

Course	Title	Credits
Freshman Biology Sequence		
BY 101	Introductory Biology I	3
BY 102	Introductory Biology II	3
BY 103	Introductory Biology Lab I	1
BY 104	Introductory Biology Lab II	1
Biology Core Courses		
BY 322	Genetics (WI)	4
BY 324	Introduction to Evolutionary Biology	3
BY 332	Ecology	4
BY 373	Cell Biology	4
Biology concentration (see requirements below)		15
Senior Seminar		
BY 496	Senior Seminar (WI)	1
Freshman Chemistry Sequence		
CY 105	General Chemistry I	3
CY 106	General Chemistry II	3
CY 107	General Chemistry Laboratory I	1
CY 108	General Chemistry Laboratory II	1
Organic Chemistry sequence		
CY 231	Organic Chemistry I	4
CY 232	Organic Chemistry II	4
Mathematics		
Select one of the following:		3-4
MS 113	Precalculus Trigonometry	
MS 125	Calculus I	
or higher		
Computer Science		
CS 201	Introduction to Information Technology	3
Physics Sequence		
PHS 201 & PHS 203	College Physics I and College Physics Laboratory Techniques I	4
PHS 202 & PHS 204	College Physics II and College Physics Laboratory Techniques II	4
Total Hours		69-70

The requirements for the concentration in Pre-Health Professional Biology are:

Course	Title	Credits
BY 320	Comparative Vertebrate Anatomy	4
BY 434	Animal Systems Physiology	4
BY 300+ Electives		7
Total Hours		15

In addition to courses noted below, candidates for graduation must successfully complete all JSU Academic Regulations. More information about Jax MIX requirements (<https://catalog.jsu.edu/undergraduate/jax-mix-requirements/>) and Alabama Transfers equivalents (<https://catalog.jsu.edu/undergraduate/alabama-transfers-equivalents/>) can be found in their respective section of the catalog.

Freshman		Hours
Fall		
Jax MIX Communication: EH Composition sequence		3
BY 101 & BY 103	Introductory Biology I and Introductory Biology Lab I (Jax MIX Inquiry)	4
MS 112	Precalculus Algebra (or higher - Jax MIX Communication)	3
CY 105 & CY 107	General Chemistry I and General Chemistry Laboratory I	4
SSC 101	First Year Experience	0
Hours		14
Spring		
Jax MIX Communication: EH Composition sequence		3
BY 102 & BY 104	Introductory Biology II and Introductory Biology Lab II (Jax MIX Inquiry)	4
CY 106 & CY 107	General Chemistry II and General Chemistry Laboratory I	4
MS 113	Precalculus Trigonometry (or higher)	3
Hours		14
Sophomore		
Fall		
Jax MIX Experience: History sequence		3
Jax MIX Experience: Social/Behavioral Science		3
CY 231	Organic Chemistry I	4
BY 322	Genetics (WI)	4
Hours		14
Spring		
Jax MIX Experience: History sequence		3
Jax MIX Experience: Social/Behavioral Science		3
CS 201	Introduction to Information Technology (or higher)	3
CY 232	Organic Chemistry II	4
BY 373	Cell Biology	4
Hours		17
Junior		
Fall		
EH 141	Speech (Jax MIX Communication)	3
PHS 201 & PHS 203	College Physics I and College Physics Laboratory Techniques I ¹	4
BY 320	Comparative Vertebrate Anatomy	4
Biology Concentration Elective ²		4
Hours		15
Spring		
Jax MIX Expression: Literature		3
PHS 202 & PHS 204	College Physics II and College Physics Laboratory Techniques II ¹	4
BY 434	Animal Systems Physiology	4

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Biology Concentration Elective ²	3
Hours	14
Senior	
Fall	
Jax MIX Expression: Literature	3
BY 324 Introduction to Evolutionary Biology	3
BY 332 Ecology	4
Electives	6
Hours	16
Spring	
Jax MIX Expression: Fine Arts	3
BY 496 Senior Seminar (WI)	1
Electives	12
Hours	16
Total Hours	120

¹ Student may elect to take calculus-based PHS 221 Physics for Scientists and Engineers I w/Lab (4) /PHS 222 Physics for Scientists and Engineers II w/Lab (4) in place of PHS 201 College Physics I (3)/PHS 202 College Physics II (3).

² Recommended elective courses: BY 323, BY 402, BY 403, BY 450, CY 362. A minor in chemistry is also recommend.