

Arkansas State University – Jonesboro
Bachelor of Science
Major: Biotechnology
2025-2026

Students needing foundational course work based on low entrance exam scores (ACT, SAT, ASSET, COMPASS) may require more than eight (8) semesters to complete this program of study. Students having completed college level courses prior to enrollment will be assisted by their advisor in making appropriate substitutions. In most cases, general education courses may be interchanged between semesters. A minimum of 45 hours of upper division credit (3000-4000 level) is required for this degree. It is important to note that some upper-level degree requirements may be courses that are only offered once every two years. Students and advisors must become familiar with the cycle of teaching these courses. Students and advisors must also be aware that some courses may be offered only in Fall or Spring semesters. Mandatory state and institutional assessment exams will be required during your degree program. Failure to participate in required assessments may delay graduation. The following example does not account for the foreign language requirement. Two semesters of a foreign language are required unless taken in high school. This should be discussed with your advisor. If you need to take foreign language courses, choose the lightest semesters.

Year 1			
Fall Semester			
Course No.	Course Name	Hrs	Gen Ed
BIO 1013	Biology Making Connections	3	
BIO 1303	Biology of Animals	3+1	
BIO 1301	Biology of Animals Lab		
	OR		
BIO 1503	Biology of Plants		
BIO 1501	Biology of Plants		
CHEM 1013	General Chemistry I	3	X
CHEM 1011	General Chemistry I Lab	1	X
MATH 2204	Calculus I		X
	OR	4	
	Survey of Calculus		
	Total Hours	15	

Year 1			
Spring Semester			
Course No.	Course Name	Hrs	Gen Ed
BIO 2013	Biology of the Cell**	3	X
BIO 2011	Biology of the Cell Lab**	1	X
CHEM 1023	General Chemistry II	3	
CHEM 1021	General Chemistry II Lab	1	
BIO 2042	Biotech in a Global Society	2	
ENG 1003	Composition I	3	X
	Social Science	3	X
	Total Hours	16	

Year 2			
Fall Semester			
Course No.	Course Name	Hrs	Gen Ed
BIO 3013	Genetics**	3	
BIO 3011	Genetics Lab**	1	
CHEM 3103	Organic Chemistry I	3	
CHEM 3101	Organic Chemistry I Lab	1	
PHYS 2054	General Physics I	4	
ENG 1013	Composition II	3	X
	Total Hours	15	

Year 2			
Spring Semester			
Course No.	Course Name	Hrs	Gen Ed
STAT 3233	Applied Statistics I	3	
CHEM 3113	Organic Chemistry II	3	
CHEM 3111	Organic Chemistry II Lab	1	
PHYS 2064	General Physics II	4	
BIO 403V	Special Problems in Biology	3	
SCOM 1203	Oral Communications	3	X
	Total Hours	17	

Year 3			
Fall Semester			
Course No.	Course Name	Hrs	Gen Ed
BIO 4104	Microbiology	4	
BIO 4033	Bioinformatics and Applications	3	
Chem 4243	Biochemistry	3	
Chem 4241	Biochemistry Lab	1	
AGRI 4523	Applied Modern Biotechnology^	3	
	Total Hours	14	

Year 3			
Spring Semester			
Course No.	Course Name	Hrs	Gen Ed
BIO 4173	Molecular Biology	3	
BIO 4133	Cell Biology	3	
BIO 4131	Cell Biology Lab	1	
BIO 4103	Virology^ *(Spring only)	3	
	OR		
	Biological Sciences Elective		
	Fine Art	3	X
	Social Science	3	X
	Total Hours	16	

Year 4			
Fall Semester			
Course No.	Course Name	Hrs	Gen Ed
BIO 4153	Laboratory in Biotechniques I	3	
AGRI 4523	Applied Modern Biotechnology^	3	
BIO 4113	Immunology** (Fall only)	3	
	OR		
	Biological Sciences Elective		
BIO 4063	Biosafety and Ethics in Research	3	
	Humanities	3	X
	Total Hours	15	

Year 4			
Spring Semester			
Course No.	Course Name	Hrs	Gen Ed
BIO 4163	Laboratory in Biotechniques II	3	
EMSL 3123	Principles of Management^	3	
	OR		
EMSL 3183	Entrepreneurship^		
BIO 4053	Applications in Biotechnology	3	
	Social Science	3	X
	Total Hours	12	
	Total Hours for Degree	120	

ALTERNATIVES POS options with codes

- ** BOTC Honors/Regular Sections in Y2 Fall; Genetics in Y2 Spring; Shift Physics I/II to Y1 Spring and Y2 Fall respectively or move up Gen Ed courses
- ^ Biotech ELECTIVE courses - 3 credits must be a business course; must have Immunology or Virology; all others are elective choices
- ^^ One semester Biotech Immunology/Virology and other semester Biological Science Elective