

Curriculum

The Engineering & Management program confers the Bachelor of Science (BS) degree upon completion of the 120 credit-hour program requirements. A candidate for the bachelor's degree must not only pass all prescribed courses in the E&M curriculum, but must also meet all other graduation requirements and Clarkson Common Experience requirements stated in the Academic Requirements section of this catalog.

The Engineering & Management student is encouraged to use program professional electives to focus on specific career objectives. Students work closely with their advisor to select electives that best suit these objectives. Students often choose to pursue a minor in project management, a concentration in global supply chain management, or courses in construction management.

Engineering & Management Curriculum					
First Semester		Credits	Second Semester		Credits
CM 131	Chemistry I	4	BY 160 Or CM 132	Cellular and Molecular Biology ⁵ Chemistry II	3 4
EM 120	Team-Based Design & Innovation ^{1,3}	3	EM 121	Technological Entrepreneurship ^{1,3}	2
EM 205	Intro to Financial & Managerial Accounting	3	EM 211	Intro to Enterprise Information Systems ²	3
MA 131	Calculus I	3	MA 132	Calculus II	3
UNIV 190	The Clarkson Seminar	3	IS 110	Intro to Business Intelligence & Data Analytics ^{2,3}	3
FY 100	First-Year Seminar	1			
Total		17	Total		15

Third Semester		Credits	Fourth Semester		Credits
EC 350	Economic Principles & Engineering Economics	3	EM 380	Project Management	3
EM 286	Organizational Behavior	3	ES 220	Statics	3
LW 270	Law & Society	3	PH 132	Physics II	4
STAT 383	Applied Statistics I	3	MA 232	Differential Equations	3
PH 131	Physics I	4		University Course	3
Total		16	Total		16
Fifth Semester		Credits	Sixth Semester		Credits
EM 333	Operations Research	3	EM 331	Operations & Supply Chain Management	3
ES 260 Or ES 222 Or EE 264	Materials Science Or Strength of Materials Or Digital Design ¹	3	EM 451	Quality Management & Lean Enterprise	3
ES 330	Fluid Mechanics	3	ES 250	Electrical Science	3
MA 231	Calculus III	3	FN 361	Financial Management	3
MK 320	Principles of Marketing	3		Professional Elective	3
Total		15	Total		15
Seventh Semester		Credits	Eighth Semester		Credits
COMM 217	Public Speaking ¹	3	EM 456	Process Engineering & Design ^{1,3,4}	3
EM 432	Organizational Policy & Strategy ¹	3		Free Elective	3
ES 340	Thermodynamics	3		Knowledge Area	3
	Knowledge Area	3		Professional Elective	3
	Professional Elective	3			
Total		15	Total		12

¹Communications intensive (CI) – Students must earn a minimum of six (6) CI points outside of UNIV190 to meet graduation requirements.

²Information technology-based courses

³Technology course that meets CCE requirement

⁴Students must take EM 456 or another senior capstone design course approved by the Director of E&M.

⁵Students who take BY 160 rather than CM 132 will need to complete one more credit of coursework to reach 120 credits

See Academic Requirements for details of the Clarkson Common Experience including the First-Year Seminar, the Clarkson Seminar, Knowledge Area (KA) courses, University Courses (UC), and related requirements. Students are required to take five courses which cover four of the six specified CCE knowledge areas; one University course (UC) must span two Knowledge Areas. All students will participate in a project-based professional experience such as co-op, internship, directed research or community project related to the student's professional goals.