

B.S. in Engineering Entrepreneurship (Electrical and Computer Engineering)

Academic Program Guide for **New First-Year Students** (Effective Fall 2018)
Department of Experiential Engineering Education (ExEEd) (farrell@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

- No more than 18 credits of discipline specific engineering courses may be counted toward a double major in another Engineering discipline.

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:*
- (HUML) Humanistic Literacy *Recommendation from major:*
- (QNTL) Quantitative Literacy *Recommendation from major:* MATH 01130 (4 sh count under non-program)
- (SCIL) Scientific Literacy *Recommendation from major:* PHYS 00220 (4 sh count 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 count under major)
- (RS) Rowan Seminar Attribute² *Recommendation from major:* ENGR 01101 (2 sh count under major)

Non-Program Courses (20 sh)

Courses in this section cannot be in the major department.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
CS 04103	Computer Science and Programming		F/1		4
MATH 01130	Calculus I	Satisfies Quantitative Literacy	F/1		4
MATH 01131	Calculus II		S/1		4
PHYS 00220	Introductory Mechanics	Satisfies Scientific Literacy	F/1		4

Choose **one** of the following Math/Science Electives

	Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
<input type="radio"/>	PHYS 00222	Introductory Electricity and Magnetism		S/1		4
<input type="radio"/>			Or any Math or Science course approved by advisor and department head	S/3		4
Subtotal: 20 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.

B.S. in Engineering Entrepreneurship (ECE)

Major Requirements (85 sh)

SUMMARY OF MAJOR REQUIREMENTS

- 7 sh of First Year Courses
 - 24 sh of Second Year Courses
 - 27 sh of Third Year Courses
 - 27 sh of Fourth Year Courses
-
- 85 sh total

FIRST YEAR COURSES

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
ENGR 01101	Freshman Engineering Clinic I	Satisfies RS requirement	F/1		2
ENGR 01102	Freshman Engineering Clinic II		S/1		2
ENT 06240	Entrepreneurship and Innovation		S/1		3
Subtotal: 7 sh					

SECOND YEAR COURSES

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
	Approved Engineering Foundations I	Any 100 or 200 level course in the College of Engineering	F/2		3
	Approved Engineering Foundations II	Any 100 or 200 level course in the College of Engineering	F/2		4
MATH 01230	Calculus III		F/2		4
	Approved Engineering Foundations III	Any 100 or 200 level course in the College of Engineering	S/2		3
	Any ECE 09.3XX or ECE 09.4XX course	Approved Advanced Engineering I	S/2		3
MATH 01235	Math for Eng. Analysis I		S/2		4
MKT 09200	Principles of Marketing		S/2		3
Subtotal: 24 sh					

THIRD YEAR COURSES

Choose **one** of the following Math/Science Electives not taken previously.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
<input type="radio"/> CHEM 06100	Chemistry I		S/3		4
<input type="radio"/>		Or any Math or Science course approved by advisor and department head	S/3		4

Then take all of the following courses.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
ENGR 01303	Junior Engineering Clinic	Taken twice; Satisfies WI requirement	F+S/3		4
ENT 06426	New Venture I: Investing Through Development		F/3		3
ACC 03210	Principles of Accounting		F/3		3
	Any ECE 093XX or ECE 094XX course or ME 10.320	Approved Advanced Engineering II	S/3		3
	Any ECE 093XX or ECE 094XX course or ME 10.320	Approved Advanced Engineering III	S/3		3
	Any ECE 093XX or ECE 094XX course or ME 10.320	Approved Advanced Engineering IV			
	Engineering Clinic Consultant	XEED 12400 or ECE 09461	S/3		1
ENT 06342	Financing & Legal Aspects of Entrepreneurship		S/3		3
Subtotal: 27 sh					

B.S. in Engineering Entrepreneurship (ECE)

FOURTH YEAR COURSES

Choose **one** of the following Math/Science Electives (not already taken in third year).

	Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
<input type="radio"/>	CHEM 06100	Chemistry I		S/4		4
<input type="radio"/>	CHEM 06101	Chemistry II		S/4		4
<input type="radio"/>			Or any Math or Science course approved by advisor and department head	S/4		4

Choose **three** of the following Entrepreneurship Electives (one in Fall of 4th year, the other two in Spring of 4th year).

	Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
<input type="radio"/>	MGT 06330 or MKT 09379	Managing International Business or International Marketing				3
<input type="radio"/>	MKT 09384	Research Methods in Marketing (WI)	Satisfies WI requirement			3
<input type="radio"/>	ENT 06415	Management Consulting Field Study				3
<input type="radio"/>	ACC 03328	Entrepreneurial Accounting				3
<input type="radio"/>	ENT 06326	Entrepreneurship & Small Business Management				3
<input type="radio"/>	ENT 06327	Strategic Issues in Family Business				3
<input type="radio"/>	ENT 06328	Evaluating Franchising Opportunities				3
<input type="radio"/>	ENT 06346	Social Entrepreneurship				3
<input type="radio"/>	MGT 06361	Supervised Internship				3
<input type="radio"/>	ENT 06344	Entrepreneurial Growth Strategies				3
<input type="radio"/>			Or other Business course approved by advisor and department head			3

Then take all of the following courses.

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
ENGR 01403	Senior Engineering Clinic	Taken twice; Satisfies WI requirement	F+S/4		4
ENT 06450	Technology Entrepreneurship		F/4		3
	Any ECE 093XX or ECE 094XX course or ME 10.320	Approved Advanced Engineering Elective V	F/4		3
	Any ECE 093XX or ECE 094XX course or ME 10.320	Approved Advanced Engineering Elective VI	S/4		3
	Any ECE 093XX or ECE 094XX course	Approved Advanced Engineering Elective VII	S/4		1
Subtotal:					27 sh

Free Electives for this Major/Degree (12 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:					12 sh

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