

**Bachelor of Science in Biology**  
**Biotechnology & Molecular Biology Concentration**  
**Transfer Curriculum Planning Guide and Baccalaureate Degree Plan**  
**Fayetteville State University**  
**(2022-2023)**

University College Core Curriculum (39 Credits)	Course Number <sup>1</sup>	Cr.	FSU Equivalent
<b>Transitional Studies – University Studies (2 Credits)</b> <i>Select one option from (UNIV 101/102) or UNIV 110 or UNIV 111 or UNIV 112</i>	ACA 122 (1 cr.)	2	Waived with 30 credit hours <sup>2</sup>
<b>Transitional Studies – Life Skills (2 Credits)</b> <i>Select two credits from the following: ENTR 100 or FINC 100 or GEOG 110 or HEED 112 or HEED 113 or PEDU 101 or PEDU 107 or PEDU 112 or PEDU 120 or PEDU 122 or PEDU 130 or PEDU 132 or PEDU 140</i>	PED 110 or any PED course	2	Waived with AA/AS, NOT with AAS/AGE <sup>2</sup> <sub>3</sub>
<b>Communication Skills – Written Communication (3 Credits) – ENGL 110</b>	ENG 111	3	ENG 110
<b>Information Literacy (3 Credits) – ENGL 120</b>	ENG 112	3	ENG 120
<b>Communication Skills – Oral Communication (3 Credits)</b> <i>SPEE 200 Or BADM 215</i>	COM 231	3	SPEE 200 BADM 215
<b>Reasoning Skills – Critical Thinking (3 Credits)</b> <i>Select one from the following: PHIL 110 or PHIL 220</i>	HUM 115	3	Waived with 60 credit hours <sup>2</sup>
<b>Reasoning Skills – Quantitative Reasoning (3 Credits)</b> <i>Select one from the following: MATH 129 or MATH 130 or MATH 131</i>	MAT 171 or higher	3	MATH 129 or higher
<b>Scientific Literacy – Natural Sciences (7-8 Credits)<sup>4</sup></b> <i>Select from the following: BIOL 150 and BIOL 150L And BIOL 160 And BIOL 160L</i>	BIO 111	4	BIOL 150 and 150L
	BIO 112	4	BIOL 160 and 160L
<b>Scientific Literacy – Social Sciences (3 Credits)</b> <i>CRJC 210 or ECON 211 or ECON 212 or GEOG 210 or HIST 212 or HIST 271 or POLI 200 or POLI 210 or POLI 220 or POLI 270 or PSYC 210 or SOCI 210</i>	Social science elective	3	
<b>Humanities and Creative Arts (3 Credits)</b> <i>Select one from the following: ART 210 or COMM 220 or ENGL 220 or ENGL 223 or ENGL 240 or ENGL 250 or ENGL 253 or HIST 210 or HUMN 211 or HUMN 212 or MUSI 210 or MUSI 225 or MUSI 260 or PHIL 210 or RELI 215 or THEA 203</i>	Hum/Fine Arts elective	3	
<b>Global Literacy (3 Credits)<sup>5</sup></b> <i>Select one from the following: ANTH 210 or ART 150 or ART 215 or BADM 210 or CHIN 110 or CHIN 120 or ENGL 211 or ENGL 212 or FREN 110 or FREN 120 or GEOG 220 or HIST 110 or HIST 120 or HIST 270 or PHIL 211 or POLI 230 or SOCI 150 or SPAN 110 or SPAN 112 or SPAN 120 or SPAN 122 or SPAN 211 or THEA 242 or YORU 110 or YORU 120</i>	Foreign language or Global literacy course	3	Waived with AA/AS, NOT with AAS/AGE <sup>2</sup>
<b>Ethics and Civic Engagement (3 Credits)</b> <i>Select three credits from the following: BADM 220 or CRJC 203 or EDUC 211 or ENEC 210 or ENGL 232 or ENGL 233 or (ETCE 101/102/103) or ETCE 200 or GEOG 270 or HCM 200 or HIST 211 or PHIL 120 or PHIL 212 or PHIL 250 or PNUR 210 or POLI 150 or SPTM 210 or SWRK 220</i>	EDUC 216	3	Waived with 60 credit hours <sup>2</sup>

