

B.S. in Civil Engineering

Academic Program Guide for New First-Year Students (Effective Fall 2018)

Department of Civil Engineering (jahan@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 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://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 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 11 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)
 - ☐ ENGR 01201 Sophomore Eng. Clinic I (4 sh)
 - ☐ ENGR 01202 Sophomore Eng. Clinic II (4 sh)
- ☐ (ARTL) Artistic Literacy *Recommendation from major:*
- ☐ (GLBL) Global Literacy *Recommendation from major:*
- ☐ (HURL) Humanistic Literacy *Recommendation from major:* ECON 04102 (3 sh counted under non-program)
- ☐ (QNTL) Quantitative Literacy *Recommendation from major:* MATH 01130 (4 sh counted under non-program)
- ☐ (SCIL) Scientific Literacy *Recommendation from major:* CHEM 06100 or PHYS 00220 (4 sh counted under non-program)

Subtotal of credits counted in this section: 11 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:* ENGR 01403 (4 sh counted under major)
- ☐ (RS) Rowan Seminar Attribute² *Recommendation from major:* ENGR 01101 (2 sh counted under major)

Non-Program Courses (26 sh)

Courses in this section cannot be in the major department.

Course #	Course Name				Credits
CHEM 06100	Chemistry I	Satisfies Scientific Literacy			4
CS 01104	Intro to Scientific Programming	SM			3
ECON 04102	Intro to Econ - Microeconomics	Satisfies Humanistic Literacy			3
MATH 01130	Calculus I	Satisfies Quantitative Literacy			4
MATH 01131	Calculus II	SM			4
PHYS 00220	Introductory Mechanics	SM, LAB; Satisfies Scientific Literacy			4
CHEM 06101, PHYS 02201 or PHYS 02210	Chemistry II, Intro. to Electricity and Magnetism or Intro. to Thermodynamics, Fluids, Waves, and Optics	Approved Technical Science Elective			4
					Subtotal: 26 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 (85 sh)

SUMMARY OF MAJOR REQUIREMENTS

- 34 sh of Foundational Courses
 - 31 sh of Mid-Level Courses
 - 5 sh of Upper-Level Courses
 - 15 sh of Civil Engineering Electives
-
- 85 sh total

FOUNDATIONAL COURSES

Course #	Course Name		Sem/Yr	Grade	Credits
CEE 08103	Field Surveying				2
CEE 08305	Civil Engineering Systems				3
CEE 08102	Engineering Graphics				2
CEE 08101	Intro to Infrastructure				2
ENGR 01101	Freshman Eng. Clinic I				2
ENGR 01102	Freshman Clinic II				2
ENGR 01271	Statics				2
ENGR 01291	Dynamics				2
ENGR 01272	Solid Mechanics				2
ENGR 01403	Senior Eng. Clinic I & II	Satisfies WI requirement			4
GEO 06193	Intro to Mapping & GIS				3
MATH 01230	Calculus III				4
MATH 01235	Math for Engineering Analysis				4
Subtotal:					34 sh

MID-LEVEL COURSES

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
ENGR 01303	Junior Eng. Clinic I & II				4
ENGR 01341	Fluid Mechanics				2
ENGR 01281	Material Science				2
CEE 08382	Structural Analysis				3
CEE 08311	Environmental Engineering				3
CEE 08301	Civil Engineering Materials				2
CEE 08383	Analysis & Design of Steel Frames				3
CEE 08342	Water Resources Engineering				3
CEE 08312	Sustainable Civ/Env Engineering				3
CEE 08361	Transportation Engineering				3
CEE 08351	Geotechnical Engineering				3
Subtotal:					31 sh

UPPER-LEVEL COURSES

Course #	Course Name		Sem/Yr	Grade	Credits
CEE 08491	CE Design Project I				2
CEE 08492	CE Design Project II				2
CEE 08490	Civil Engineering Practice				1
Subtotal:					5 sh

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CIVIL ENGINEERING ELECTIVES

Students must choose 4 electives based on availability. 1 elective must come from 2 of the following areas: Transportation, Geotechnical, Water Resources.

	Course #	Course Name	Sem/Yr	Grade	Credits
☐		Civil Engineering Elective			3
☐		Civil Engineering Elective			3
☐		Civil Engineering Elective			3
☐		Civil Engineering Elective			3
☐		Technical Elective			3
					Subtotal: 15 sh

Free Electives for this Major/Degree (6 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	Sem/Yr	Grade	Credits
		Any course satisfying Artistic Literacy		3
		Any course satisfying Global Literacy		3
				Subtotal: 6 sh

Total Program Credits Required for this Major / Degree: 128 SH