

Major/Program	Biology (Genetics)
College	Science and Mathematics
Department	Biology
Contact	Dr. Dave Slimmer, Dean

2022-2023

Lander University 4-Year Major Guide

Can be swapped between Second Year fall and spring

Can be moved to any semester

	First Semester	Second Semester	TOTALS																																												
First Year	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Course</th> <th>Notes</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>BIOL 111</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td>CHEM 111</td> <td>Scientific and Mathematical Reasoning (General Education)</td> <td style="text-align: center;">4</td> </tr> <tr> <td>MATH 121, MATH 123, or MATH 141</td> <td>Core Academic Skills (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>ENGL 101</td> <td>Core Academic Skills (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>LINK 101</td> <td>General Education</td> <td style="text-align: center;">1</td> </tr> <tr> <td colspan="2" style="text-align: right;">Subtotal</td> <td style="text-align: center;">15</td> </tr> </tbody> </table>	Course	Notes	Hours	BIOL 111		4	CHEM 111	Scientific and Mathematical Reasoning (General Education)	4	MATH 121, MATH 123, or MATH 141	Core Academic Skills (General Education)	3	ENGL 101	Core Academic Skills (General Education)	3	LINK 101	General Education	1	Subtotal		15	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Course</th> <th>Notes</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>BIOL 112</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td>CHEM 112</td> <td>General Education Elective (General Education)</td> <td style="text-align: center;">4</td> </tr> <tr> <td>MATH 211</td> <td>Scientific and Mathematical Reasoning (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>ENGL 102</td> <td>Core Academic Skills (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>General Education</td> <td>Behavioral and Social Perspectives (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td colspan="2" style="text-align: right;">Subtotal</td> <td style="text-align: center;">17</td> </tr> </tbody> </table>	Course	Notes	Hours	BIOL 112		4	CHEM 112	General Education Elective (General Education)	4	MATH 211	Scientific and Mathematical Reasoning (General Education)	3	ENGL 102	Core Academic Skills (General Education)	3	General Education	Behavioral and Social Perspectives (General Education)	3	Subtotal		17	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Yearly Totals</td> <td style="text-align: center;">32</td> </tr> </table>	Yearly Totals	32
	Course	Notes	Hours																																												
	BIOL 111		4																																												
	CHEM 111	Scientific and Mathematical Reasoning (General Education)	4																																												
	MATH 121, MATH 123, or MATH 141	Core Academic Skills (General Education)	3																																												
	ENGL 101	Core Academic Skills (General Education)	3																																												
LINK 101	General Education	1																																													
Subtotal		15																																													
Course	Notes	Hours																																													
BIOL 112		4																																													
CHEM 112	General Education Elective (General Education)	4																																													
MATH 211	Scientific and Mathematical Reasoning (General Education)	3																																													
ENGL 102	Core Academic Skills (General Education)	3																																													
General Education	Behavioral and Social Perspectives (General Education)	3																																													
Subtotal		17																																													
Yearly Totals	32																																														
Second Year	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Course</th> <th>Notes</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>* Program Requirement</td> <td>Organismal Diversity Requirement (see note below)</td> <td style="text-align: center;">4</td> </tr> <tr> <td>CHEM 221</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td>Elective</td> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td>General Education</td> <td>Behavioral and Social Perspectives (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td colspan="2" style="text-align: right;">Subtotal</td> <td style="text-align: center;">14</td> </tr> </tbody> </table>	Course	Notes	Hours	* Program Requirement	Organismal Diversity Requirement (see note below)	4	CHEM 221		4	Elective		3	General Education	Behavioral and Social Perspectives (General Education)	3	Subtotal		14	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Course</th> <th>Notes</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>BIOL 303</td> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td>BIOL 299</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>CHEM 301</td> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td>HIST 111 or POLS 101</td> <td>Founding Documents (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Elective</td> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td>Elective</td> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td colspan="2" style="text-align: right;">Subtotal</td> <td style="text-align: center;">16</td> </tr> </tbody> </table>	Course	Notes	Hours	BIOL 303		3	BIOL 299		1	CHEM 301		3	HIST 111 or POLS 101	Founding Documents (General Education)	3	Elective		3	Elective		3	Subtotal		16	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Yearly Totals</td> <td style="text-align: center;">30</td> </tr> </table>	Yearly Totals	30
	Course	Notes	Hours																																												
	* Program Requirement	Organismal Diversity Requirement (see note below)	4																																												
	CHEM 221		4																																												
	Elective		3																																												
	General Education	Behavioral and Social Perspectives (General Education)	3																																												
Subtotal		14																																													
Course	Notes	Hours																																													
BIOL 303		3																																													
BIOL 299		1																																													
CHEM 301		3																																													
HIST 111 or POLS 101	Founding Documents (General Education)	3																																													
Elective		3																																													
Elective		3																																													
Subtotal		16																																													
Yearly Totals	30																																														
Third Year	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Course</th> <th>Notes</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>BIOL 312</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td>BIOL 399</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>PHYS 201 or PHYS 211</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td>General Education</td> <td>Humanities and Fine Arts (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Elective</td> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td colspan="2" style="text-align: right;">Subtotal</td> <td style="text-align: center;">15</td> </tr> </tbody> </table>	Course	Notes	Hours	BIOL 312		4	BIOL 399		1	PHYS 201 or PHYS 211		4	General Education	Humanities and Fine Arts (General Education)	3	Elective		3	Subtotal		15	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Course</th> <th>Notes</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>BIOL 403</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td>PHYS 202 or PHYS 212</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td>General Education</td> <td>World Cultures (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Elective</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td colspan="2" style="text-align: right;">Subtotal</td> <td style="text-align: center;">15</td> </tr> </tbody> </table>	Course	Notes	Hours	BIOL 403		4	PHYS 202 or PHYS 212		4	General Education	World Cultures (General Education)	3	Elective		4	Subtotal		15	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Yearly Totals</td> <td style="text-align: center;">30</td> </tr> </table>	Yearly Totals	30			
	Course	Notes	Hours																																												
	BIOL 312		4																																												
	BIOL 399		1																																												
	PHYS 201 or PHYS 211		4																																												
	General Education	Humanities and Fine Arts (General Education)	3																																												
Elective		3																																													
Subtotal		15																																													
Course	Notes	Hours																																													
BIOL 403		4																																													
PHYS 202 or PHYS 212		4																																													
General Education	World Cultures (General Education)	3																																													
Elective		4																																													
Subtotal		15																																													
Yearly Totals	30																																														
Fourth Year	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Course</th> <th>Notes</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>BIOL 307</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td>Genetics Group Requirement</td> <td>(see note below)</td> <td style="text-align: center;">4</td> </tr> <tr> <td>BIOL 498</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>General Education</td> <td>Humanities and Fine Arts (General Education)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Elective</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td colspan="2" style="text-align: right;">Subtotal</td> <td style="text-align: center;">16</td> </tr> </tbody> </table>	Course	Notes	Hours	BIOL 307		4	Genetics Group Requirement	(see note below)	4	BIOL 498		1	General Education	Humanities and Fine Arts (General Education)	3	Elective		4	Subtotal		16	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Course</th> <th>Notes</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>Genetics Group Requirement</td> <td>(see note below)</td> <td style="text-align: center;">4</td> </tr> <tr> <td>BIOL 499</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>BIOL 412</td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td>FALS 101</td> <td>University Requirement</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Elective</td> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td colspan="2" style="text-align: right;">Subtotal</td> <td style="text-align: center;">12</td> </tr> </tbody> </table>	Course	Notes	Hours	Genetics Group Requirement	(see note below)	4	BIOL 499		1	BIOL 412		4	FALS 101	University Requirement	0	Elective		3	Subtotal		12	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Yearly Totals</td> <td style="text-align: center;">28</td> </tr> </table>	Yearly Totals	28
	Course	Notes	Hours																																												
	BIOL 307		4																																												
	Genetics Group Requirement	(see note below)	4																																												
	BIOL 498		1																																												
	General Education	Humanities and Fine Arts (General Education)	3																																												
Elective		4																																													
Subtotal		16																																													
Course	Notes	Hours																																													
Genetics Group Requirement	(see note below)	4																																													
BIOL 499		1																																													
BIOL 412		4																																													
FALS 101	University Requirement	0																																													
Elective		3																																													
Subtotal		12																																													
Yearly Totals	28																																														

Total Hours Required: 120

* Students may take either BIOL 213 or BIOL 214 to meet the organismal diversity requirement. Those who opt to fulfill this requirement in the second semester should take BIOL 303 in the first semester.

Biology Group Requirements

- Group 1: BIOL 308 or BIOL 313 or BIOL 401
- Group 2: BIOL 307
- Group 3: BIOL 306 or BIOL 311 or BIOL 415 or BIOL 421