

# Academic Rhode Map for BS Biotechnology 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. 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. Any courses marked (F) offered Fall only; (Sp) Spring only.

Academic Major Checklist	Course	Academic Major Checklist	Course
BIOL 111 Introductory Biology I*		CHEM 103 General Chemistry I*	
BIOL 112 Introductory Biology II*		CHEM 104 General Chemistry II* (Sp, Sull)	
BIOL 314 Genetics (F)*		CHEM 205W Organic Chemistry I* (F)	
BIOL 320 Cell and Molecular Biology (Sp)*		CHEM 206W Organic Chemistry II* (Sp)	
BIOT 270W Intro to Biotechnology (F)*		MATH 240 Statistical Methods* or BIOL 240 Biostatistics and Experimental Design*	
BIOT 370 Biotechnology Techniques (Sp)*		MATH 209 Precalculus* or MATH 212 Calculus*	
BIOT 406-410 Biotechnology Internship Experience*		CSCI 157 Intro. to Algorithmic Thinking in Python* or PHYS 110 Introductory Physics*	
BIOT 465W Biotechnology Internship Seminar*			
CHOOSE ONE Technology Liberal Arts Elective – ANTH 334*, HIST 108 (GenEd. H), PHIL 207, or PHIL 320 (Sp)*			
CHOOSE TWO Science Electives – BIOL 348*, BIOL 429*, BIOL 431*, BIOL 330*, CHEM 404W* (Sp) or 416W (Sp)*, CHEM 422 (Sp)*, CHEM 425 (F)*, CSCI 209, MATH 245, PHYS 309 (F)*			

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

Approved by Department Chair: Dana Kolibachuk Date 3/13/2023

Approved by Curriculum Committee: Date 6/1/2023

Revised:

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<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
CHEM 103 General Chemistry I (F, Sul)* satisfies Gen Ed Natural Science (NS) Lecture and Lab.	4	Math Milestone or appropriate score on Math Placement Exam MUST be completed in order to take ALL science courses for this program. If not, will need to take MATH 010 this semester.
BIOL 111 Introductory Biology I* Lecture and Lab.	4	Must complete with C- or better to proceed to BIOL 112
Gen Ed--Second Lang 101 (based on placement, course higher than 101/102 may be taken). If lang. req. 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 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
BIOL 112 Introductory Biology II* Lecture and Lab.	4	Must complete BIOL 112 sequence with a C or better
CHEM 104 General Chemistry II (Sp, Sull)* Lecture and Lab (Gen Ed ASQR)	4	Gen Ed- Advanced Quantitative/ Scientific Reasoning completed
Gen Ed--Second Lang 102* (if needed), or Gen Ed Distribution course from <b>one</b> of these GE categories: Arts (A); Literature (L); History (H), or Social and Behavioral Sciences (SB).	3-4	Complete Second Language 102* (if needed)
Requirements and GPA		Aim for minimum of 32 earned credits; 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>
BIOL 314 Genetics* (F) Lecture and Lab	4	Prereqs are BIOL 111 and BIOL 112 with a C or better
CHEM 205W Organic Chemistry I*(F) Lecture and Lab	4	Prereqs are CHEM 105 and 106
MATH 209 Precalculus* or MATH 212 Calculus*. Either one satisfies Gen Ed Math (M)	4	Prereqs. MATH 209 has MATH 120 or appropriate score on mathematics placement exam; MATH 212 has MATH 209 or appropriate score on mathematics placement exam.
Gen Ed Distribution course from <b>one</b> of these GE categories: Arts (A); Literature (L); History (H), or Social and Behavioral Sciences (SB).	4	
Requirements and GPA		Aim for minimum of 48 earned credits; minimum of 2.0 GPA overall and in the major
# CREDITS EARNED	16	Make appointment with advisor to discuss your schedule for next semester and discuss possible minor in Sept.

