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):

Code	Title	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
PHY-206	Principles of Physics II	4
Select one option	on 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 c	urriculum	
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 Globa Religious Traditions	3
	al core courses, including 6 themed courses in 4 es one MTH and one PHY	21
Capstone cours	e may be completed at Washington University	

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

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

Total Credits

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

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Course	Title	Credits
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 ¹	0
	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 ¹	
	or Quest for the Good Life	
MTH-213	or Quest for the Good Life Differential Equations	3
MTH-213 PHY-206		3
	Differential Equations	
PHY-206	Differential Equations	4
PHY-206 Core Course or Elective	Differential Equations	4 3
PHY-206 Core Course or Elective	Differential Equations Principles of Physics II	4 3 3
PHY-206 Core Course or Elective Core Course or Elective	Differential Equations Principles of Physics II	4 3 3
PHY-206 Core Course or Elective Core Course or Elective Third Year	Differential Equations Principles of Physics II	4 3 3
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall	Differential Equations Principles of Physics II Credits	4 3 3 16
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall MTH-411	Differential Equations Principles of Physics II Credits Analysis I	4 3 3 16 3
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall MTH-411 MTH-315	Differential Equations Principles of Physics II Credits Analysis I Geometry	4 3 3 16 3 3
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall MTH-411 MTH-315 CHM-113	Differential Equations Principles of Physics II Credits Analysis I Geometry	4 3 3 16 3 3 3 4
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall MTH-411 MTH-315 CHM-113 Core Course or Elective	Differential Equations Principles of Physics II Credits Analysis I Geometry	4 3 3 16 3 3 4 3 3
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall MTH-411 MTH-315 CHM-113 Core Course or Elective Core Course or Elective	Differential Equations Principles of Physics II Credits Analysis I Geometry General Chemistry I	4 3 3 16 3 3 4 3 3 3 3 3 3 3
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall MTH-411 MTH-315 CHM-113 Core Course or Elective	Differential Equations Principles of Physics II Credits Analysis I Geometry General Chemistry I Credits	4 3 16 3 3 3 4 3 3 3 16
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall MTH-411 MTH-315 CHM-113 Core Course or Elective Core Course or Elective Spring MTH-412	Differential Equations Principles of Physics II Credits Analysis I Geometry General Chemistry I	4 3 3 16 3 3 4 3 3 16 3
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall MTH-411 MTH-315 CHM-113 Core Course or Elective Core Course or Elective Spring MTH-412 Physical or Life Science ²	Differential Equations Principles of Physics II Credits Analysis I Geometry General Chemistry I Credits	4 3 3 16 3 3 4 3 3 16 3 3 3 3
PHY-206 Core Course or Elective Core Course or Elective Third Year Fall MTH-411 MTH-315 CHM-113 Core Course or Elective Core Course or Elective Core Spring MTH-412	Differential Equations Principles of Physics II Credits Analysis I Geometry General Chemistry I Credits	4 3 3 16 3 3 4 3 3 16 3

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Core Course or Elective	
Credits	15
Total Credits	94

	Total Credits	94
	Credits	15
Core Course or Elective		3
Core Course or Elective		3

¹ One each semester.

² Required for Mechanical Engineering track.

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² Required for Mechanical Engineering track.

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	Title	Credits
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
Spring	Credits	14
UNV-102	University Seminar II	3
MTH-196	Calculus II	4
MTH-190	Discrete Mathematics	3
Core Course or Elective	Discrete Mathematics	3
Core Course or Elective	- P	3
Second Year Fall	Credits	16
RTS-225 or PHL-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions ¹ or Quest for the Good Life	3
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 ¹ or Quest for the Good Life	
MTH-213	Differential Equations	3
PHY-206	Principles of Physics II	4
Core Course or Elective		3
Core Course or Elective		3
	Credits	16
Third Year		
Fall		
STA-341	Statistical Theory I	3
MTH-421	Abstract Algebra	3
CHM-113	General Chemistry I	4
Core Course or Elective		3
Core Course or Elective		3
	Credits	16
Spring		
STA-342	Statistical Theory II	3
Physical or Life Science ²		3
Core Course or Elective		3

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