**Notes**

- 1 Courses are for the North Carolina Community College (NCCC) system. Other courses may satisfy requirement.
- 2 Students do not earn credit if any requirement is waived. All students must earn at least 120 credits to graduate.
- 3 NCCC Associate in Arts (AA), Associate in Science (AS), Associate in Applied Science (AAS), Associate in General Education (AGE). Per NC Comprehensive Articulation Agreement, NCCC graduates with AA or AS have completed FSU general education requirements. NCCC general education courses not used for core may be applied to free electives or used to reach 120 credits. AAS, AFA, and other specific degrees may be governed by articulation agreements.
- 4 At least one Natural Science class must include a lab.
- 5 Not required for students with 30 or more transfer credits from a foreign institution. Students do not earn credit if requirement is waived.

<b>Program Requirements (81 Credits)</b>	<b>Course Number</b>	<b>Cr.</b>	<b>FSU Equivalent</b>
<b>Required Major Courses (62 Credits)</b> <i>(BIOL 200 And BIOL 200L) And (BIOL 210 And BIOL 210L) And (BIOL 220 And BIOL 220L) And BIOL 225 And (BIOL 310 And BIOL 310L) And BIOL 320 And (BIOL 330 And BIOL 330L) And BIOL 400 And BTCH 210 And BTCH 220 And BTCH 230 (BIOL 325 And BIOL 325L) Or (BTCH 360 And BTCH 360L) And BTCH 490 Or BIOL 499 And (CHEM 141 And CHEM 141L) And (CHEM 161 And CHEM 161L) And (PHYS 115 And PHYS 125L) And (PHYS 116 And PHYS 126L).</i>		<b>62</b>	
<b>Required Concentration Electives (Select 16 Credits from the following):</b> <i>BTCH 310, BTCH 320, (BIOL 325 And BIOL 325L) Or (BTCH 360 And BTCH 360L), (BTCH 340 And BTCH 340L), BTCH 350, BTCH 410, BTCH 425, (BTCH 435 And BTCH 435L), BTCH 440, BTCH 450 Or BIOL 430, (BTCH 460 And BTCH 460L), (BIOL 410 And BIOL 410L) Or (BICH 411 And BICH 421), BTCH 490 Or BIOL 499.</i>		<b>16</b>	
	CHM 151		CHEM 141 and 141L
	CHM 152		CHEM 161 and 161L
	PHY 151		PHYS 115 and 125L
	PHY 152		PHYS 116 and 126L
<b>Other Required Courses (3 Credits)</b>			
<i>MATH 130 Or Higher</i>	MAT 172 or higher	<b>3</b>	MATH 130 or higher
<b>Waived Core Requirements</b> <i>The credits in this area increase as requirements are waived without credit in the university core – typically 7 credits to equal 120 credits overall; add extra lines as needed.</i>			
<b>Total Credits</b>		<b>120</b>	
<b>Transfer Credits</b>			

## Four-Year Plan

This Plan illustrates how students can meet degree course requirements in four years. Some courses listed below may be taken in an alternate order. Courses fulfilling requirements are listed on the previous pages. For information about prerequisites and other program requirements, consult the appropriate Catalog Program of Study and an advisor. Students should work with advisor to create and update an individual plan in Degree Works.

<b>Year 1 Fall</b>		
Requirement	Course	Cr
University Studies	UNIV 101	1
Written Communication	ENGL 110	3
Core Life Skills	See core courses <sup>1</sup>	2
Precalculus Mathematics I	MATH 129	3
Core Social Science	See core courses <sup>1</sup>	3
Core Humanities Creative Arts	See core courses <sup>1</sup>	3
<b>Total:</b>		<b>15</b>

<b>Year 1 Spring</b>		
Requirement	Course	Cr
University Studies	UNIV 102	1
Information Literacy	ENGL 120	3
Oral Communication	BADM 215 Or SPEE 200	3
Reason. Skills-Critical Thinking	PHIL 110 Or PHIL 220	3
Precalculus Mathematics II	MATH 130	3
Principles of Biology I w/ Lab	BIOL 150/150L	4
<b>Total:</b>		<b>17</b>

<b>Year 2 Fall</b>		
Requirement	Course	Cr
Principles of Biology II w/ Lab	BIOL 160/160L	4
General Chemistry I w/ Lab	CHEM 141/141L	4
Scientific Communication	BIOL 225	3
Core Global Literacy	See core courses <sup>1</sup>	3
Core Ethics Civic Engagement	See core courses <sup>1</sup>	3
<b>Total:</b>		<b>17</b>

