

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

- This Rhode Map is a suggested pathway to graduation in 8 semesters
  - There are other valid pathways available to graduation - part time, summer/early spring classes, etc.
- The left column contains the suggested courses for each semester, the right column contains notes for the course and about progress towards graduation
- Some courses might not be offered during the semester shown on the map
  - In these cases, courses listed in future semesters can be substituted if their prerequisites have been satisfied
  - Your advisor can help you determine which courses can be used during your appointment each semester
- This Rhode Map is designed primarily with incoming freshmen in mind and assumes a Fall start
  - Transfer students can also use it as a guide, knowing that their transfer credits may have satisfied some requirements. Academic advisors are available to answer questions about how these will affect the program
  - Students starting in the spring may need to adjust based on class offerings and availability

<b>GENERAL EDUCATION REQUIREMENTS CHECKLIST</b>				
	<b>FYW 100</b> – Taken in first year (Cannot be used as elective)	<b>Distribution Courses -</b>  One from each category		<b>Math (M)</b> - Suggested in first year Satisfied by Math 209/212
	<b>FYS 100</b> – Taken in first year (Cannot be used as elective)			<b>Arts (A)</b>
				<b>History/Philosophy (HP)</b>
				<b>Literature/Language (LL)</b>
				<b>Natural Science (NS)</b> -Satisfied by CHEM 103
	<b>Connections</b> – Taken after FYW & FYS			<b>Social &amp; Behavioral Sciences (SB)</b>
				<b>Elective(s) to bring total Gen Ed credits to 40 (E)</b>

<b>MAJOR REQUIREMENTS CHECKLIST</b>				
	CHEM 103 General Chemistry I <b>OR</b> CHEM 103H (F)			CHEM 404W Analytical Chemistry I (Sp) <b>OR</b> CHEM 416W Environmental Analytical Chemistry (Sp)
	CHEM 104 General Chemistry II <b>OR</b> CHEM 104H (Sp)			CHEM 405 Physical Chemistry I (F) <b>AND</b> CHEM 407 Physical Chemistry Laboratory I (F)
	CHEM 205W Organic Chemistry I (F, Sum)			MATH 212 Calculus I
	CHEM 206W Organic Chemistry II (Sp, Sum)			MATH 213 Calculus II
	CHEM 310 Biochemistry (F)			PHYS 101 Physics for Science and Mathematics I
	CHEM 403 Inorganic Chemistry I (F)			PHYS 102 Physics for Science and Mathematics II
	<b>Choose One:</b> <div style="display: flex; justify-content: space-between;"> <div>                     CHEM 406 Physical Chemistry II (Sp)                      CHEM 412 and CHEM 413                          Inorganic Chemistry II Lec and Lab (Sp)                      CHEM 414 Instrumental Methods of Analysis (Sp)                      CHEM 418 Marine Environmental Chemistry (F)                 </div> <div>                     CHEM 419 Biochemistry Mechanisms (Sp)                      CHEM 422 Biochemistry Lab (Sp)                      CHEM 425 Advanced Organic Chemistry (F)                      CHEM 435 Pharmacology and Toxicology                 </div> </div>			

### Graduation Requirements:

- Completion of General Education Requirements** – See table above
- Completion of Major Requirements** — See table above
- RIC 100 or Equivalent** — Taken in first year
- College Math Milestone** — Satisfied by placement exam or completion of MATH 010
- College Writing Competency** — Satisfied by FYW 100 with a minimum grade of C
- Minimum 120 Credit Hours** — At least 30 credits at RIC (of which 15 from major, including 12 at 300 or 400 level)
- Minimum 2.0 GPA** - Need at least 2.0 for both overall and classes in major

**The total credit count for the major is 50-51 credits, and 40 credits for General Education. However, 12 Gen. Ed. credits for M, NS and Elective can double count, so the program can be completed in 78-79 credits.**

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<b>SEMESTER 1</b>	<b>CR</b>	<b>SEMESTER 1 NOTES</b>
FYW 100 First Year Writing <b>OR</b> FYS 100 First Year Seminar	<b>4</b>	Directed Self Placement exam
RIC 100 Introduction to Rhode Island College	<b>1</b>	Exempt if taking COLL 101, COLL 150, or HONR 150
CHEM 103 General Chemistry I (F, Sum)	<b>4</b>	Math Milestone is a prerequisite for all science courses. If not completed, take MATH 010 this semester Satisfies Gen Ed Natural Science (NS)
MATH 212 Calculus I or prereq (if needed)	<b>4</b>	Dependent on Math Placement result. If prereq needed, MATH 212 can be taken later. Satisfies Gen Ed (M)
General Education course (any still needed)	<b>3-4</b>	
<b>Requirements and GPA</b>		<i>Aim for at least 16 earned credits (While 12 is fulltime, 16 credits are preferred to stay on track to graduate in 4 years), with minimum 2.0 GPA overall and in the major</i>
<b># CREDITS EARNED</b>	<b>16-17</b>	<i>By October, make appointment with advisor to discuss your schedule for next semester.</i>

<b>SEMESTER 2</b>	<b>CR</b>	<b>SEMESTER 2 NOTES</b>
FYW 100 First Year Writing <b>OR</b> FYS 100 First Year Seminar	<b>4</b>	
MATH 213 Calculus II	<b>4</b>	Prereq = MATH 212
CHEM 104 General Chemistry II Lecture and Lab (Sp, Sum) or CHEM 104H Honors	<b>4</b>	Prereq = CHEM 103 (C- or better)
General Education course (any still needed)	<b>3-4</b>	
<b>Requirements and GPA</b>		<i>Aim for minimum of 32 earned credits, with minimum 2.0 GPA overall and in the major</i>
<b># CREDITS EARNED</b>	<b>15-16</b>	<i>By March, make appointment with advisor to discuss your schedule for next semester.</i>

<b>SEMESTER 3</b>	<b>CR</b>	<b>SEMESTER 3 NOTES</b>
CHEM 205W Organic Chemistry I (F, Sum)	<b>4</b>	Prereq = CHEM 104 (C- or better)
General Education course (any still needed)	<b>3-4</b>	
PHYS 101 Physics for Science and Mathematics I (Lecture and Lab)	<b>4</b>	Prereq = MATH 120 or appropriate score on Mathematics Placement Exam
General Education course (any still needed)	<b>3-4</b>	
<b>Requirements and GPA</b>		<i>Aim for minimum of 48 earned credits, with minimum of 2.0 GPA overall and in major</i>
<b># CREDITS EARNED</b>	<b>14-16</b>	<i>By October, make appointment with advisor to discuss your schedule for next semester and possible minor. Also discuss opportunities for research and independent study.</i>

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<b>SEMESTER 4</b>	<b>CR</b>	<b>SEMESTER 4 NOTES</b>
PHYS 102 Physics for Science and Mathematics II (Lecture and Lab)	<b>4</b>	Prereq = PHYS 101
CHEM 206W Organic Chemistry II Lecture and Lab (Sp, Sum)	<b>4</b>	Prereq = is CHEM 205W
Gen Ed, elective, or course toward minor	<b>3-4</b>	
Gen Ed, elective, or course toward minor	<b>3-4</b>	
<b>Requirements and GPA</b>		<i>Aim for minimum of 64 earned credits, with minimum of 2.0 GPA overall and in major</i>
<b># CREDITS EARNED</b>	<b>14-16</b>	<i>By March, make appointment with advisor to discuss your schedule for next semester. Discuss opportunities for research and Independent study with your advisor if you have not already done so.</i>

