GENERAL EDUCATION: A complete listing of General Education courses can be found at the Office of Academic Support (OASIS) **401** 456-8083 or online at http://www.ric.edu/recordsoffice/Pages/College-Catalog.aspx; 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, Korean, Latin, Portuguese, or Spanish. For other ways to satisfy the second language requirement look under the Gen Ed. section of the catalog. Any courses marked (F) offered Fall only; (Sp) Spring; (Su) Summer. All courses marked with an asterisk * have a prerequisite. For info. about Math Placement exam visit: http://www.ric.edu/orientation/Pages/Math-Placement.aspx. Courses with (WID) are Writing in the Discipline courses and will be writing intensive.

Academic Major Checklist	Course	Academic Major Checklist	Course
CSCI 211 Computer Programming and Design*		CSCI 435 Operating Systems and Computer Architecture*	
CSCI 212 Data Structures* (WID)			
CSCI 309 Object-Oriented Design*		THREE courses from: CSCI 305 Functional Programming (F)*; CSCI 415 Software Testing (Sp)*; CSCI416 Human-Computer Interaction Design*; CSCI 422 Introduction to Computation Theory (Sp)*; CSCI 427 Introduction to Artificial Intelligence*; CSCI 428 Machine Learning* (Sp); CSCI 437 Networks and Programming * CSCI 455 Introduction to Database Systems (F)*; CSCI 467 Computer Science Internship*; CSCI 476 Advanced Topics in Computer Science (Sp)*	
CSCI 312 Computer Organization and Architecture I*			
CSCI 313 Computer Organization and Architecture II*			
CSCI 325 Organization of Programming Language*		Cognates:	
CSCI 401 Software Engineering* (WID)		MATH 212 Calculus I*	
CSCI 423 Analysis of Algorithms*		MATH 436 Discrete Mathematics*	
IT IS RECOMMENDED that students also take the following:			
COMM 208 Public Speaking		MATH 213 Calculus II*	
ENGL 230 Workplace Writing*		MATH 315 Linear Algebra (F)*	
MATH 209 Precalculus Math*			

Please note: Students must consult with their assigned advisor before they will be able to register for courses

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 will need you to take them in a special order, there is some flexibility in this map. All courses that have prerequisites are marked with an asterisk* in the checklists above and in the 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 its equivalent
- College Math Competency (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.
- 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 of Mathematics and Computer Science Date 8/9/2016
Approved by Undergraduate Curriculum Committee: Date   8/9/2016   Revised: 6/1/2020

SEMESTER 1	CR		SEMESTER 1 CHECKPOINTS ✓
First Year Writing (FYW 100) or First Year Seminar (FYS 100).	4		☐ FYW 100P is a 6-credit option. To decide which FYW to take, see Directed Self-Placement test at www.ric.edu/firstyearwriting
RIC 100 Introduction to Rhode Island College	1		☐ Exempt if taking COLL 101, COLL 150, or HONR 150
CSCI 157 Introduction to Algorithmic Thinking, or Gen Ed.	4		☐ Recommended as the prerequisite for CSCI 211 ☐ Prereq. college math competency completed
MATH 209 Precalculus Math* (if needed to be ready for calculus) or MATH 212 Calculus I* [either one satisfies Gen Ed Mathematics (M)]	4		☐ Prereq. for MATH 209 is MATH 120 or appropriate score on mathematics placement exam; recommended ☐ Prereq for MATH 212 is MATH 209 or appropriate score on mathematics placement exam
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 16 earned credits (While 12 is fulltime, 16 credits are preferred to stay on track to graduate in 4 years) ☐ Math Competency completed ☐ Minimum 2.0 GPA
# CREDITS EARNED	17		☐ Make appointment with advisor to discuss your schedule for next semester in Sept.

SEMESTER 2	CR		SEMESTER 2 CHECKPOINTS ✓
FYW 100 or FYS 100	4		☐ Complete FYS and FYW, for FYW, grade C or better
MATH 212 Calculus I* (if not yet taken), or Gen Ed.	4		☐ Prereq for MATH 212 is MATH 209 or appropriate score on mathematics placement exam; Gen Ed. Math.
CSCI 211 Computer Programming and Design*	4		☐ Prereq. is CSCI 157 or consent
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 ☐ Minimum 2.0 GPA
# CREDITS EARNED	15-16		☐ Make appointment with advisor to discuss your schedule for next semester in Feb.

SEMESTER 3	CR		SEMESTER 3 CHECKPOINTS ✓
CSCI 212 Data Structures* (WID)	4		☐ Prereq. is CSCI 211
CSCI 309 Object-Oriented Design*	4		☐ Prereq. is CSCI 201 or 211
ENGL 230 Workplace Writing*, or COMM 208 Public Speaking, or elective	4		☐ Recommended not required ☐ Prereq, for ENGL 230 is FYW 100 or completion of College Writing Requirement
Gen Ed Distribution course from **one** of these categories: Arts (A); Literature (L); History (H), Natural Science (NS); or Social and Behavioral Sciences (SB).	4		☐ Consider Gen Ed Natural Science (NS)
Requirements and GPA			☐ Aim for minimum of 48 earned credits, ☐ Minimum of 2.0 GPA overall and in major
# CREDITS EARNED	16		☐ Make appointment with advisor to discuss your schedule for next semester and discuss possible minor or double major in Sept.

SEMESTER 4	CR		SEMESTER 4 CHECKPOINTS ✓
CSCI 312 Computer Organization and Architecture	4		☐ Prereq. is CSCI 201 or 211
CSCI 325 Organization of Programming Language*	3		☐ Prereq. is CSCI 212 or 315
MATH 436 Discrete Mathematics (Sp)*	3		☐ Prereq. is MATH 212
Gen Ed Distribution course from **one** of these categories: Arts (A); Literature (L); History (H), Natural Science (NS); 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	14		☐ Make appointment with advisor to discuss your schedule for next semester in Feb.

