## MATHEMATICS (B.A.) LEADING TO ELECTRICAL, MECHANICAL, OR SYSTEMS SCIENCE AND ENGINEERING (B.S.)

Students enrolled in the 3+2 engineering dual degree and majoring in mathematics complete a minimum of 120 credits to earn a bachelor's degree. While enrolled at Salve Regina University, students complete a minimum of 40 credits of core courses (https://catalog.salve.edu/undergraduate/curriculum-degree-programs/), 41 credits of major courses, and up to 12 credits of elective courses. The remaining 27 credits are completed after transfer to Washington University. Before conferral of the B.A. in Mathematics from Salve Regina University, the student must request that Washington University forward transcripts to verify completion of all required coursework. See Engineering Dual Degree (https://catalog.salve.edu/undergraduate/academic-programs/engineering-32-dual-degree/) for more information.

Courses required of all mathematics majors (32 credits):

MTH-173 Discrete Mathematics 3 MTH-195 Calculus I 4 MTH-196 Calculus II 4 MTH-203 Calculus III 4 MTH-211 Linear Algebra 3 MTH-213 Differential Equations 3 CSC-103 Computer Programming I 3 PHY-205 Principles of Physics I 4 Select one option depending on calendar year. 9 Courses required for mathematics majors entering in an EVEN calendar year (9 credits): MTH-315 Geometry MTH-411 Analysis I MTH-412 Analysis II Courses required for mathematics majors entering in an ODD calendar year. MTH-421 Abstract Algebra STA-341 Statistical Theory I STA-342 Statistical Theory II Modified core curriculum FYT-101 University Seminar II UNV-102 University Seminar II PHL-225 Quest for the Good Life RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	Code	Title	Credits
MTH-196 Calculus II 4 MTH-203 Calculus III 4 MTH-211 Linear Algebra 3 MTH-213 Differential Equations 3 CSC-103 Computer Programming I 3 PHY-205 Principles of Physics I 4 PHY-206 Principles of Physics II 4 Select one option depending on calendar year: 9 Courses required for mathematics majors entering in an EVEN calendar year (9 credits): MTH-315 Geometry MTH-411 Analysis I MTH-412 Analysis II Courses required for mathematics majors entering in an ODD calendar year. MTH-421 Abstract Algebra STA-341 Statistical Theory I STA-342 Statistical Theory II Modified core curriculum FYT-101 First Year Studio 1 UNV-101 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-173	Discrete Mathematics	3
MTH-203 Calculus III 4 MTH-211 Linear Algebra 3 MTH-213 Differential Equations 3 CSC-103 Computer Programming I 3 PHY-205 Principles of Physics I 4 PHY-206 Principles of Physics II 4 Select one option depending on calendar year: 9 Courses required for mathematics majors entering in an EVEN calendar year (9 credits): MTH-315 Geometry MTH-411 Analysis I MTH-412 Analysis II Courses required for mathematics majors entering in an ODD calendar year. MTH-421 Abstract Algebra STA-341 Statistical Theory I STA-342 Statistical Theory II Modified core curriculum FYT-101 First Year Studio 1 UNV-101 University Seminar II UNV-102 University Seminar II PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-195	Calculus I	4
MTH-211 Linear Algebra 3 MTH-213 Differential Equations 3 CSC-103 Computer Programming I 3 PHY-205 Principles of Physics I 4 PHY-206 Principles of Physics II 4 Select one option depending on calendar year. 9 Courses required for mathematics majors entering in an EVEN calendar year (9 credits): MTH-315 Geometry MTH-411 Analysis I MTH-412 Analysis II Courses required for mathematics majors entering in an ODD calendar year. MTH-421 Abstract Algebra STA-341 Statistical Theory I STA-342 Statistical Theory II Modified core curriculum FYT-101 First Year Studio 1 UNV-101 University Seminar II 3 UNV-102 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-196	Calculus II	4
MTH-213 Differential Equations 3 CSC-103 Computer Programming I 3 PHY-205 Principles of Physics I 4 PHY-206 Principles of Physics II 4 Select one option depending on calendar year. 9 Courses required for mathematics majors entering in an EVEN calendar year (9 credits): MTH-315 Geometry MTH-411 Analysis I MTH-412 Analysis II Courses required for mathematics majors entering in an ODD calendar year. MTH-421 Abstract Algebra STA-341 Statistical Theory I STA-342 Statistical Theory II Modified core curriculum FYT-101 First Year Studio 1 UNV-101 University Seminar 1 UNV-102 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-203	Calculus III	4
CSC-103 Computer Programming I 3 PHY-205 Principles of Physics I 4 PHY-206 Principles of Physics II 4 Select one option depending on calendar year. 9 Courses required for mathematics majors entering in an EVEN calendar year (9 credits): MTH-315 Geometry MTH-411 Analysis I MTH-412 Analysis II Courses required for mathematics majors entering in an ODD calendar year. MTH-421 Abstract Algebra STA-341 Statistical Theory I STA-342 Statistical Theory II Modified core curriculum FYT-101 First Year Studio 1 UNV-101 University Seminar II 3 UNV-102 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-211	Linear Algebra	3
PHY-205 Principles of Physics I 4 PHY-206 Principles of Physics II 4 Select one option depending on calendar year. 9 Courses required for mathematics majors entering in an EVEN calendar year (9 credits): MTH-315 Geometry MTH-411 Analysis I MTH-412 Analysis II Courses required for mathematics majors entering in an ODD calendar year. MTH-421 Abstract Algebra STA-341 Statistical Theory I STA-342 Statistical Theory II Modified core curriculum FYT-101 First Year Studio 1 UNV-101 University Seminar II 3 UNV-102 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-213	Differential Equations	3
PHY-206 Principles of Physics II 4  Select one option depending on calendar year: 9  Courses required for mathematics majors entering in an EVEN calendar year (9 credits):  MTH-315 Geometry  MTH-411 Analysis I  Courses required for mathematics majors entering in an ODD calendar year:  MTH-412 Analysis II  Courses required for mathematics majors entering in an ODD calendar year:  MTH-421 Abstract Algebra  STA-341 Statistical Theory I  STA-342 Statistical Theory II  Modified core curriculum  FYT-101 First Year Studio 1  UNV-101 University Seminar II 3  UNV-102 University Seminar II 3  PHL-225 Quest for the Good Life 3  RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4  themes, includes one MTH and one PHY	CSC-103	Computer Programming I	3
Select one option depending on calendar year.  Courses required for mathematics majors entering in an EVEN calendar year (9 credits):  MTH-315 Geometry  MTH-411 Analysis I  Courses required for mathematics majors entering in an ODD calendar year.  MTH-412 Analysis II  Courses required for mathematics majors entering in an ODD calendar year.  MTH-421 Abstract Algebra  STA-341 Statistical Theory I  STA-342 Statistical Theory II  Modified core curriculum  FYT-101 First Year Studio 1  UNV-101 University Seminar 3  UNV-102 University Seminar II 3  PHL-225 Quest for the Good Life 3  RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4  themes, includes one MTH and one PHY	PHY-205	Principles of Physics I	4
Courses required for mathematics majors entering in an EVEN calendar year (9 credits):  MTH-315 Geometry  MTH-411 Analysis I  MTH-412 Analysis II  Courses required for mathematics majors entering in an ODD calendar year.  MTH-421 Abstract Algebra  STA-341 Statistical Theory I  STA-342 Statistical Theory II  Modified core curriculum  FYT-101 First Year Studio 1  UNV-101 University Seminar 3  UNV-102 University Seminar II 3  PHL-225 Quest for the Good Life 3  RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	PHY-206	Principles of Physics II	4
calendar year (9 credits):  MTH-315 Geometry  MTH-411 Analysis I  MTH-412 Analysis II  Courses required for mathematics majors entering in an ODD calendar year.  MTH-421 Abstract Algebra  STA-341 Statistical Theory I  STA-342 Statistical Theory II  Modified core curriculum  FYT-101 First Year Studio 1  UNV-101 University Seminar II 3  UNV-102 University Seminar II 3  PHL-225 Quest for the Good Life 3  RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	Select one option	depending on calendar year.	9
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MTH-412 Analysis II  Courses required for mathematics majors entering in an ODD calendar year.  MTH-421 Abstract Algebra  STA-341 Statistical Theory I  STA-342 Statistical Theory II  Modified core curriculum  FYT-101 First Year Studio 1  UNV-101 University Seminar 3  UNV-102 University Seminar II 3  PHL-225 Quest for the Good Life 3  RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-315	Geometry	
Courses required for mathematics majors entering in an ODD calendar year.  MTH-421 Abstract Algebra STA-341 Statistical Theory I STA-342 Statistical Theory II  Modified core curriculum  FYT-101 First Year Studio 1 UNV-101 University Seminar 3 UNV-102 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-411	Analysis I	
calendar year:  MTH-421 Abstract Algebra  STA-341 Statistical Theory I  STA-342 Statistical Theory II  Modified core curriculum  FYT-101 First Year Studio 1  UNV-101 University Seminar 3  UNV-102 University Seminar II 3  PHL-225 Quest for the Good Life 3  RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-412	Analysis II	
STA-341 Statistical Theory I STA-342 Statistical Theory II  Modified core curriculum  FYT-101 First Year Studio 1 UNV-101 University Seminar 3 UNV-102 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	•	ed for mathematics majors entering in an ODD	
STA-342 Statistical Theory II  Modified core curriculum  FYT-101 First Year Studio 1  UNV-101 University Seminar 3  UNV-102 University Seminar II 3  PHL-225 Quest for the Good Life 3  RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	MTH-421	Abstract Algebra	
Modified core curriculum  FYT-101 First Year Studio 1  UNV-101 University Seminar 3  UNV-102 University Seminar II 3  PHL-225 Quest for the Good Life 3  RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	STA-341	Statistical Theory I	
FYT-101 First Year Studio 1 UNV-101 University Seminar 3 UNV-102 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	STA-342	Statistical Theory II	
UNV-101 University Seminar 3 UNV-102 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	Modified core cur	riculum	
UNV-102 University Seminar II 3 PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	FYT-101	First Year Studio	1
PHL-225 Quest for the Good Life 3 RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	UNV-101	University Seminar	3
RTS-225 The Quest for the Ultimate: Dialogue with Global Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	UNV-102	University Seminar II	3
Religious Traditions  Seven additional core courses, including 6 themed courses in 4 themes, includes one MTH and one PHY	PHL-225	Quest for the Good Life	3
themes, includes one MTH and one PHY	RTS-225		al 3
Capstone course may be completed at Washington University			

Depending on the choice of engineering degree, students should also consider taking:

Total Credits		75	
Physical or Life Science Elective at or above the 200-level			
	CSC-104	Computer Programming II	
	CHM-113	General Chemistry I	

## Degree Plan for Mathematics (B.A.) Leading to Electrical, Mechanical, or Systems Science and Engineering (B.S.) (Starting in an even year)

	Til.	0
Course	Title	Credits
First Year		
Fall		
UNV-101	University Seminar and First Year Studio	4
& FYT-101		
MTH-195	Calculus I	4
CSC-103	Computer Programming I	3
Core Course or Elective		3
	Credits	14
Spring		
UNV-102	University Seminar II	3
MTH-196	Calculus II	4
MTH-173	Discrete Mathematics	3
Core Course or Elective		3
Core Course or Elective		3
	Credits	16
Second Year		
Fall		
RTS-225	The Quest for the Ultimate: Dialogue with Global	3
or PHL-225	Religious Traditions <sup>1</sup>	
	or Quest for the Good Life	
MTH-203	Calculus III	4
MTH-211	Linear Algebra	3
PHY-205	Principles of Physics I	4
Core Course or Elective		3
	Credits	17
Spring		
RTS-225	The Quest for the Ultimate: Dialogue with Global	3
or PHL-225	Religious Traditions <sup>1</sup> or Quest for the Good Life	
MTH-213		2
PHY-206	Differential Equations	3
	Principles of Physics II	
Core Course or Elective		3
Core Course or Elective		3
	Credits	16
Third Year		
Fall		
MTH-411	Analysis I	3
MTH-315	Geometry	3
CHM-113	General Chemistry I	4
Core Course or Elective		3
Core Course or Elective		3
	Credits	16
Spring		
MTH-412	Analysis II	3
Physical or Life Science <sup>2</sup>		3
Core Course or Elective		3
Core Course or Elective		3

Course

Core Course or Elective	3
Credits	15
Total Credits	94

<sup>&</sup>lt;sup>1</sup> One each semester.

Students should consult with the Mathematical Sciences Adviser & Engineering Liaison as early as possible. Minimum of 120 credits required for degree conferral.

## Degree Plan for Mathematics (B.A.) Leading to Electrical, Mechanical, or Systems Science and Engineering (B.S.) (Starting in an odd year)

Course	ride	Cieuits
First Year		
Fall		
UNV-101	University Seminar	4
& FYT-101	and First Year Studio	
MTH-195	Calculus I	4
CSC-103	Computer Programming I	3
Core Course or Elective		3
	Credits	14
Spring		
UNV-102	University Seminar II	3
MTH-196	Calculus II	4
MTH-173	Discrete Mathematics	3
Core Course or Elective		3
Core Course or Elective		3
	Credits	16
Second Year		
Fall		
RTS-225	The Quest for the Ultimate: Dialogue with Global	3
or PHL-225	Religious Traditions <sup>1</sup>	
	or Quest for the Good Life	
MTH-203	Calculus III	4
MTH-211	Linear Algebra	3
PHY-205	Principles of Physics I	4
Core Course or Elective		3
	Credits	17
Spring		
RTS-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions <sup>1</sup>	3
or PHL-225	or Quest for the Good Life	
MTH-213	Differential Equations	3
PHY-206	Principles of Physics II	4
Core Course or Elective	1 morpies of 1 myslos ii	3
Core Course or Elective		3
Core Course or Liective	Credits	16
Third Year	Credits	10
Fall		
STA-341	Statistical Theory I	3
MTH-421	Statistical Theory I	3
CHM-113	Abstract Algebra General Chemistry I	4
Core Course or Elective	General Greatlistry i	3
Core Course or Elective		3
COLE COULSE OF EIECTIVE	Credits	16
Spring	Credits	16
STA-342	Statistical Theory II	3
Physical or Life Science <sup>2</sup>	otationedi ilicory ii	3
Core Course or Elective		3
Core Course or Elective		3

Credits  Total Credits	15
Core Course or Elective	3
Core Course or Elective	3

Credits

Students should consult with the Mathematical Sciences Adviser & Engineering Liaison as early as possible. Minimum of 120 credits required for degree conferral.

Required for Mechanical Engineering track.

One each semester.
 Required for Mechanical Engineering track.