

B.S. in Chemical Engineering

Academic Program Guide for New First-Year Students (Effective Fall 2019) Department of Chemical Engineering (savelski@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 several of the 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 Comp. 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:* ENGL 02116 (3 sh counts under non-program)
- (HUML) Humanistic Literacy *Recommendation from major:* ECON 04101 (3 sh counts under non-program)
- (QNTL) Quantitative Literacy *Recommendation from major:* MATH 01130 (4 sh counts under non-program)
- (SCIL) Scientific Literacy *Recommendation from major:* CHEM 06100 or PHYS 00220 (4 sh counts 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:* ENGL 02116 (3 sh counts under non-program)
- (WI) Writing Intensive Attribute *Recommendation from major:* ENGR 01403 (4 sh counts under major)
- (RS) Rowan Seminar Attribute² *Recommendation from major:* ENGR 01101 (2 sh counts under major)

Non-Program Courses (31 sh)

Courses in this section cannot be in the major department.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
MATH 01130	Calculus I	Satisfies Quantitative Literacy			4
CHEM 06100	Chemistry I	Satisfies Scientific Literacy			4
CHEM 06101	Chemistry II				4
	Computer Programming Elective				3
	(ARTL) Artistic Literacy	Rowan Core			3
	(GLBL) Global Literacy	Rowan Core			3
	(HUML) Humanistic Literacy	Rowan Core			3
PHYS 00220	Introductory Mechanics	Satisfies Scientific Literacy			4
	Approved Biological Science Elective	Examples: BIOL 01110, BIOL 01113, BIOL 10211, BIOL 10210			3
					Subtotal: 31 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 (89 sh)

SUMMARY OF MAJOR REQUIREMENTS

- 29 sh of Foundational Courses
 - 27 sh of Mid-Level Courses
 - 17 sh of Upper-Level Courses
 - 12 sh of Chemical Engineering Electives
 - 3 sh of Free Elective
-
- 88 sh total

FOUNDATIONAL COURSES

Course #	Course Name	Course Designations / Notes	Sem/Yr	Grade	Credits
ENGR 01101	Freshman Engineering Clinic I	Satisfies RS requirement			2
ENGR 01102	Freshman Engineering Clinic II				2
CHE 06201	Principles of Chemical Processes I				2
CHE 06202	Principles of Chemical Processes II				2
CHE 06241	Chemical Engineering Fluid Mechanics				2
CHEM 07200	Organic Chemistry I				4
	Approved Chemistry Elective	Examples: CHEM 07201; CHEM 07202, CHEM 09249			3
MATH 01131	Calculus II				4
MATH 01230	Calculus III				4
MATH 01235	Math for Engineering Analysis				4
Subtotal: 29 sh					

MID-LEVEL COURSES

Course #	Course Name	Course Designations / Notes	Sem/Yr	Grade	Credits
ENGR 01303	Junior Eng. Clinic I & II				4
CHE 06309	Process Fluid Transport				2
CHE 06310	Chemical Eng. Thermodynamics I				3
CHE 06311	Heat Transfer Processes				3
CHE 06312	Separation Processes I				2
CHE 06314	Separation Processes II				4
CHE 06315	Chemical Eng. Thermodynamics II				3
CHE 06316	Chemical Reaction Engineering				4
CHE 06381	Chemical Eng. Materials				2
Subtotal: 27 sh					

UPPER-LEVEL COURSES

Course #	Course Name	Course Designations / Notes	Sem/Yr	Grade	Credits
CHE 06401	Chemical Process Component Design				4
CHE 06403	Unit Operations Experimental Design & Analysis				3
CHE 06405	Process Dynamics and Controls				3
CHE 06406	Chemical Plant Design				3
ENGR 01403	Senior Engineering Clinic I & II	Satisfies WI requirement			4
Subtotal: 17 sh					

CHEMICAL ENGINEERING ELECTIVES

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
<input type="radio"/>					3
<input type="radio"/>					3
<input type="radio"/>					3
<input type="radio"/>					3
Subtotal: 12 sh					

Free Electives for this Major/Degree (3 sh)

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
					3
Subtotal: 3 sh					

Total Program Credits Required for this Major / Degree: 130 SH