

Academic Rhode Map for BS Biotechnology 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

GENERAL EDUCATION REQUIREMENTS CHECKLIST

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

MAJOR REQUIREMENTS CHECKLIST

BIOL 111 Introductory Biology I		CHEM 103 General Chemistry I
BIOL 112 Introductory Biology II		CHEM 104 General Chemistry II (Sp, Sum)
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		CSCI 157 Intro. to Algorithmic Thinking in Python or PHYS 110 Introductory Physics
BIOT 465W Biotechnology Internship Seminar		
CHOOSE TWO Science Electives: BIOL 348 Microbiology BIOL 429 Medical Microbiology BIOL 431 Immunology BIOL 330 Developmental Biology of Animals CHEM 404W Analytical Chemistry (Sp) OR		CHEM 416W Environmental Analytical Chemistry (Sp) CHEM 422 Biochemistry Laboratory (Sp) CHEM 425 Advanced Organic Chemistry (F) CSCI 209 Discrete Structures Using Python DATA 245 Principles of Data Science PHYS 309 Nanoscience and Nanotechnology (F)
CHOOSE ONE Technology Liberal Arts Elective: ANTH 334 Steamships and Cyberspace: Technology, Culture, Society		HIST 108 History of Science and Medicine PHIL 207 Technology & the Future of Humanity PHIL 320 Philosophy of Science (Sp)

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 69-76 credits, and 40 credits for General Education. 16 Gen. Ed. credits for M, NS, HP and Elective can double count, so the program could be completed in 93-100 credits.

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SEMESTER 1	CR	SEMESTER 1 NOTES
FYW 100 First Year Writing OR FYS 100 First Year Seminar	4	FYW Directed Self Placement exam
RIC 100 Introduction to Rhode Island College	1	Exempt if taking COLL 101, COLL 150, or HONR 150
MATH 209 Precalculus OR MATH 212 Calculus	4	Math class choice based on Math placement result. If milestone is complete but did not place into 209, take MATH 120 here. If milestone is not complete, take MATH 10 Both satisfy Gen Ed Math (M)
CHEM 103 General Chemistry I (F, Sum)	4	Math Milestone is a prerequisite for all science courses. If not completed, will need to take MATH 010 this semester Satisfies Gen Ed Natural Science (NS)
BIOL 111 Introductory Biology I Lecture & Lab		Must complete with C- or better to proceed to BIOL 112
Requirements and GPA		<i>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.</i>
# CREDITS EARNED	17	<i>By October, make appointment with advisor to discuss your schedule for next semester</i>

SEMESTER 2	CR	SEMESTER 2 NOTES
FYW 100 First Year Writing OR FYS 100 First Year Seminar	4	Complete FYW with a grade C or better
BIOL 112 Introductory Biology II Lecture & Lab	4	Complete BIOL 112 sequence with a C or better
CHEM 104 General Chemistry II Lecture and Lab (Sp, Sum)	4	
General Education Course (any still needed)	3-4	
Requirements and GPA		<i>Aim for minimum of 32 earned credits; minimum of 2.0 GPA overall and in the major</i>
# CREDITS EARNED	15-16	<i>By March, make appointment with advisor to discuss your schedule for next semester.</i>

SEMESTER 3	CR	SEMESTER 3 NOTES
BIOL 314 Genetics Lecture and Lab (F)	4	Prereqs = C or better in BIOL 111 and 112
CHEM 205W Organic Chemistry I Lecture & Lab (F)		Prereqs = CHEM 104
MATH 209 Precalculus OR MATH 212 Calculus Both satisfy Gen Ed Math (M)	4	Both require Math Milestone/appropriate score on placement exam. If milestone is complete but did not place into 209, take MATH 120 here. If milestone is not complete, take MATH 10
General Education Course (any still needed)	3-4	
Requirements and GPA		<i>Aim for minimum of 48 earned credits; minimum of 2.0 GPA overall and in the major</i>
# CREDITS EARNED	16	<i>By October, make appointment with advisor to discuss your schedule for next semester</i>

