

# BIOMEDICAL SCIENCES (B.S.) - PRE-CLINICAL - RESIDENT

**Important:** This degree plan is effective for those starting this degree program in fall 2023 through summer 2024. This degree plan will remain in effect for students who do not break enrollment or who do not change degree programs, concentrations, or cognates.

## General Education/Foundational Skills Requirements

Code	Title	Hours
<b>Communication &amp; Information Literacy</b> <sup>1</sup>		
ENGL 101	Composition and Rhetoric	3
INQR 101	Inquiry	1
Communications Elective		3
Information Literacy Elective		3
Information Literacy Elective		3
<b>Technological Solutions &amp; Quantitative Reasoning</b> <sup>1</sup>		
UNIV 101	Foundational Skills	1
Math Elective	MATH 114 or higher	3
Technology Competency <sup>2</sup>		0-3
<b>Critical Thinking</b> <sup>1</sup>		
RLGN 105	Introduction to Biblical Worldview <sup>3</sup>	2
RSCH 201	Research	3
Critical Thinking Elective		3
<b>Civic &amp; Global Engagement</b> <sup>1</sup>		
EVAN 101	Evangelism and the Christian Life <sup>3</sup>	2
Cultural Studies Elective		3
<b>Social &amp; Scientific Inquiry</b> <sup>1</sup>		
Natural Science Elective		3
Social Science Elective <sup>4</sup>		3
<b>Christianity &amp; Contexts</b> <sup>1</sup>		
BIBL 105	Old Testament Survey	2
BIBL 110	New Testament Survey	2
THEO 201	Theology Survey I <sup>3</sup>	2
THEO 202	Theology Survey II <sup>3</sup>	2
<b>Total Hours</b>		<b>44-47</b>

<sup>1</sup> Refer to the list of approved general education electives before enrolling in foundational skill requirements

<sup>2</sup> All students must pass the Computer Assessment OR complete applicable INFT course

<sup>3</sup> Students transferring in 45 or more UG credit hours will have the requirements of RLGN 105 Introduction to Biblical Worldview (2 c.h.) and EVAN 101 Evangelism and the Christian Life (2 c.h.) waived; Students transferring in 60 or more UG credit hours will also have the requirements of THEO 201 Theology Survey I (2 c.h.) and THEO 202 Theology Survey II (2 c.h.) waived

<sup>4</sup> PSYC 101 General Psychology (3 c.h.) is strongly recommended

## Major Requirements

Code	Title	Hours
<b>Major Foundational Courses</b>		
BIOL 224	General Biology I <sup>1</sup>	4
CHEM 121	General Chemistry I <sup>1</sup>	4
or CHEM 131 & CHEM 135	Advanced General Chemistry I and Advanced General Chemistry Lab	
CHEM 122	General Chemistry II <sup>1</sup>	4
or CHEM 132 & CHEM 136	Advanced General Chemistry II and Advanced General Chemistry II Lab	
MATH 201	Introduction to Probability and Statistics <sup>1</sup>	3
or MATH 211	Introduction to Statistical Analysis	
MATH 126	Elementary Calculus for Business and Science <sup>1</sup>	3-4
or MATH 131	Calculus and Analytic Geometry I	
PHYS 201	General Physics I <sup>1</sup>	4
or PHYS 231	University Physics I	
PHYS 202	General Physics II <sup>1</sup>	4
or PHYS 232	University Physics II	
<b>Total Hours</b>		<b>26-27</b>

<sup>1</sup> Course may fulfill select general education requirements

Code	Title	Hours
<b>Major Core</b>		
BCHM 450	Medical Biochemistry	3-4
or BCHM 451	Biochemistry I	
BIOL 225	General Biology II	4
BIOL 301	Genetics	4
BIOL 313	Clinical Human Anatomy	3
or BIOL 385	Advanced Human Physiology	
BIOL 400	Biology Seminar	1
BIOL 415	Cell Biology	4
CHEM 301	Organic Chemistry I	4
CHEM 302	Organic Chemistry II	4
CRST 290	History of Life	3
or CRST 390	Origins	
Choose 12-16 credit hours from the following:		12-16
BCHM 452	Biochemistry II	
BIOL 303	Microbiology	
BIOL 305	Parasitology	
BIOL 313	Clinical Human Anatomy	
BIOL 316	Human Biological Variation	
BIOL 321	Comparative Anatomy of the Vertebrates	
BIOL 330	Histology	
BIOL 385	Advanced Human Physiology	
BIOL 403	Embryology	
BIOL 416	Comparative Animal Physiology	
BIOL 420	Immunology	
BIOL 435	Neurobiology	
<b>Total Hours</b>		<b>42-47</b>

Code	Title	Hours
<b>Cognate</b>		
BIOL 214	Human Anatomy and Physiology I Lab	1
BIOL 216	Human Anatomy and Physiology II Lab	1
BIOL 499	Internship	3-6
Psychology Elective <sup>1,2</sup>		3
Psychology Elective <sup>1,2</sup>		3
<b>Total Hours</b>		<b>11-14</b>

<sup>1</sup> Choose any 200-400 level PSYC course, except for PSYC 354

<sup>2</sup> PSYC 210 or PSYC 430 are strongly recommended

Code	Title	Hours
<b>Free Electives</b>		
Choose 0-4 credit hours of Free Electives		0-4
<b>Total Hours</b>		<b>0-4</b>

All applicable prerequisites must be met

## Graduation Requirements

- 120 total hours
- 2.0 Overall grade point average
- 30 Hours must be upper-level courses (300-400 level)
- **Grade of 'C'** Minimum required for all upper-level courses in the major
- 25% Of major taken through Liberty University
- 30 Hours must be completed through Liberty University
- **Grad App** Submission of Degree Completion Application must be completed within the last semester of a student's anticipated graduation date
- **CSER** All Requirements must be satisfied before a degree will be awarded

## Course Sequence

Course	Title	Hours
<b>First Year</b>		
<b>First Semester</b>		
ENGL 101	Composition and Rhetoric	3
INQR 101	Inquiry	1
MATH 126 or MATH 131	Elementary Calculus for Business and Science or Calculus and Analytic Geometry I	3-4
UNIV 101	Foundational Skills	1
Natural Science Elective (BIOL 224) <sup>1</sup>		4
CHEM Elective(s) <sup>2</sup>		4
CSER		0
<b>Hours</b>		<b>16-17</b>
<b>Second Semester</b>		
RLGN 105	Introduction to Biblical Worldview	2
CHEM Elective(s) <sup>3</sup>		4
Information Literacy Elective <sup>1</sup>		3
MATH Elective (MATH 201 or MATH 211) <sup>1</sup>		3
BIOL 225	General Biology II	4
CSER		0
<b>Hours</b>		<b>16</b>

Course	Title	Hours
<b>Second Year</b>		
<b>First Semester</b>		
RSCH 201	Research	3
Communications Elective <sup>1</sup>		3
Technology Competency <sup>4</sup>		0-3
BIOL 301	Genetics	4
CHEM 301	Organic Chemistry I	4
CSER		0
<b>Hours</b>		<b>14-17</b>

<b>Second Semester</b>		
BIBL 105	Old Testament Survey	2
Critical Thinking Elective <sup>1</sup>		3
BIOL 415	Cell Biology	4
CHEM 302	Organic Chemistry II	4
CRST 290 or CRST 390	History of Life or Origins	3
CSER		0
<b>Hours</b>		<b>16</b>

<b>Third Year</b>		
<b>First Semester</b>		
PHYS 201 or PHYS 231	General Physics I or University Physics I	4
Social Sciences Elective <sup>1,5</sup>		3
BCHM 450 or BCHM 451	Medical Biochemistry or Biochemistry I	3-4
BIOL 214	Human Anatomy and Physiology I Lab	1
BIOL 313 or BIOL 385	Clinical Human Anatomy or Advanced Human Physiology	3
CSER		0
<b>Hours</b>		<b>14-15</b>

<b>Second Semester</b>		
BIBL 110	New Testament Survey	2
PHYS 202 or PHYS 232	General Physics II or University Physics II	4
BIOL 216	Human Anatomy and Physiology II Lab	1
Biomedical Elective <sup>6</sup>		3-4
PSYC Elective <sup>7,8</sup>		3
Elective		3
CSER		0
<b>Hours</b>		<b>16-17</b>

<b>Fourth Year</b>		
<b>First Semester</b>		
EVAN 101	Evangelism and the Christian Life	2
THEO 201	Theology Survey I	2
BIOL 400	Biology Seminar	1
Biomedical Elective <sup>6</sup>		3-4
Biomedical Elective <sup>6</sup>		3-4
PSYC Elective <sup>7,8</sup>		3
CSER		0
<b>Hours</b>		<b>14-16</b>

<b>Second Semester</b>		
THEO 202	Theology Survey II	2

Course	Title	Hours
Cultural Studies Elective <sup>1</sup>		3
Information Literacy Elective <sup>1</sup>		3
BIOL 499	Internship	3-6
Biomedical Elective <sup>6</sup>		3-4
CSER		0
<b>Hours</b>		<b>14-18</b>
<b>Total Hours</b>		<b>120-132</b>

<sup>1</sup> Refer to the list of approved general education electives before enrolling in foundational skill requirements.

<sup>2</sup> Choose CHEM 121 OR CHEM 131 and CHEM 135.

<sup>3</sup> Choose CHEM 122 OR CHEM 132 and CHEM 136.

<sup>4</sup> All students must pass the Computer Assessment OR complete applicable INFT course.

<sup>5</sup> PSYC 101 is strongly recommended.

<sup>6</sup> Choose from BCHM 452, BIOL 303, BIOL 305, BIOL 313, BIOL 316, BIOL 321, BIOL 330, BIOL 385, BIOL 403, BIOL 416, BIOL 420, or BIOL 435.

<sup>7</sup> Choose any 200-400 level PSYC course, except for PSYC 354.

<sup>8</sup> PSYC 210 or PSYC 430 are strongly recommended.