

# Academic Rhode Map for BA Mathematics Major at Rhode Island College

**GENERAL EDUCATION:** A complete listing of General Education courses can be found in the online catalog; look at catalog for year you enrolled. For Gen Ed courses, aside from Second Language requirement, which varies depending on where you are placed, you need ONE course from each category. Second Language 101/102 options are: American Sign, Arabic, French, German, Italian, Japanese, Portuguese, or Spanish. For other ways to satisfy the second language requirement look under the Gen Ed. section of the catalog. For information about Math Placement exam visit the orientation webpage. Any courses marked (F) offered Fall only; (Sp) Spring only. **Courses with an asterisk\* have prerequisites. Courses with a "W" in the prefix are Writing in the Discipline (WID) courses and will be writing intensive.**

Academic Major Checklist	Course	Academic Major Checklist	Course
MATH 212 Calculus I*		Choose THREE from: DATA 345 Applied Linear Algebra for Statistical Learning*; DATA 445 Advanced Statistical Methods (Sp)*; MATH 416 Ordinary Differential Equations (Sp)* or MATH 417 Introduction to Numerical Analysis (Sp)*; MATH 418 Introduction to Operations (Sp even yrs)*; MATH 431 Number Theory*; or MATH 436 Discrete Mathematics (Sp)*	
MATH 213 Calculus II*			
MATH 300W Bridge to Advanced Mathematics (Sp)* (WID)			
MATH 314 Calculus III*		<b>Cognate</b>	
MATH 315 Linear Algebra (F)*		Choose ONE from: CSCI 157 Introduction to Algorithmic Thinking in Python; CHEM 103 General Chemistry I*; ECON 214 Principles of Microeconomics*; ECON 215 Principles of Macroeconomics*; MATH 240 Statistical Methods I*; MATH 248 Business Statistics*; PHIL 205W Introduction to Logic*; PHYS 101 Physics for Science and Mathematics I*	
MATH 411 Advanced Calculus (F odd yrs)*			
MATH 432 Introduction to Abstract Algebra (Sp)*			
MATH 441 Introduction to Probability (F)*			
MATH 461W Seminar in Mathematics (Sp)* (WID)			

**Please note: Students must consult with their assigned advisor before they will be able to register for courses, and all MATH courses require students to have completed their College Math Milestone or have an acceptable score on the Mathematics Placement Exam.**

This map is a semester-by-semester plan to help you toward graduation in four years. Not everyone graduates in four years as it depends on how many courses you can take, and how you do in those courses. This map is not your only route; it is a suggestion. While there are many courses in your major that have prerequisites that you will need to take in a special order, there is some flexibility in this map.

The column to the left on the other side of this page suggests the ideal courses for you to take each semester. There are times when those courses may be full or unavailable the semester you plan to take them, in which case consider another course from a different semester with which you can switch. The column on the right has "Checkpoints" for each semester that show where you should be by the end of that semester. You should work from this map as you plan each semester's schedule with your advisor. You should plan to see your advisor in late September for the Spring Semester and in February for the Fall. The Map is designed primarily for freshmen coming to college for the first time, but transfer students may also use the Rhode Map with the understanding that they have most likely completed several requirements through transfer of credit and will be starting further into the program. Maps assume a Fall start.

**GRADUATION REQUIREMENTS:** The following requirements must be completed by undergraduate degree candidates at Rhode Island College in order to graduate:

- General Education program, including a second language requirement and RIC 100 or equivalent
- College Math Milestone (which is separate from the Gen Ed math requirement)
- College Writing Competency (satisfied by FYW with a minimum grade of C)
- Academic Major—see check chart below. Writing in the Discipline requirement is satisfied through major courses.
- A minimum of 120 credit hours, with a minimum of 45 credit hours taken at RIC. Of the 45 credit hours, a minimum of 15 credit hours must be in the major (12 of which must be at the 300- or 400-level).
- A minimum overall grade point average of 2.0
- A minimum grade point average of 2.0 in your major

## Academic Rhode Map for BA Mathematics Major at Rhode Island College

<b>SEMESTER 1</b>	<b>CR</b>	<b>SEMESTER 1 CHECKPOINTS</b>
First Year Writing (FYW 100) or First Year Seminar (FYS 100).	4	FYW 100P is a 6-credit option. There is a Directed Self-Placement questionnaire you can take to aid in this decision; check the RIC First Year Writing website
RIC 100 Introduction to Rhode Island College	1	Exempt if taking COLL 101, COLL 150, or HONR 150
MATH 212 Calculus I*	4	Prereq. for MATH 212 is MATH 209 or appropriate score on the Mathematics Placement Exam. May need to take MATH 209 here. Then push Math 213 Calculus II and Math 314 Calculus III back one semester. MATH 212 satisfies Gen Ed Math (M)
Gen Ed Distribution course	4	
Gen Ed--Second Lang 101 (based on placement, a course higher than 101/102 may be taken). If language requirement already satisfied: Any Gen Ed Distribution course.	4	Language placement test with Dept. of Modern Languages (optional). Complete Second Lang 101 (if needed)
Requirements and GPA		Aim for at least 16 earned credits (While 12 is fulltime, 16 credits are preferred to stay on track to graduate in 4 years). Math Milestone completed. Minimum 2.0 GPA
# CREDITS EARNED	17	Make appointment with advisor to discuss your schedule for next semester in Sept.

<b>SEMESTER 2</b>	<b>CR</b>	<b>SEMESTER 2 CHECKPOINTS</b>
FYW 100 or FYS 100	4	Complete FYS and FYW, for FYW, grade C or better
MATH 213 Calculus II*	4	Prereq. is MATH 212. MATH 213 satisfies Gen Ed Advanced Quantitative/Scientific Reasoning (AQSR)
Gen Ed Distribution course	4	Consider Gen Ed Natural Science (NS), many use Math Milestone as a prereq. Note PHYS 101 or CHEM 103 can double-count as part of the program.
Gen Ed--Second Lang 102* (if needed), Gen Ed, elective, or course toward minor/major	3-4	Complete Second Language 102* (if needed)
Requirements and GPA		Aim for minimum of 32 earned credits, with minimum of 2.0 GPA overall and in the major
# CREDITS EARNED	15-16	Make appointment with advisor to discuss your schedule for next semester in Feb.

<b>SEMESTER 3</b>	<b>CR</b>	<b>SEMESTER 3 CHECKPOINTS</b>
ONE from CSCI 157 Introduction to Algorithmic Thinking in Python; CHEM 103 General Chemistry I*; ECON 214 Principles of Microeconomics*; ECON 215 Principles of Macroeconomics*; MATH 240 Statistical Methods I*; MATH 248 Business Statistics*; PHIL 205W Introduction to Logic*; PHYS 101 Physics for Science and Mathematics I*; or Gen Ed, elective, or course toward minor/major	3-4	Prereqs. vary—see catalog. PHYS 101 or CHEM 103 satisfy Gen Ed Natural Science (NS)
MATH 314 Calculus III*	4	Prereq. is MATH 213
Gen Ed. (if needed), elective, or course toward minor/major	3-4	
Elective, or course toward minor/major	3-4	
Requirements and GPA		Aim for minimum of 48 earned credits, with minimum of 2.0 GPA overall and in the major
# CREDITS EARNED	13-16	Make appointment with advisor to discuss your schedule for next semester and discuss possible minor or double major in Sept.

## Academic Rhode Map for BA Mathematics Major at Rhode Island College

<b>SEMESTER 4</b>	<b>CR</b>	<b>SEMESTER 4 CHECKPOINTS</b>
ONE from DATA 345 Applied Linear Algebra for Statistical Learning*; DATA 445 Advanced Statistical Methods (Sp)*; MATH 416 Ordinary Differential Equations (Sp)* or MATH 417 Introduction to Numerical Analysis (Sp)*; MATH 418 Introduction to Operations (Sp even yrs)*; MATH 431 Number Theory*; or MATH 436 Discrete Mathematics (Sp)*	3-4	Prereqs. vary—see catalog. MATH 431 or MATH 436 are recommended from the electives list. Prereq. for both is MATH 212. Need THREE from this list
ONE from CSCI 157 Introduction to Algorithmic Thinking in Python; CHEM 103 General Chemistry I*; ECON 214 Principles of Microeconomics*; ECON 215 Principles of Macroeconomics*; MATH 240 Statistical Methods I*; MATH 248 Business Statistics*; PHIL 205W Introduction to Logic*; PHYS 101 Physics for Science and Mathematics I*; or other elective, or course toward minor/major	3-4	
MATH 300W Bridge to Advanced Mathematics (Sp)*(WID)	4	Prereq. is MATH 212
Gen Ed. (if needed), elective, or course toward minor/major	3-4	
Requirements and GPA		Aim for minimum of 64 earned credits, with minimum of 2.0 GPA overall and in the major
# CREDITS EARNED	<b>13-16</b>	Make appointment with advisor to discuss your schedule for next semester in Feb.

<b>SEMESTER 5</b>	<b>CR</b>	<b>SEMESTER 5 CHECKPOINTS</b>
MATH 411 Advanced Calculus (F odd yrs)* elective, or course toward a minor	3-4	Prereq. is MATH 213
MATH 315 Linear Algebra (F)*	4	Prereq. is MATH 300 or MATH 300W with a minimum grade of C
Gen Ed. (if needed), elective, or course toward minor/major	3-4	
Gen Ed. (if needed), elective, or course toward minor/major	3-4	
Requirements and GPA		Aim for minimum of 80 earned credits, with minimum of 2.0 GPA overall and in the major
# CREDITS EARNED	<b>13-16</b>	Make appointment with advisor to discuss your schedule for next semester in Sept.

<b>SEMESTER 6</b>	<b>CR</b>	<b>SEMESTER 6 CHECKPOINTS</b>
Choose 1 Connections course (Gen Ed-C)	4	Prereqs are 45 completed credits and FYW and FYS.
ONE from DATA 345 Applied Linear Algebra for Statistical Learning*; DATA 445 Advanced Statistical Methods (Sp)*; MATH 416 Ordinary Differential Equations (Sp)* or MATH 417 Introduction to Numerical Analysis (Sp)*; MATH 418 Introduction to Operations (Sp even yrs)*; MATH 431 Number Theory*; or MATH 436 Discrete Mathematics (Sp)*	3-4	Prereqs. vary—see catalog. MATH 431 or MATH 436 are recommended from the electives list. Prereq. for both is MATH 212. Need THREE from this list
MATH 432 Introduction to Abstract Algebra (Sp)*	4	Prereq is MATH 300 or MATH 300W and MATH 315. This course could also be taken in Semester 8 if you want to take something else here
Gen Ed. (if needed), elective, or course toward minor/major	3-4	If pursuing minor or second major make sure you have registered for this with the relevant department prior to audit
Requirements and GPA		Aim for minimum of 96 earned credits, with minimum of 2.0 GPA overall and in the major. Apply for degree audit online through MyRIC
# CREDITS EARNED	<b>15-16</b>	Make appointment with advisor to discuss your schedule for next semester in Feb.

## Academic Rhode Map for BA Mathematics Major at Rhode Island College

<b>SEMESTER 7</b>	<b>CR</b>	<b>SEMESTER 7 CHECKPOINTS</b>
MATH 411 Calculus IV (F odd yrs)* elective, or course toward minor/major	3-4	Prereq. is MATH 213. MATH 411 Completed
MATH 441 Introduction to Probability (F)*	4	Prereq. is MATH 314
Gen Ed. (if needed), elective, or course toward minor/major	3-4	
Elective, or course toward minor/major	3-4	
Requirements and GPA		Aim for minimum of 108 earned credits, with minimum of 2.0 GPA overall and in the major. All ten GE courses and second lang. req. completed
# CREDITS EARNED	13-16	Make appointment with advisor to discuss your schedule for next semester in Sept.

<b>SEMESTER 8</b>	<b>CR</b>	<b>SEMESTER 8 CHECKPOINTS</b>
ONE from DATA 345 Applied Linear Algebra for Statistical Learning*; DATA 445 Advanced Statistical Methods (Sp)*; MATH 416 Ordinary Differential Equations (Sp)* or MATH 417 Introduction to Numerical Analysis (Sp)*; MATH 418 Introduction to Operations (Sp even yrs)*; MATH 431 Number Theory*; or MATH 436 Discrete Mathematics (Sp)*	3-4	Prereqs. vary—see catalog. MATH 431 or MATH 436 are recommended from the electives list. Prereq. for both is MATH 212. Need to have completed THREE from this list
MATH 461W Seminar in Mathematics (Sp)* (WID)	3	Prereqs are MATH 441 and prior or concurrent enrolment in MATH 432
Elective, or course toward minor/major	3-4	
Elective, or course toward minor/major	3-4	
Requirements and GPA		Need minimum of 120 earned credits, with minimum of 2.0 GPA overall and in the major
# CREDITS EARNED	12-15	Attend Gradfest and Commencement

**For more information, check the Department of Mathematical Sciences website:**

<https://www.ric.edu/departments-directory/departments-mathematical-sciences>

**Note: Students cannot count toward the major more than TWO courses with grades below C-**

**NOTE: The minimum total credit count for this major is 48 credits (depending on choices), although 8 (and possibly 12) of those may be offset against Gen Ed. courses (AQSR and M, poss. NS), which leaves 28 more credits of Gen Ed. and possibly 9 more depending on secondary language needs and RIC 100. The minimum credit count will be 76 credits (without secondary language/RIC 100), which would leave 44 credits, that could be used toward a second major, minors, or as electives.**