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SEMESTER 4	CR	SEMESTER 4 NOTES
MATH 240 Statistical Methods or BIOL 240 Biostatistics and Experimental Design	4	MATH 240 Prereq = Math Milestone BIOL 240 – Prereq = C or better in BIOL 100, 108, or 112
BIOL 320 Cell and Molecular Biology Lecture and Lab (Sp)	4	Prereqs = C or better in BIOL 111 and 112; BIOL 314; CHEM 205
CHEM 206W Organic Chemistry II Lecture and Lab (Sp, Sum)	4	Prereq = CHEM 205W
General Education Course (any still needed)	3-4	
Requirements and GPA		<i>Aim for minimum of 64 earned credits; minimum of 2.0 GPA overall and in major</i>
# CREDITS EARNED	4	<i>By March, make appointment with advisor to discuss your schedule for next semester.</i>

SEMESTER 5	CR	SEMESTER 5 NOTES
BIOT 270W Intro to Biotechnology (F) Lecture and Lab	4	Prereqs = C or better in BIOL 314; CHEM 205W
CSCI 157 Intro Algorithmic Thinking in Python OR PHYS 110 Introductory Physics Lecture and Lab	4	CSCI 157 Prereq = math Milestone PHYS 110 Prereq = MATH 120 or appropriate score on Math Placement Exam.
Technology Liberal Arts Elective, or other elective, or course toward minor.	3-4	Prereqs vary, check catalog HIST 108 satisfies H. Gen Ed.
General Education Course (any still needed) or elective, or course towards minor	3-4	
Requirements and GPA		<i>Aim for minimum of 80 earned credits; minimum of 2.0 GPA overall and in major</i>
# CREDITS EARNED	14 -16	<i>By October, make appointment with advisor to discuss your schedule for next semester.</i>

SEMESTER 6	CR	SEMESTER 6 NOTES
BIOT 370 Biotechnology Techniques Lecture and Lab (Sp)	4	Prereqs = BIOL 314 with a grade of C or better, CHEM 205W
Science Elective	3-4	Prereqs vary, check catalog Need TWO completed in this category
Technology Liberal Arts Elective or other elective, or course toward minor.	3-4	Prereqs vary, check catalog HIST 108 satisfies H. Gen Ed.
General Education Course, or other elective, or course toward minor	3-4	<i>If pursuing minor or second major make sure you have registered for this with the relevant department prior to audit</i>
Requirements and GPA		<i>Aim for minimum of 96 earned credits; minimum of 2.0 GPA overall and in the major. Apply for degree audit online through MyRIC</i>
# CREDITS EARNED	13-16	<i>By March, make appointment with advisor to discuss your schedule for next semester Consult with Biotechnology Program Director about internship for following year</i>

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SEMESTER 7	CR	SEMESTER 7 NOTES
Science Elective	3-4	Check prereqs and availability for each course Need TWO completed in this category
Connections (Gen Ed-C)	4	Prereqs = FYW and FYS.
Elective, or course toward minor	3-4	
Elective, or course toward minor	3-4	
Requirements and GPA		<i>Aim for minimum of 108 earned credits; minimum of 2.0 GPA overall and in the major</i>
# CREDITS EARNED	13-16	<i>By October, make appointment with advisor to discuss your schedule for next semester. Consult with Biotechnology Program Director about internship for following semester.</i>

SEMESTER 8	CR	SEMESTER 8 NOTES
BIOT 406-410 Biotechnology Internship	6-10	Prereqs = 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	2	Concurrent enrollment in BIOT 471-475 required.
Elective, or course toward minor	3-4	<i>Note: Need 12 credits to be fulltime</i>
Requirements and GPA		<i>Need minimum of 120 earned credits; minimum of 2.0 GPA overall and in the major</i>
# CREDITS EARNED	12-16	<i>Attend Gradfest and Commencement</i>

NOTE:

- 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: Dana Kolibachuk

Date: 11/18/2024

Approved by Undergraduate Curriculum Committee

Date: 11/8/2024

Revised: