Academic Rhode Map for BS Data Science 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 212
					Arts (A)
	FYS 100 – Taken in first year (Cannot be used as elective)				**History/Philosophy (HP)**
					Literature/Language (LL)
					Natural Science (NS)
	Connections – Taken after FYW & FYS				**Social & Behavioral Sciences (SB)**
					Elective(s) to bring total Gen Ed credits to 40 (E)

MAJOR REQUIREMENTS CHECKLIST				
	MATH 212 Calculus I			MATH 436 Discrete Mathematics
	MATH 213 Calculus II			DATA 445 Advanced Statistical Methods (Sp)
	MATH 240 Statistical Methods I OR MATH 248 Business Statistics I			DATA 460W Seminar in Data Science (Sp)
	DATA 245 Principles of Data Science			CSCI 157 Introduction to Algorithmic Thinking in Python
	MATH 314 Calculus III			CIS 455W Database Programming
	DATA 345 Applied Linear Algebra for Statistical Learning			PHIL 207 Technology and the Future of Humanity

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 41 credits, and 40 credits for General Education. However, 8 Gen. Ed. credits for M and Elective can double count, so the program can be completed in 73 credits.

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SEMESTER 1	CR		***SEMESTER 1 CHECKPOINTS***
FYW 100 First Year Writing **OR** FYS 100 First Year Seminar	**4**		FYW Directed Self Placement exam
RIC 100 Introduction to RIC	**1**		Exempt if taking COLL 101, COLL 150, or HONR 150
MATH 240 Statistical Methods or MATH 248 Business Statistics I	**4**		Prereq MATH 240= Milestone/placement exam Prereq 248 = MATH 177, consent or placement exam Both satisfy Gen Ed Elective
General Education course - Any but Mathematics (M)	**3-4**		MATH (M) Gen Ed is satisfied by MATH 212
CSCI 157 Introduction to Algorithmic Thinking in Python	**4**		Prereq = Milestone/placement exam
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). Minimum 2.0 GPA*
# CREDITS EARNED	**16 -17**		*By October, make appointment with advisor to discuss your schedule for next semester*

SEMESTER 2	CR		***SEMESTER 2 CHECKPOINTS***
FYW 100 First Year Writing **OR** FYS 100 First Year Seminar	**4**		
MATH 212 Calculus I or prereq (if needed)	**4**		Dependent on Math Placement result. If prereq needed, MATH 212 can be taken later. Satisfies Gen Ed (M)
DATA 245 Principles of Data Science	**4**		Prereq = Math 240. Satisfies Gen Ed Elective
General Education course	**3-4**		
Requirements and GPA			*Aim for minimum of 32 earned credits, with minimum of 2.0 GPA overall and in major*
# CREDITS EARNED	**15-16**		*By March, make appointment with advisor to discuss your schedule for next semester*

SEMESTER 3	CR		***SEMESTER 3 CHECKPOINTS***
MATH 213 Calculus II	**4**		Prereq = MATH 212
General Education course	**3-4**		
PHIL 207 Technology and the Future of Humanity	**3**		
Elective or course toward second major or minor	**3-4**		
Requirements and GPA			*Aim for minimum of 48 earned credits, with minimum of 2.0 GPA overall and in major.*
# CREDITS EARNED	**13 -15**		*By October, make appointment with advisor to discuss your schedule for next semester*

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SEMESTER 4	CR		***SEMESTER 4 CHECKPOINTS***
DATA 345 Applied Linear Algebra for Statistical Learning	**4**		Prereq = MATH 315 or both DATA 245 and MATH 212.
MATH 314 Calculus III	**4**		Prereq = MATH 213
General Education course	**3-4**		
General Education course	**3-4**		
Requirements and GPA			*Aim for minimum of 64 earned credits, with minimum of 2.0 GPA overall and in major*
# CREDITS EARNED	**14 -16**		*By March, make appointment with advisor to discuss your schedule for next semester*

SEMESTER 5	CR		***SEMESTER 5 CHECKPOINTS***
Connections (Gen Ed-C)	**4**		Prereqs = FYW and FYS.
CIS 455W Database Programming	**3-4**		Prereqs = CIS 252 or CSCI 102 or MATH 245, **AND** CIS 301 or CSCI 157, or consent of department chair
MATH 436 Discrete Mathematics	**3**		Prereq = MATH 212
Elective or course toward second major or minor	**3-4**		
Requirements and GPA			*Aim for minimum of 80 earned credits, with minimum of 2.0 GPA overall and in major. If pursuing minor make sure you have registered for this with the relevant department prior to audit*
# CREDITS EARNED	**13 -15**		*By October, make appointment with advisor to discuss your schedule for next semester*

SEMESTER 6	CR		***SEMESTER 6 CHECKPOINTS***
DATA 445 Advanced Statistical Methods (Sp)	**4**		Prereq = MATH 240 AND DATA 345 or MATH 315 or MATH 436 and prior/concurrent enrollment in CSCI 423.
General Education course	**3-4**		
Other Gen Ed if needed, or elective, or course towards minor	**3-4**		
Elective or course toward second major or minor	**3-4**		
Requirements and GPA			*Aim for minimum of 96 earned credits, with minimum of 2.0 GPA overall and in major. Apply for degree audit online through MyRIC (If pursuing minor make sure you have registered for this with the relevant department prior to audit)*
# CREDITS EARNED	**13 -16**		*By March, make appointment with advisor to discuss your schedule for next semester*

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SEMESTER 7	CR		***SEMESTER 7 CHECKPOINTS***
Other Gen Ed if needed, or elective, or course towards minor	3-4		
Elective or course toward second major or minor	3-4		
Elective or course toward second major or minor	3-4		
Elective or course toward second major or minor	3-4		
Requirements and GPA			*Aim for minimum of 108 earned credits, with minimum of 2.0 GPA.*
# CREDITS EARNED	12 -16		*By October, make appointment with advisor to discuss your schedule for next semester*

SEMESTER 8	CR		***SEMESTER 8 CHECKPOINTS***
DATA 460W Seminar in Data Science (Sp)	**3**		Prereq = DATA 445
Elective or course toward second major or minor	**3-4**		
Elective or course toward second major or minor	**3-4**		
Elective or course toward second major or minor	**3-4**		
Requirements and GPA			*Need minimum of 120 earned credits, with minimum of 2.0 GPA overall and in major*
# CREDITS EARNED	**13 -15**		*Attend Gradfest and Commencement*

Notes:

- No more than 2 classes with a grade of below C- can be counted towards the major
- 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.

Acknowledged by Department Chair: Rebecca Sparks — Date: 12/30/2024

Approved by Undergraduate Curriculum Committee — Date: 11/8/2024

Revised: