

# B.S. in Engineering Entrepreneurship (Mechanical Engineering)

Academic Program Guide for **New First-Year Students** (Effective Fall 2018)  
Department of Experiential Engineering Education (ExEEEd) ([farrell@rowan.edu](mailto: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](http://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 Requirements<sup>1</sup>

*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)    ○ 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 Attribute<sup>2</sup>            *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
CHEM 06100	Chemistry I		S/1		4
<b>Subtotal:</b>					<b>20 sh</b>

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

<sup>2</sup> 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 (ME)

## Major Requirements (85 sh)

### SUMMARY OF MAJOR REQUIREMENTS

- 7 sh of First Year Courses
  - 21 sh of Second Year Courses
  - 30 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
<b>Subtotal: 7 sh</b>					

### 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		2
	Approved Engineering Foundations II	Any 100 or 200 Level course in the College of Engineering	F/2		2
MATH 01230	Calculus III		F/2		4
ACC03210	Principles of Accounting		F/2		3
	Approved Engineering Foundations III	Any 100 or 200 Level course in the College of Engineering	S/2		3
MATH 01235	Math for Eng. Analysis I		S/2		4
MKT 09200	Principles of Marketing		S/2		3
<b>Subtotal: 21 sh</b>					

### THIRD YEAR COURSES

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/3		4
<input type="radio"/>		Or any Math or Science course approved by advisor and department head	S/3		4

Choose **one** of the following Entrepreneurship Electives

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

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
	Approved Engineering Foundations IV	Any 100 or 200 Level course in the College of Engineering	S/3		3
	Any ME 103XX or ME 104XX course	Approved Advanced Engineering I	F/3		3
	Any ME 103XX or ME 104XX course	Approved Advanced Engineering II	F/3		3
	Any ME 103XX or ME 104XX course	Approved Advanced Engineering III	S/3		3
	Any 300 or 400 level course in the College of Engineering	Approved Advanced Engineering IV	S/3		1
ENT 06426	New Venture I: Investing Through Development		F/3		3
ENT 06342	Financing & Legal Aspects of Entrepreneurship		S/3		3
<b>Subtotal: 30 sh</b>					

## B.S. in Engineering Entrepreneurship (ME)

### FOURTH YEAR COURSES

Choose **one** of the following Math/Science Electives in the spring of the fourth year (not taken previously).

Course #	Course Name	Course Attributes / Notes	Sem/Yr	Grade	Credits
<input type="radio"/> CHEM 06101	Chemistry II		S/4		4
<input type="radio"/> PHYS 00222	Introductory Electricity & Magnetism		S/4		4
<input type="radio"/>		Or any Math or Science course approved by advisor and department head	S/4		4

Choose **two** of the following Entrepreneurship Electives not taken previously (one in Fall of 4<sup>th</sup> year, one in Spring of 4<sup>th</sup> 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 ME 103XX or ME 104XX course	Approved Advanced Engineering V	F/4		3
	Any ME 103XX or ME 104XX course	Approved Advanced Engineering VI	F/4		3
	Any ME 103XX or ME 104XX course	Approved Advanced Engineering VII	S/4		3
	Engineering Clinic Consultant	XEED 12400 or ECE 09461	S/3		1
<b>Subtotal: 27 sh</b>					

### 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
<b>Subtotal: 12 sh</b>					

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