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<b>SEMESTER 4</b>	<b>CR</b>	<b>SEMESTER 4 CHECKPOINTS</b>
MATH 240 Statistical Methods* or BIOL 240 Biostatistics and Experimental Design*	4	Prereqs are Math Milestone or appropriate score on the Mathematics Placement Exam for MATH 240; C or better in BIOL 100, 108 or 112 for BIOL 240, which is a lab course with 6 contact hours
BIOL 320 Cell and Molecular Biology (Sp)* Lecture and Lab	4	Prereqs are BIOL 111 and BIOL 112 with a C or better, BIOL 314 and CHEM 205W
CHEM 206W Organic Chemistry II* (Sp) Lecture and Lab	4	Prereq CHEM 205W
Gen Ed Distribution course from <b>one</b> of these GE categories: Arts (A); Literature (L); History (H), or Social and Behavioral Sciences (SB).	4	
Requirements and GPA		Aim for minimum of 64 earned credits; minimum of 2.0 GPA overall and in major
# CREDITS EARNED	16	

<b>SEMESTER 5</b>	<b>CR</b>	<b>SEMESTER 5 CHECKPOINTS</b>
BIOT 270W Intro to Biotechnology (F)* Lecture and Lab (WID)	4	Prereqs are BIOL 314 with a grade of C or better, CHEM 205W
CSCI 157 Intro Algorithmic Thinking in Python or PHYS 110 Introductory Physics* Lecture and Lab	4	Prereq. for CSCI 157 is math Milestone. Prereq. for PHYS 110 is MATH 120 or appropriate score on Mathematics Placement Exam.
Technology Liberal Arts Elective, or other elective, or course toward minor.	3-4	Check prereqs and availability for each course.
Gen Ed Distribution course from <b>one</b> of these GE categories: Arts (A); Literature (L); History (H), or Social and Behavioral Sciences (SB), elective, or course toward minor.	3-4	
Requirements and GPA		Aim for minimum of 80 earned credits; minimum of 2.0 GPA overall and in major
# CREDITS EARNED	14-16	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>
BIOT 370 Biotechnology Techniques (Sp)* Lecture and Lab	4	Prereqs are BIOL 314 with a grade of C or better, CHEM 205W
Science Elective*	3-4	Check prereqs and availability for each course. Need TWO completed in this category.
Technology Liberal Arts Elective, or other elective, or course toward minor.	3-4	Check prereqs and availability for each course. Technology Liberal Arts Elective completed (need ONE).
Gen Ed Distribution course from <b>one</b> of these GE categories: Arts (A); Literature (L); History (H), or Social and Behavioral Sciences (SB), elective, or course toward minor.	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; minimum of 2.0 GPA overall and in the major. Apply for degree audit online through MyRIC
# CREDITS EARNED	13-16	Make appointment with advisor to discuss your schedule for next semester in Feb. Consult with Biotechnology Program Director about internship for following year.

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<b>SEMESTER 7</b>	<b>CR</b>	<b>SEMESTER 7 CHECKPOINTS</b>
Science Elective*	3-4	Check prereqs and availability for each course. Need TWO completed in this category.
Choose 1 Connections course (Gen Ed-C)	4	Prereqs are 45 completed credits and FYW and FYS.
Elective, or course toward minor	3-4	
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Requirements and GPA		All ten Gen Ed courses and second lang. req. completed. Aim for minimum of 108 earned credits; 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 in Sept. Consult with Biotechnology Program Director about internship for following semester.

<b>SEMESTER 8</b>	<b>CR</b>	<b>SEMESTER 8 CHECKPOINTS</b>
BIOT 406-410 Biotechnology Internship*	6-10	Prereqs are minimum grade of B- in BIOT 270W and BIOT 370. Concurrent enrollment in BIOT 465W. Favorable lab competency evaluations from three lab science instructors from RIC, at least one from a BIOT course.
BIOT 465W Biotechnology Internship Seminar* (WID)	2	Concurrent enrollment in BIOT 471-475 required.
Elective, or course toward minor	3-4	Note: Need 12 credits to be fulltime
Requirements and GPA		Need minimum of 120 earned credits; minimum of 2.0 GPA overall and in the major
# CREDITS EARNED	12-16	Attend Gradfest and Commencement

**For more information, check the Biology Department website:**  
<https://www.ric.edu/department-directory/department-biology>

**NOTE: The minimum total credit count for the major is 69-76 credits (depending on choices), and 40 credits for Gen. Ed. However, 12 Gen Ed. credits for M, NS and AQSR will double-count (and possibly H for 4-credits), making the total 93-104 credits, leaving room for 16-27 credits that may need to include two secondary language courses and RIC 100, but could go toward a minor or electives.**