B.A. in Mathematics (Statistics)

Academic Program Guide for **New First-Year Students** (Effective Fall 2018)
Department of Mathematics (mathadvising@rowan.edu)

Students who entered Rowan University prior to Fall 2018 should follow the guide for their program and start year in consultation with their advisor.

Rowan University Graduation Requirements for all Majors / Degrees

- Students must complete at least 120 semester hours (sh) of coursework that apply to their Rowan University degree.
- Students must have a cumulative GPA of at least 2.0 in Rowan University coursework. (Transfer courses/credit do not count toward the RU GPA.)
- A minimum of 30 sh of coursework must be completed at/through Rowan University.
- Only grades of "D-" or above may apply to graduation/degree requirements. (Some programs may set higher minimums.)
- Students must meet the Rowan Core and Rowan Experience Requirements.
  - An individual course can potentially satisfy one Rowan Core literacy and/or multiple Rowan Experience attributes.
  - Rowan Core & Rowan Experience designations are listed in course details in Section Tally (www.rowan.edu/registrar) and may also be searched on that site under "Attributes." A list of Rowan Core courses is here: https://confluence.rowan.edu/display/AS/Rowan+Core+Course+List.
- Students must apply for graduation and should do so for the term in which they will complete all program requirements.

Program-Specific Graduation Requirements for this Major / Degree

- Students must receive a grade of C- or better in all courses satisfying Major requirements.

Rowan Core Requirements[1]

*Students must satisfy all **six** Rowan Core Literacies. A minimum total of 3 sh of coursework is required to satisfy each Literacy.*
With the exception of the 9 sh counted here for Communicative Literacy, credits attached to the courses in this section will apply elsewhere.

- ○ (COML) Communicative Literacy: *Must be met by the following three courses or their official equivalents:*
  - ○ COMP 01111 College Composition I (3 sh)　　○ COMP 01112 College Composition II (3 sh)　　○ CMS 04205 Public Speaking (3 sh)
- ○ (ARTL) Artistic Literacy　　*Recommendation from major:*　(sh counted under Non-Program or Free Elective categories)
- ○ (GLBL) Global Literacy　　*Recommendation from major:*　(sh counted under Non-Program or Free Elective categories)
- ○ (HUML) Humanistic Literacy　　*Recommendation from major:*　(sh counted under Non-Program or Free Elective categories)
- ○ (QNTL) Quantitative Literacy　　*Recommendation from major:*　MATH 01130 (4 sh counted under major)
- ○ (SCIL) Scientific Literacy　　*Recommendation from major:*　PHYS 00220 (4 sh counted under non-program)

> Subtotal of credits counted in this section: 9 sh

Rowan Experience Requirements

Students must satisfy all three Rowan Experience attributes. Credits attached to the courses in this section will apply elsewhere.

- ○ (LIT) Broad-Based Literature Attribute　　*Recommendation from major:*
- ○ (WI) Writing Intensive Attribute　　*Recommendation from major:* MATH 01498 (3 sh counted under major)
- ○ (RS) Rowan Seminar Attribute[2]　　*Recommendation from major:*

Non-Program Courses (minimum 18 sh)

Courses in this section cannot be in the major department.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
PHYS 00220	Introductory Mechanics	Satisfies Scientific Literacy	Fall/2	>= D-	4
PHYS 00222, PHYS 00221 or CS 04225	Intro to Electricity & Magnetism, Intro to Thermodynamics, Fluids, Waves & Optics or Principles of Data Structures		Spr/2	>= D-	4, 4 or 3
CS 04103	Computer Science and Programming		Fall/1	>= D- [3]	4
PHIL 09130	Intro to Symbolic Logic		Fall/1	>= C-	3
					Subtotal: 18 sh

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Major Requirements (42-43 sh)

SUMMARY OF MAJOR REQUIREMENTS

- 24 sh of Foundational Courses
- 9 sh of Mid-Level Courses for the Statistics Concentration
- 9-10 sh of Statistics Concentration Restricted Electives (Groups One and Two)
- 42-43 sh total

FOUNDATIONAL COURSES

Course #	Course Name	Course Designations / Notes	Sem/Yr	Grade	Credits
MATH 03150	Discrete Mathematics		Spr/1	>= C-	3
MATH 01130	Calculus I	Satisfies Quantitative Literacy	Fall/1	>= C-	4
MATH 01131	Calculus II		Spr/1	>= C-	4
MATH 01230	Calculus III		Fall/2	>= C-	4
MATH 01210	Linear Algebra		Fall/2	>= C-	3
STAT 02320	Concepts in Statistical Data Analysis		Spr/2	>= C-	3
MATH 01340	Modern Algebra I		Fall/3	>= C-	3
				Subtotal: 24 sh	

MID-LEVEL COURSES FOR THE STATISTICS CONCENTRATION

Course #	Course Name	Course Designations / Notes	Sem/Yr	Grade	Credits
STAT 02360	Probability and Random Variables		Spr/2	>= C-	3
STAT 02361	Mathematical Statistics		Fall/3	>= C-	3
MATH 01498	Mathematics Seminar	Satisfies WI requirement	Spr/4	>= C-	3
				Subtotal: 9 sh	

STATISTICS CONCENTRATION RESTRICTED ELECTIVES – GROUP ONE

Choose two of the following courses.

	Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
○	MATH 01411	Deterministic Models in Operations Research			>= C-	3
○	MATH 01412	Stochastic Models in Operations Research			>= C-	3
○	STAT 02340	Elements of Statistical Learning			>= C-	3
○	STAT 02371	Design of Experiments: Analysis of Variance			>= C-	3
					Subtotal: 6 sh	

STATISTICS CONCENTRATION RESTRICTED ELECTIVES – GROUP TWO

Choose one of the following courses.

	Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
○	MATH 01231	Ordinary Differential Equations			>= C-	3
○	MATH 01310	College Geometry			>= C-	4
○	MATH 01330	Introduction to Real Analysis I			>= C-	3
○	MATH 01331	Introduction to Real Analysis II			>= C-	3
○	MATH 01332	Numerical Analysis			>= C-	3
○	MATH 01341	Modern Algebra II			>= C-	3
○	MATH 01352	Theory of Numbers			>= C-	3
○	MATH 01354	Introduction to Topology			>= C-	3
○	MATH 01386	Introduction to Partial Differential Equations			>= C-	3
○	MATH 01400	Applications of Mathematics			>= C-	3
○	MATH 01410	History of Mathematics			>= C-	3
○	MATH 01421	Mathematics Field Experience			>= C-	3
					Subtotal: 3-4 sh	

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Free Electives for this Major/Degree (50-51 sh)

Students should choose Free Electives that satisfy any Rowan Core or Rowan Experience requirements that are not fulfilled by Major or Non-Program courses.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
					Subtotal: 50-51 sh

Total Program Credits Required for this Major / Degree: 120 SH