

DUAL DEGREE MATHEMATICS (B.A.) AND DATA SCIENCE (M.S.)

The Mathematical Sciences Department at Salve Regina University offers a dual 3+2 program with the University of Massachusetts Dartmouth leading to a B.A. in mathematics and a minor in data analytics from Salve Regina University and a master's degree in data science from the University of Massachusetts Dartmouth.

Students in this 5-year program take courses to fulfill the requirements for the B.A. in mathematics and a minor in data analytics at Salve Regina University in the first three years of study, after which they take courses at the University of Massachusetts Dartmouth for two additional years. In the fourth year of this program, students take courses at the University of Massachusetts Dartmouth for the master's degree in data science and to complete their B.A. in mathematics from Salve Regina University. Upon successful completion of courses at the end of the fourth year, students in this program are awarded the B.A. in mathematics with a minor in data analytics and graduate with their class at Salve Regina University's commencement. In the fifth year of this program, students complete the requirements for a master's degree in data science from University of Massachusetts Dartmouth.

To remain in this program, students must maintain a 3.25 GPA, with no grade below a C- in any mathematics (MTH), computer science (CSC), data science and analytics (DSA), or statistics (STA) course, and have the written recommendation of the department chair.

Students seeking the B.A. in mathematics and a minor in data analytics from Salve Regina University and a master's degree in data science from the University of Massachusetts Dartmouth enroll at Salve Regina University for three years followed by two years at the University of Massachusetts Dartmouth. A minimum of 120 credits are required to earn a bachelor's degree, including 41-44 credits of core courses (<https://catalog.salve.edu/undergraduate/curriculum-degree-programs/>). While enrolled at Salve Regina University, students in this program complete a minimum of 90 credits, including the following required courses:

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
Select one option depending on calendar year:		9

Courses required for mathematics majors entering in an ODD calendar year (9 credits):

MTH-421	Abstract Algebra
STA-341	Statistical Theory I
STA-342	Statistical Theory II

Courses required for mathematics majors entering in an EVEN calendar year:

MTH-315	Geometry
MTH-411	Analysis I

MTH-412	Analysis II	
CSC-103	Computer Programming I	3
CSC-104	Computer Programming II	3
DSA-201	Introduction to Data Science and Analytics	3
DSA-202	Data Analysis and Visualization	3
PHY-205	Principles of Physics I	4
PHY-206	Principles of Physics II	4
Select one elective course from the following:		3
ACC-405	Accounting Research & Analytics	
CSC-300	Algorithms and Data Structures	
ECN-307	Introduction to Econometrics	
Core curriculum		
FYT-101	First Year Studio	1
GST-098	Sophomore 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	3
Eight additional core courses.		24
Total Credits		91

Up to 30 credits of approved coursework completed at the University of Massachusetts Dartmouth in year 4 will be transferred to Salve Regina to complete undergraduate degree requirements, including the requirements for the B.A. in mathematics.

Degree Plan for Dual Degree Mathematics (B.A.) and Data Science (M.S.) (Starting in odd year)

Course	Title	Credits
First Year		
Fall		
FYT-101	First Year Studio	1
UNV-101	University Seminar	3
MTH-195	Calculus I	4
CSC-103	Computer Programming I	3
Core Course		3
Core Course		3
		Credits
		17
Spring		
UNV-102	University Seminar II	3
MTH-196	Calculus II	4
MTH-173	Discrete Mathematics	3
CSC-104	Computer Programming II	3
Core Course		3
		Credits
		16
Second Year		
Fall		
GST-098	Sophomore Studio ¹	1
RTS-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions ²	3
	or PHL-225	
	or Quest for the Good Life	
MTH-203	Calculus III	4
MTH-211	Linear Algebra	3
PHY-205	Principles of Physics I	4
		Credits
		15

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Spring		
RTS-225 or PHL-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions ² or Quest for the Good Life	3
MTH-213	Differential Equations	3
PHY-206	Principles of Physics II	4
Core Course		3
Core Course		3
Credits		16
Third Year		
Fall		
STA-341	Statistical Theory I	3
MTH-421	Abstract Algebra	3
DSA-201	Introduction to Data Science and Analytics	3
Elective in Business, Biology, CSC, Cybersecurity or DSA		3
Core Course		3
Credits		15
Spring		
STA-342	Statistical Theory II	3
DSA-202	Data Analysis and Visualization	3
Core Course		3
Core Course		3
Credits		12
Total Credits		91

¹ This weekend workshop may be taken in either the fall or spring semester of sophomore year.

² One each semester.

Minimum of 120 credits required for degree conferral.

Degree Plan for Dual Degree Mathematics (B.A.) and Data Science (M.S.) (Starting in even year)

Course	Title	Credits
First Year		
Fall		
FYT-101	First Year Studio	1
UNV-101	University Seminar	3
MTH-195	Calculus I	4
CSC-103	Computer Programming I	3
Core Course		3
Core Course		3
Credits		17
Spring		
UNV-102	University Seminar II	3
MTH-196	Calculus II	4
MTH-173	Discrete Mathematics	3
CSC-104	Computer Programming II	3
Core Course		3
Credits		16
Second Year		
Fall		
GST-098	Sophomore Studio ¹	1
MTH-203	Calculus III	4
MTH-211	Linear Algebra	3
PHY-205	Principles of Physics I	4
DSA-201	Introduction to Data Science and Analytics	3
Credits		15

Spring		
RTS-225 or PHL-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions ² or Quest for the Good Life	3
MTH-213	Differential Equations	3
PHY-206	Principles of Physics II	4
DSA-202	Data Analysis and Visualization	3
Core Course		3
Credits		16
Third Year		
Fall		
MTH-315	Geometry	3
MTH-411	Analysis I	3
Elective in Business, Biology, CSC, Cybersecurity or DSA		3
Core Course		3
Core Course		3
Credits		15
Spring		
PHL-225 or RTS-225	Quest for the Good Life ² or The Quest for the Ultimate: Dialogue with Global Religious Traditions	3
MTH-412	Analysis II	3
Core Course		3
Core Course		3
Credits		12
Total Credits		91

¹ This weekend workshop may be taken in either the fall or spring semester of sophomore year.

² One in spring of the second year and one in spring of the third year.

Minimum of 120 credits required for degree conferral.