SEMESTER 5	CR		SEMESTER 5 CHECKPOINTS ✓
CSCI 313 Computer Organization and Architecture II*	3		☐ Prereqs are CSCI 312 and either CSCI 211 or 221
Choose ONE from: CSCI 305 Functional Programming (F)*; CSCI 416 Human-Computer Interaction Design*; CSCI 427 Introduction to Artificial Intelligence*; CSCI 437 Networks and Programming *; CSCI 455 Introduction to Database Systems (F)*; CSCI 467 Computer Science Internship*; or another needed Gen Ed.	3-4		☐ Need to complete a minimum of THREE CSCI electives (there are several offered only in Fall or Spring and they have only been listed here when potentially offered that semester) ☐ Prereqs. vary—see catalog
MATH 240 Statistical Methods I* or MATH 248 Business Statistics I* or elective	4		☐ Recommended (not required) statistics; satisfies Gen Ed AQSR ☐ Prereq. for MATH 240 is MATH 120 or consent; Prereq. for MATH 248 is MATH 177 or consent
Gen Ed Distribution course from **one** of these categories: Arts (A); Literature (L); History (H), Natural Science (NS); or Social and Behavioral Sciences (SB).	4		
Requirements and GPA			☐ Aim for minimum of 80 earned credits ☐ Minimum of 2.0 GPA overall and in major
# CREDITS EARNED	14-15		☐ Make appointment with advisor to discuss your schedule for next semester in Sept.

SEMESTER 6	CR		SEMESTER 6 CHECKPOINTS ✓
Choose 1 Connections course (Gen Ed-C)	4		☐ Prereqs are 45 completed credits and FYW and FYS.
CSCI 401 Software Engineering* (WID)	3		☐ Prereqs are CSCI 212 or 315, CSCI 309 and at least two additional computer science courses at the 300-level or above, or consent of department chair ☐ This course, also, could be taken in Semester 8
CSCI 423 Analysis of Algorithms*	4		☐ Prereqs are MATH 212, MATH 436 and either CSCI 212 or CSCI 315; satisfies Gen Ed Advanced Quantitative/Scientific Reasoning (AQSR) ☐ Could be taken in Semester 8, and elective or Gen Ed course taken here
Gen Ed Distribution course if needed, or CSCI elective	3-4		
Requirements and GPA			☐ Aim for minimum of 96 earned credits ☐ If pursuing minor or second major make sure you have registered for this with the relevant department prior to audit ☐ Minimum of 2.0 GPA overall and in major ☐ Apply for degree audit online through MyRIC
# CREDITS EARNED	14-15		☐ Make appointment with advisor to discuss your schedule for next semester in Feb.

SEMESTER 7	CR		SEMESTER 7 CHECKPOINTS ✓
CSCI 435 Operating Systems and Computer Architecture*	3		☐ Prereqs are CSCI 313 and either CSCI 212 or 315
MATH 213 Calculus II* or elective	3-4		☐ Recommended not required ☐ Prereq. is MATH 212 and satisfies Gen Ed. AQSR.
Choose ONE from: CSCI 305 Functional Programming (F)*; CSCI 416 Human-Computer Interaction Design*; CSCI 427 Introduction to Artificial Intelligence*; CSCI 437 Networks and Programming *; CSCI 455 Introduction to Database Systems (F)*; CSCI 467 Computer Science Internship*; or elective	3-4		☐ Need to complete a minimum of THREE from this list (also consider the Spring only options) ☐ Prereqs. vary—see catalog
MATH 315 Linear Algebra (F)* or elective	3-4		☐ Recommended not required ☐ Prereq. is MATH 300 which also may need to take
Requirements and GPA			☐ Aim for minimum of 108 earned credits ☐ Minimum of 2.0 GPA ☐ Minimum GPA of 2.0 in major ☐ All ten GE courses and second lang. req. completed
# CREDITS EARNED	12-15		☐ Make appointment with advisor to discuss your schedule for next semester in Sept.

SEMESTER 8	CR		SEMESTER 8 CHECKPOINTS ✓
Choose ONE from: CSCI 415 Software Testing (F Sp)*; CSCI 416 Human-Computer Interaction Design*; CSCI 422 Introduction to Computation Theory (Sp)*; CSCI 427 Introduction to Artificial Intelligence*; CSCI 428 Machine Learning (Sp)*; CSCI 437 Networks and Programming *; CSCI 467 Computer Science Internship*; or CSCI 476 Advanced Topics in Computer Science (Sp)*	3-4		☐ Complete a minimum of THREE from this list (also consider the Fall only options) ☐ Prereqs. vary—see catalog ☐ Completed CSCI 401 and CSCI 423
Choose another course from the above list, or elective	3-4		
Gen Ed Distribution course if needed, or elective	3-4		
Elective, or course toward minor	3-4		
Requirements and GPA			☐ Need minimum of 120 earned credits ☐ Minimum of 2.0 GPA ☐ Minimum GPA of 2.0 in major
# CREDITS EARNED	12-16		Attend Gradfest and Commencement

For more information, check the COMPUTER SCIENCE Department website:
http://www.ric.edu/mathComputerScience/Pages/default.aspx

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

NOTE: The minimum total credit count for the BA Computer Science major is 49 credits (depending on choices), and there are 40 credits of Gen Ed. with possibly 9 more depending on secondary language needs and RIC 100. However, 8 Gen Ed. credits for M and AQSR will double-count, making the total 81 credits (though this will be at least 20 credits higher if you take the additional recommended courses), leaving room for 39 credits that may need to include two secondary language courses and RIC 100, but could go toward a minor or electives.