<b>SEMESTER 5</b>	<b>CR</b>	<b>SEMESTER 5 NOTES</b>
CHEM 310 Biochemistry (F)	<b>4</b>	Prereq = CHEM 206W
CHEM 403 Inorganic Chemistry I (F)	<b>3</b>	Prereq = CHEM 206W
CHEM 400 Level Elective	<b>3-4</b>	Prereqs vary depending on course
Gen Ed, elective, or course toward minor	<b>3-4</b>	
<b>Requirements and GPA</b>		<i>Aim for minimum of 80 earned credits, with minimum of 2.0 GPA overall and in major</i>
<b># CREDITS EARNED</b>	<b>13-15</b>	<i>By October, make appointment with advisor to discuss your schedule for next semester.</i>

<b>SEMESTER 6</b>	<b>CR</b>	<b>SEMESTER 6 NOTES</b>
Connections (Gen Ed-C)	<b>4</b>	Prereqs = FYW and FYS.
CHEM 404W Analytical Chemistry I (Sp) <b>OR</b> CHEM 416W Environmental Analytical Chemistry (Sp)	<b>3-4</b>	Prereq 404W & 416W = CHEM 104 Can also be taken semester 8 Only need CHEM 404W <b>OR</b> CHEM 416W
Gen Ed, elective, or course toward minor	<b>3-4</b>	
Gen Ed, elective, or course toward minor	<b>3-4</b>	<i>If pursuing minor make sure you have registered for this with the relevant department prior to audit</i>
<b>Requirements and GPA</b>		<i>Aim for minimum of 96 earned credits, with minimum of 2.0 GPA overall and in major. Apply for degree audit online through MyRIC</i>
<b># CREDITS EARNED</b>	<b>13-16</b>	<i>By March, make appointment with advisor to discuss your schedule for next semester.</i>

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<b>SEMESTER 7</b>	<b>CR</b>	<b>SEMESTER 7 NOTES</b>
CHEM 405 Physical Chemistry I (F)	<b>3</b>	Prereqs = CHEM 104, MATH 213 and PHYS 102.
CHEM 407W Physical Chemistry Laboratory I (F)	<b>1</b>	Taken concurrently with CHEM 405
Gen Ed, elective, or course toward minor	<b>3-4</b>	
Gen Ed, elective, or course toward minor	<b>3-4</b>	
Elective or course toward minor	<b>3-4</b>	Need 12 credits to be full time
<b>Requirements and GPA</b>		<i>Aim for minimum of 108 earned credits, with minimum of 2.0 GPA overall and in the major.</i>
<b># CREDITS EARNED</b>	<b>13-16</b>	<i>By October, make appointment with advisor to discuss your schedule for next semester.</i>

<b>SEMESTER 8</b>	<b>CR</b>	<b>SEMESTER 8 NOTES</b>
CHEM 400 Elective <b>OR</b> Course toward minor	<b>4</b>	Prereqs vary, check catalog
Elective or course toward minor	<b>3-4</b>	
Elective or course toward minor	<b>3-4</b>	
Elective or course toward minor	<b>3-4</b>	
<b>Requirements and GPA</b>		<i>Need minimum of 120 earned credits, with minimum of 2.0 GPA overall and in the major</i>
<b># CREDITS EARNED</b>	<b>13-16</b>	<i>Attend Gradfest and Commencement</i>

### Notes:

- MATH 209 Pre-Calculus Mathematics is a prerequisite for MATH 212, Mathematics Department can test to see if this can be waived or if you need to take this, in which case you should take it in your first semester in place of a Gen Ed. option
- MATH 314 Calculus III is a prerequisite for CHEM 406.
- Prior to enrolling in any Chemistry course students must have completed the college Mathematics Milestone.
- The total number of credits needed for the major, general education, and other requirements may be less than the 120 required for graduation. Those remaining credits can be satisfied with electives, or they can be used toward a second major or minor which could be very useful.
  - Along with your advisor, this Rhode Map can help you determine if a second major or minor could fit into your plan

Approved by Department Chair: Andrea Del Vecchio

Date: 12/2/2024

Approved by Undergraduate Curriculum Committee

Date: 11/8/2024

Revised: