

# 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. While enrolled at Salve Regina University, students in this program complete 96 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	
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	3
Nine additional core courses, including 6 themed courses in 4 themes		27
<b>Total Credits</b>		<b>93</b>

Twenty four 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
<b>First Year</b>		
<b>Fall</b>		
UNV-101 & FYT-101	University Seminar and First Year Studio	4
MTH-195	Calculus I	4
CSC-103	Computer Programming I	3
Core Course		3
Core Course		3
<b>Credits</b>		<b>17</b>
<b>Spring</b>		
Core Course		3
UNV-102	University Seminar II	3
MTH-196	Calculus II	4
MTH-173	Discrete Mathematics	3
CSC-104	Computer Programming II	3
<b>Credits</b>		<b>16</b>
<b>Second Year</b>		
<b>Fall</b>		
RTS-225 or PHL-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions <sup>1</sup> 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		3
<b>Credits</b>		<b>17</b>
<b>Spring</b>		
RTS-225 or PHL-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions <sup>1</sup> or Quest for the Good Life	3
Core Course		3
MTH-213	Differential Equations	3

2 Dual Degree Mathematics (B.A.) and Data Science (M.S.)

PHY-206	Principles of Physics II	4
Core Course		3
<b>Credits</b>		<b>16</b>
<b>Third Year</b>		
<b>Fall</b>		
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
<b>Credits</b>		<b>15</b>
<b>Spring</b>		
Elective in Business, Biology, CSC, Cybersecurity or DSA		3
Core Course		3
Core Course		3
STA-342	Statistical Theory II	3
DSA-202	Data Analysis and Visualization	3
<b>Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>96</b>

<sup>1</sup> 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
<b>First Year</b>		
<b>Fall</b>		
UNV-101 & FYT-101	University Seminar and First Year Studio	4
MTH-195	Calculus I	4
CSC-103	Computer Programming I	3
Core Course		3
Core Course		3
<b>Credits</b>		<b>17</b>
<b>Spring</b>		
Core Course		3
UNV-102	University Seminar II	3
MTH-196	Calculus II	4
MTH-173	Discrete Mathematics	3
CSC-104	Computer Programming II	3
<b>Credits</b>		<b>16</b>
<b>Second Year</b>		
<b>Fall</b>		
RTS-225 or PHL-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions <sup>1</sup> or Quest for the Good Life	3
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
<b>Credits</b>		<b>17</b>
<b>Spring</b>		
RTS-225 or PHL-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions <sup>1</sup> or Quest for the Good Life	3
Core Course		3
MTH-213	Differential Equations	3
PHY-206	Principles of Physics II	4
DSA-202	Data Analysis and Visualization	3
<b>Credits</b>		<b>16</b>

<b>Third Year</b>		
<b>Fall</b>		
MTH-315	Geometry	3
MTH-411	Analysis I	3
Elective in Business, Biology, CSC, Cybersecurity or DSA		3
Core Course		3
RST or PHL core		3
<b>Credits</b>		<b>15</b>
<b>Spring</b>		
Elective in Business, Biology, CSC, Cybersecurity or DSA		3
Core Course		3
Core Course		3
MTH-412	Analysis II	3
RTS or PHL core		3
<b>Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>96</b>

<sup>1</sup> One each semester.

Minimum of 120 credits required for degree conferral.