

# APPLIED MATHEMATICS & STATISTICS (B.S.) - RESIDENT

**Important:** This degree plan is effective for those starting this degree program in fall 2025 through summer 2026. 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
	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
	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	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>40-43</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 and EVAN 101 waived; Students transferring in 60 or more UG credit hours will also have the requirements of THEO 201 and THEO 202 waived

## Major Requirements

Code	Title	Hours
<b>Major Foundational Courses</b>		
CSIS 110	Introduction to Computer Science <sup>1</sup>	3
CSIS 111	Introduction to Programming Using C++ <sup>1</sup>	3
MATH 131	Calculus and Analytic Geometry I <sup>1</sup>	4

Code	Title	Hours
PHYS 231	University Physics I <sup>1</sup>	4
<b>Total Hours</b>		<b>14</b>

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

Code	Title	Hours
<b>Major Core</b>		
MATH 132	Calculus and Analytic Geometry II	4
MATH 133	Calculus with Mathematica Lab	1
MATH 200	Introduction to Mathematical Reasoning	3
MATH 221	Applied Linear Algebra	3
MATH 231	Calculus and Analytical Geometry III	4
MATH 302	Introduction to Experimental Design in Statistics	3
MATH 311	Probability and Statistics I	3
MATH 321	Linear Algebra	3
MATH 352	Numerical Analysis	3
MATH 402	Linear Regression	3
MATH 411	Probability and Statistics II	3
MATH 450	Mathematics Capstone Seminar	2
	Math Elective <sup>1</sup>	3
	Math Elective <sup>2</sup>	3
<b>Total Hours</b>		<b>41</b>

<sup>1</sup> Choose one of the following courses: MATH 421 or MATH 431

<sup>2</sup> Choose one of the following courses: MATH 301, MATH 304, MATH 334, or MATH 350

Code	Title	Hours
<b>Free Electives</b>		
	Choose 18-35 credit hours of Free Electives <sup>1</sup>	18-35
<b>Total Hours</b>		<b>18-35</b>

<sup>1</sup> May need 4 hours of upper-level electives

*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>Freshman Year</b>		
<b>First Semester</b>		
BIBL 105	Old Testament Survey	2
ENGL 101	Composition and Rhetoric	3
RLGN 105	Introduction to Biblical Worldview	2
UNIV 101	Foundational Skills	1
Math Elective (MATH 131) <sup>1</sup>		4
Technology Competency <sup>2</sup>		0-3
MATH 133	Calculus with Mathematica Lab	1
CSER		0
<b>Hours</b>		<b>13-16</b>
<b>Second Semester</b>		
BIBL 110	New Testament Survey	2
INQR 101	Inquiry	1
Communications Elective <sup>1</sup>		3
Information Literacy Elective (CSIS 110) <sup>1</sup>		3
Natural Science Elective (PHYS 231) <sup>1</sup>		4
MATH 132	Calculus and Analytic Geometry II	4
CSER		0
<b>Hours</b>		<b>17</b>
<b>Sophomore Year</b>		
<b>First Semester</b>		
EVAN 101	Evangelism and the Christian Life	2
RSCH 201	Research	3
Information Literacy Elective (CSIS 111) <sup>1</sup>		3
MATH 231	Calculus and Analytical Geometry III	4
MATH Elective <sup>5</sup>		3
CSER		0
<b>Hours</b>		<b>15</b>
<b>Second Semester</b>		
THEO 201	Theology Survey I	2
Critical Thinking Elective <sup>1</sup>		3
MATH 200	Introduction to Mathematical Reasoning	3
MATH 221	Applied Linear Algebra	3
MATH 311	Probability and Statistics I	3
CSER		0
<b>Hours</b>		<b>14</b>
<b>Junior Year</b>		
<b>First Semester</b>		
THEO 202	Theology Survey II	2
Cultural Studies Elective <sup>1</sup>		3
MATH 302	Introduction to Experimental Design in Statistics	3
MATH 411	Probability and Statistics II	3
Elective <sup>3</sup>		3
Elective <sup>3</sup>		3
CSER		0
<b>Hours</b>		<b>17</b>
<b>Second Semester</b>		
Social Science Elective <sup>1</sup>		3

Course	Title	Hours
MATH 321	Linear Algebra	3
MATH 402	Linear Regression	3
Elective		3
Elective		3
CSER		0
<b>Hours</b>		<b>15</b>
<b>Senior Year</b>		
<b>First Semester</b>		
MATH 352	Numerical Analysis	3
MATH Elective <sup>4</sup>		3
Elective		3
Elective		3
Elective		3
CSER		0
<b>Hours</b>		<b>15</b>
<b>Second Semester</b>		
MATH 450	Mathematics Capstone Seminar	2
Elective		3
Elective		3
Elective		3
Elective		3
CSER		0
<b>Hours</b>		<b>14</b>
<b>Total Hours</b>		<b>120-123</b>

<sup>1</sup> Refer to the list of approved general education electives at [www.liberty.edu/gened](http://www.liberty.edu/gened) before enrolling foundational skills requirements.

<sup>2</sup> All students must pass the Computer Assessment OR complete applicable INFT course; refer to [www.liberty.edu/computerassessment](http://www.liberty.edu/computerassessment) for more information.

<sup>3</sup> May need 4 hours of upper-level electives.

<sup>4</sup> Choose from MATH 301, MATH 304, MATH 334, or MATH 350.

<sup>5</sup> Choose from MATH 421 or MATH 431.