<b>Year 2 Spring</b>		
Requirement	Course	Cr
Cellular Biology w/ Lab	BIOL 200/200L	4
General Zoology w/ Lab	BIOL 220/220L	4
General Chemistry II w/ Lab	CHEM 161/161L	4
Introduction to Biotechnology	BTCH 210	3
<b>Total:</b>		<b>15</b>

<b>Year 3 Fall</b>		
Requirement	Course	Cr
General Botany w/ Lab	BIOL 210/210L	4
Biology Seminar	BIOL 320	1
Biotechniques I	BTCH 220	4
General Physics I	PHYS 115	3
College Physics I Lab	PHYS 125L	1
<b>Total:</b>		<b>13</b>

<b>Year 3 Spring</b>		
Requirement	Course	Cr
Principles of Genetics w/ Lab	BIOL 310/310L	4
Microbiology & Immunology w/ Lab	BIOL 330/330L	4
Biotechniques II	BTCH 230	4
General Physics II	PHYS 116	3
College Physics II Lab	PHYS 126L	1
<b>Total:</b>		<b>16</b>

<b>Year 4 Fall</b>		
Requirement	Course	Cr
Biostatistics	BIOL 400	3
Mol. Biol./Mol. Genet.	BIOL325/325L Or BTCH360/360L	4
Concentration Elective	See conc. Electives <sup>2</sup>	3
Concentration Elective	See conc. Electives <sup>2</sup>	3
<b>Total:</b>		<b>13</b>

<b>Year 4 Spring</b>		
Requirement	Course	Cr
Res. in Biotech/Senior Capstone	BTCH 490 Or BIOL 499	4
Concentration Elective	See conc. Electives <sup>2</sup>	4
Concentration Elective	See conc. Electives <sup>2</sup>	3
Concentration Elective	See conc. Electives <sup>2</sup>	3
<b>Total:</b>		<b>14</b>

### Notes

- Core Courses: (UNIV 101/102) or UNIV 110 or UNIV 111 or UNIV 112; ENTR 100 or FINC 100 or GEOG 110 or HEED 112 or HEED 113 or PEDU 101 or PEDU 107 or PEDU 112 or PEDU 120 or PEDU 122 or PEDU 130 or PEDU 132 or PEDU 140; ENGL 110; ENGL 120; SPEE 200 Or BADM 215; PHIL 110 or PHIL 220; MATH 129 and MATH 130 or MATH 131; BIOL 150 and BIOL 150L And BIOL 160 And BIOL 160L; CRJC 210 or ECON 211 or ECON 212 or GEOG 210 or HIST 212 or HIST 271 or POLI 200 or POLI 210 or POLI 220 or POLI 270 or PSYC 210 or SOCI 210; ART 210 or COMM 220 or ENGL 220 or ENGL 223 or ENGL 240 or ENGL 250 or ENGL 253 or HIST 210 or HUMN 211 or HUMN 212 or MUSI 210 or MUSI 225 or MUSI 260 or PHIL 210 or RELI 215 or THEA 203; ANTH 210 or ART 150 or ART 215 or BADM 210 or CHIN 110 or CHIN 120 or ENGL 211 or ENGL 212 or FREN 110 or FREN 120 or GEOG 220 or HIST 110 or HIST 120 or HIST 270 or PHIL 211 or POLI 230 or SOCI 150 or SPAN 110 or SPAN 112 or SPAN 120 or SPAN 122 or SPAN 211 or THEA 242 or YORU 110 or YORU 120; BADM 220 or CRJC 203 or EDUC 211 or ENEC 210 or ENGL 232 or ENGL 233 or (ETCE 101/102/103) or ETCE 200 or GEOG 270 or HCM 200 or HIST 211 or PHIL 120 or PHIL 212 or PHIL 250 or PNUR 210 or POLI 150 or SPTM 210 or SWRK 220.
- Concentration Courses: BIOL 205, BIOL 410/410L Or (BICH 411/BICH 421), BIOL 430, BTCH 310, BTCH 320, BTCH 340, BTCH 350, BTCH 410, BTCH 425, BTCH 435/435L, BTCH 440, BTCH 450, BTCH 460, CHEM 223/223L, CHEM 225/225L.