

B.S. in Geographic Information Science

Program Guide for New First-Year Students (Effective Fall 2020) Dept. of Geography, Planning & Sustainability

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 and 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://sites.rowan.edu/academic-affairs/officeofacademicaffairs/assessment/rowan-core/index.html>.
- 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 Requirements¹

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:* GEOG 16160 (3 sh counted under major)
- (GLBL) Global Literacy *Recommendation from major:* GEOG 16100, GEOG 16110 or GEOG 16140 (3 sh counted under major)
- (HUML) Humanistic Literacy *Recommendation from major:* PLAN 31280
- (QNTL) Quantitative Literacy *Recommendation from major:* MATH 01130 or STAT 02260 (3 sh counted under major)
- (SCIL) Scientific Literacy *Recommendation from major:* GEOG 16130

[Subtotal of credits counted in this section: 9]

Rowan Experience Requirements

Students must satisfy all three Rowan Experience attributes. Credits attached to the courses in this section will apply elsewhere. 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:* GEOG 16490 (3 sh counted under the major)
- (RS) Rowan Seminar Attribute² *Recommendation from major:* GEOG 16100 (3 sh counted under the 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
CS 01104	Intro. to Sci. Programming – Python				3
					3
					3
					3
					3
					3
Subtotal: 18 sh					

¹ The Rowan Core requirements are waived for transfer students with an earned A.A. or A.S. degree from a NJ community/county college.

² The Rowan Seminar requirement is waived for all students transferring 24 or more approved credits into Rowan University at the time of initial entry.

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Major Requirements (58-59 sh)

SUMMARY OF MAJOR REQUIREMENTS

- 6 sh of Introductory Geography Courses
 - 31 sh of GIS Foundational Courses
 - 6 sh of GIS Electives
 - 3-4 sh of Quantitative Methods Elective
 - 12 sh of Geography Program Electives
-
- 58-59 sh total

INTRODUCTORY GEOGRAPHY COURSES

Take two of the following courses.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
GEOG 16100	Earth, People and the Environment	Satisfies Global Literacy			3
GEOG 16110	Cultural Geography	Satisfies Global Literacy			3
GEOG 16140	World Regional Geography	Satisfies Global Literacy			3
					Subtotal: 6 sh

GIS FOUNDATIONAL COURSES

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
GEOG 16160	Intro. to Mapping & GIS	Satisfies Artistic Literacy			3
GEOG 16260	Fundamentals of GIS	Prereq GEOG 16160			4
GEOG 16261	Cartography	Prereq GEOG 16160			3
GEOG 16290	History & Methods of Modern Geography				3
GEOG 16350	Quantitative and Qualitative Methods in Geography				3
GEOG 16360	Applications of GIS	Prereq GEOG 16260			3
GEOG 16365	Geospatial Measurement and Env. Modeling	Prereq GEOG 16160			3
GEOG 16370	Drones, Planes, and Satellites	Prereq GEOG 16260			3
GEOG 16390	Internship / Research Clinic	120 hours			3
GEOG 16490	Senior Seminar in Geography	Satisfies WI requirement			3
					Subtotal: 31 sh

GIS ELECTIVES

Majors must take two additional GIS or related courses (6 sh), selected in consultation with the GIS Program Coordinator or academic advisor.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
					Subtotal: 6 sh

QUANTITATIVE METHODS ELECTIVE

Choose one of the courses below.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
STAT 02260	Statistics I	Satisfies Quantitative Literacy			3
STAT 02261	Statistics II	Pre-req: STAT 02260			3
CS 04013	Computer Science & Programming				4
MATH 01130	Calculus I	Satisfies Quantitative Literacy			4
MATH 01131	Calculus II	Pre-req: MATH 01130			3
					Subtotal: 3-4 sh

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GEOGRAPHY PROGRAM ELECTIVES

Majors must take **four** additional courses (12 sh) offered **within** the department, selected in consultation with the Geography Program Coordinator or academic advisor. It is imperative that these courses are chosen to complete a second major, minor, or CUGS offered by the Department.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
Subtotal: 12 sh					

Free Electives for this Major/Degree (34-35 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: 34-35 sh					

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