Rowan University
Henry M. Rowan College of Engineering

Electrical & Computer Engineering Curriculum Guide

Fall 2021 and beyond

Bold/shaded courses have minimum grade requirement . *Minimum grade* <u>C-</u> *for all* <u>MATH</u> *courses*

Freshman Year		Sophomore Year		Junior Year		Senior Year	
Fall Semester	16	**Fall Semester**	15	**Fall Semester**	17	**Fall Semester**	17
First-Year Engineering Clinic 1 (ENGR 01101)	2	Sophomore Clinic 1 (ENGR 01201)	4	Junior Clinic (ENGR 01303)	2	Senior Clinic (ENGR 01403)	2
Calculus I (MATH 01130) (min. grade C-)	4	**Calculus III (MATH 01230) (min. grade C-)**	4	**Signals & Systems (ECE 09341)** (min. grade C)	2	Electrical Comm. Systems (ECE 09433)	3
Introductory Mechanics I Lect/Lab (PHYS 00220/PHYS L0220)	4	**Computer Architecture (ECE 09243) (min. grade C-)**	3	Science Elective (see options in notes below)	4	Very Large Scale Integration (VLSI) Design (ECE 09414)	3
Computer Sci. & Prog (CS 04103)	4	**Princ. Elec. Circuit Analysis (ECE 09203) (min. grade C**	4	Engineering Electromagnetics (ECE 09303)	3	ECE Elective 2 (see notes below)	3
ECE: Solving Tomorrow's Problems (ECE 09101)	2			ME for ECEs (ME 10320)	3	ECE Elective 3 (see notes below)	3
				Business elective (see options under notes below)	3	*Rowan Core elective*	3
Spring Semester	15	**Spring Semester**	17	**Spring Semester**	15	**Spring Semester**	16
First-Year Engineering Clinic 2 (ENGR 01102)	2	Sophomore Clinic 2 (ENGR 01202)	4	Junior Clinic (ENGR 01303)	2	Senior Clinic (ENGR 01403)	2
Calculus II (MATH 01131) (min. grade C-)	4	Math for Engrg Analysis (MATH 01235)	4	Systems & Control I (ECE 09321)	3	Professionalism & Consulting in Engr (ECE 09461)	1
College Comp I (COMP 01111)	3	Princ. Data Structures for Engineers (CS04225)	3	Digital Signal Processing (ECE 09351)	3	Seminar: Frontiers (ECE 09498)	1
Intro Elec. & Mag. Lect/Lab(PHYS 00222/L0222) (min. grade C-)	4	Embedded Systems (ECE 09342)	3	Modules in ECE (ECE 09363)	1	ECE Elective 4 (see notes below)	3
Intro to Digital Systems (ECE 09241)	2	Electronics I (ECE 09311)	3	ECE Elective I (see notes below)	3	ECE Elective 5 (see notes below)	3
				Prob & Stat for ECEs (STAT 02286)	3	*Rowan Core elective*	3
						Rowan Core elective	3

Total Credits	**128**

University Requirements

The *Rowan Core* is the University's general education model. It is based on six literacies and *Rowan Experience* (see below) that reflect contemporary priorities while maintaining a strong liberal arts foundation.

Some literacies are incorporated in your major-specific courses. Others you will fulfill by taking elective courses in the required literacy.

Rowan Core (RC) Literacies fulfilled as folllows:	
Communicative (COML)	Comp I, SEC I and II
Scientific (SCIL)	Introductory Mechanics
Quantitative (QNTL)	Calculus I
Courses to fulfill following literacies are selected by student and may be taken in any order	
Humanistic (HUML)	*elective*
Artistic (ARTL)	*elective*
Global (GLBL)	*elective*
Rowan Experience fulfilled by:	
Rowan Seminar (RS)	First-Year Engineering Clinic I
Writing Intensive (WI)	Senior Engineering Clinic
Broad-based literature (LIT)	*Literature-designated elective may be combined with Rowan Core elective*

NOTES:

Science elective options: Chem I (Chem06100); Gen Bio: Human Focus (BIOL 01113); Human Anat. & Phys (BIOL 10210); Mod. Physics (PHYS 00300); or Intro Thermo, Fluid, Waves & Op (PHYS 00221).

Business elective options: Intro Microecon (ECON 04102); Intro Macroecon (ENT 04101);
  Entrepreneurship & Innovation (ENT 06240) or Small Business Management (ENT 06326)

Technical Electives: are chosen w/ consent of faculty advisor to meet student and program goals. Of the 5 ECE electives, one can be a course outside of ECE. Most 400-level courses offered within the College of Engineering can be used towards one ECE elective. Approved courses outside of Engineering may also be used as long as they are 400 – level and reasonably related to engineering – please contact your advisor, ECE UG Chair or ECE Department Head for approval before choosing a non-ECE class as an elective.

OOD/Multidisciplinary exp. satisfied by one of the following:
a. Participating in one out-of-discipline clinic project
b. Providing consulting services to a non-ECE clinic or another research project through Clinic Consultant;
c.Taking a non-ECE class as an elective, or an elective offered by the ECE Department but one that is clearly outside of the traditional
d. Completing a Minor in any field (which automatically satisfied item (c) above)

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