

BACHELOR OF SCIENCE, ELECTRICAL & COMPUTER ENGINEERING

GENERAL EDUCATION REQUIREMENTS

42-43 S.H.

(Parentheses indicate prerequisites)

CHECK TO BE SURE THE FOLLOWING REQUIREMENTS ARE COMPLETED:				
<input type="checkbox"/> Writing Intensive Course (WI) <input type="checkbox"/> Multicultural/Global Course (M/G) <input type="checkbox"/> Lab Science Course (LAB)		<input type="checkbox"/> Broad Based Literature Course (LIT) <input type="checkbox"/> Computer Competency Exam or Computer Literacy Course <input type="checkbox"/> Rowan Seminar (RS) – <i>Freshmen Only</i>		
Transfer	Rowan	Rowan #	COMMUNICATIONS BANK	3-4 S.H.
		COMP 01111 COMP 01105	College Composition I (3 s.h.) or Integrated College Composition I (4 s.h.)	3-4 s.h.
		ENGR 01201	Sophomore Engineering Clinic I	0 s.h.
		ENGR 01202	Sophomore Engineering Clinic II	0 s.h.
Transfer	Rowan	Rowan #	SCIENCE/MATHEMATICS BANK	8 S.H.
		MATH 01130	Calculus I	4 s.h.
		CHEM 06105	Advanced College Chemistry I (LAB)	4 s.h.
Transfer	Rowan	Rowan #	SOCIAL & BEHAVIORAL SCIENCES BANK	6 S.H.
		ECON 04102	Intro to Microeconomics	3 s.h.
			Directed Elective	3 s.h.
Transfer	Rowan	Rowan #	HISTORY/HUMANITIES/LANGUAGE BANK	6 S.H.
			Directed Elective	3 s.h.
			Directed Elective	3 s.h.
Transfer	Rowan	Rowan #	ARTISTIC & CREATIVE EXPERIENCE BANK	3 S.H.
			Directed Elective	3 s.h.
Transfer	Rowan	Rowan #	NON-PROGRAM COURSES	16 S.H.
		MATH 01131	Calculus II (Calculus I)	4 s.h.
		PHYS 02200	Physics I (Calculus I)	4 s.h.
		PHYS 02201	Physics II (Physics I)	4 s.h.
		CS 04103	Computer Science & Programming (Note 1)	4 s.h.

- ◆ This information has been provided by the department listed above as of the date listed below and is subject to change.
- ◆ To declare this major go to the CAP Center in Savitz Hall, or
- ◆ If this is a restricted major, Requirements for entering this major are attached.
- ◆ A suggested sequence of courses is also attached.

Bachelor of Science, Engineering – Electrical Computer

128 S.H.

Major Requirements

86 s.h.

ROWAN #	COURSE NAME	S.H.	PREREQUISITES
ENGR 01101	Freshman Engineering Clinic I (RS)	2 s.h.	Co's: Calculus I - MATH 01130, Adv. College Chemistry I - CHEM 06105
ENGR 01102	Freshman Engineering Clinic II	2 s.h.	Freshman Engineering Clinic I - ENGR 01101; Co's: Calculus II - MATH 01131, Physics I - PHYS 02200
MATH 01235	Math for Engineering Analysis I	4 s.h.	Calculus II - MATH 01131
MATH 01236	Math for Engineering Analysis II	4 s.h.	Math for Engineering Analysis I - MATH 01235
ENGR 01201	Sophomore Engineering Clinic I	4 s.h.	Freshman Engineering Clinic II - ENGR 01102
ENGR 01202	Sophomore Engineering Clinic II	4 s.h.	Sophomore Engineering Clinic I - ENGR 01201
ENGR 01271	Statics	2 s.h.	Calculus II - MATH 01131, Physics I - PHYS 02200
ECE 09201	Network I	2 s.h.	Computer Science and Programming - CS 04103, Calculus II - MATH 01131, Physics I - PHYS 02200, Co: Math for Engineering Analysis I - MATH 01235
ENGR 01291	Dynamics	2 s.h.	Statics - ENGR 01271, Physics I - PHYS 02200
ECE 09202	Network II	2 s.h.	Network I - ECE 09201
ECE 09241	Digital I	3 s.h.	Computer Science and Programming – CS 04.103, Network I - ECE 09201
ECE 09242	Digital II: Microprocessors	3 s.h.	Comp Arch I - ECE 09443
ECE 09311	Electronics I	2 s.h.	Network I - ECE 09201
ENGR 01301	Junior Engineering Clinic I	2 s.h.	Sophomore Engineering Clinic II – ENGR 01202
ENGR 01302	Junior Engineering Clinic II	2 s.h.	Junior Engineering Clinic I - ENGR 01301
ECE 09321	Systems & Control I	3 s.h.	Network II - ECE 09202, Math for Engineering Analysis II - MATH 01236
CS 04225	Data Structures for Engineers	3 s.h.	Computer Science and Programming - CS 04103, Math for Engineering Analysis I - MATH 01236
ECE 09301	Engineering Electromagnetics I	2 s.h.	Math for Engineering Analysis I - MATH 01236, Physics I - PHYS 02200, Network II – ECE 09201
ECE 09302	Engineering Electromagnetics II	2 s.h.	Engineering Electromagnetics I - ECE 09301, Math for Engineering Analysis II - MATH 01236, Network II – ECE 09202
ECE 09351	Digital Signal Processing	3 s.h.	Systems & Control I - ECE 09321
ECE 09331	Electrical Communications Systems	4 s.h.	Math for Engineering Analysis I - MATH 01235, Network II - ECE 09202
ENGR 01401	Senior Engineering Clinic I	2 s.h.	Junior Engineering Clinic II – ENGR 01302
ENGR 01402	Senior Engineering Clinic II (WI)	2 s.h.	Senior Engineering Clinic I - ENGR 01401
ECE 09400	Clinic Consultant	4 s.h.	Network II - ENGR 01202
ECE 09443	Computer Architecture I	2 s.h.	Digital I - ECE 09241
	CpE Core Elective (Note 2)	3 s.h.	
	CpE Elective (Note 2)	3 s.h.	
	EE Core Elective (Note 2)	3 s.h.	
	ECE Elective (Note 2)	3 s.h.	

ECE 09498	Seminar: Engineering Frontiers	1 s.h.	College Composition II – COMP 01112, Sophomore Engineering Clinic II - ENGR 01202, Co: Senior Engineering Clinic II (WI) - ENGR 01402
	Technology Focus Electives, 2 ea (Note 3)	6 s.h.	

NOTES:

1. Java-based language course if available.
2. Computer Engineering (CpE), Electrical Engineering (EE), and Electrical & Computer Engineering (ECE) electives are chosen with the consent of advisor to meet student and program goals. CpE electives may include approved Computer Science (CS) courses.
3. Technology Focus Electives are chosen with consent of advisor to meet student and program goals and are typically multidisciplinary engineering or interdisciplinary courses.

General Education (see other side).....42 s.h.

Total Credits in Program128 S.H.

- | |
|--|
| <ol style="list-style-type: none"> 1. Java-based language course if available. 2. Computer Engineering (CpE), Electrical Engineering (EE), and Electrical & Computer Engineering (ECE) electives are chosen with the consent of advisor to meet student and program goals. CpE electives may include approved Computer Science (CS) courses. 3. Technology Focus Electives are chosen with consent of advisor to meet student and program goals and are typically multidisciplinary engineering or interdisciplinary courses. |
|--|

**ROWAN UNIVERSITY
Requirements for Entering
Engineering**

- 1) College proficiency in reading, writing, and computational skills. These proficiencies are met either by satisfactory score for admissions to Engineering or successful completion of all Basic Skills courses.
- 2) Successful completion of 24 or more semester hours of course work with a cumulative GPA of 3.0 or better. Courses to be included in the 24 semester hours are: College Comp I, Calculus I, Calculus II, Physics I (Calculus Based), Advanced College Chemistry I, and Computer Science & Programming. The cumulative GPA in these major courses must be 3.0 or better.
- 3) Only grades of “C” or better are acceptable for transfer. Pass/Fail grades in any major course work are not acceptable for transfer.
- 4) Acceptance is based on availability of space in the class.
- 5) An interview with a faculty member may be required.
- 6) Change of major applications must be received in the College of Engineering by **Oct. 1 or Jan. 31**. Notification will be by **Nov. 1 or March 1**, if all courses have been completed. If a required course(s) is being taken during the semester, a decision will be deferred until the grades have been received.
- 7) Specific questions regarding the engineering program should be directed to the appropriate Engineering Program Chair.
- 8) Questions regarding the process should be directed to the Engineering Dean’s Office. Applications are available in that office.

Suggested Course Sequence

PLEASE NOTE: Limited flexibility exists for taking courses in other than the indicated semesters because most of the core ECE courses are only offered once per year. Keep in contact with your Advisor and the Program Chair for latest information on course and curriculum changes. Students interested in minors should keep up with changes in requirements from those respective departments.

FIRST SEMESTER		SECOND SEMESTER	
Freshman Engineering Clinic I ENGR 01101	2	Freshman Engr. Clinic II ENGR 01102	2
Composition I COMP 01111	3	Computer Science & Prog CS 04103 (Note 1)	4
Calculus I MATH 01130	4	Calculus II MATH 01131	4
Advanced College Chemistry I CHEM 06105	4	Physics I PHYS 02200	4
General Education I	3	General Education II	3
THIRD SEMESTER		FOURTH SEMESTER	
Sophomore Engr Clinic I ENGR 01201	4	Sophomore Engr. Clinic II ENGR 01202	4
Engineering Analysis I MATH 01235	4	Engineering Analysis II MATH 01236	4
Physics II PHYS 02201	4	Statics ENGR 01271	2
Network I ECE 09201	2	Dynamics ENGR 01291	2
Network II ECE 09202	2	Digital I ECE 09241	3
		Electronics I ECE 09311	2
FIFTH SEMESTER		SIXTH SEMESTER	
Junior Engineering Clinic I ENGR 01301	2	Junior Engineering Clinic II ENGR 01302	2
Engineering Clinic Consultant ECE 09400	1	Engineering Clinic Consultant ECE 09400	1
Systems & Control I ECE 09321	3	Data Structures for Engrs CS 04225	3
Engr. Electromagnetics I ECE 09301	2	Digital Signal Processing ECE 09351	3
Engr. Electromagnetics II ECE 09302	2	Electrical Communications ECE 09331	4
Computer Arch I: Intro ECE 09443	2	Digital II: Microprocessors ECE 09242	3
General Education III (μ Econ)	3		
SEVENTH SEMESTER		EIGHTH SEMESTER	
Senior Engineering Clinic I ENGR 01401	2	Senior Engr. Clinic II (WI) ENGR 01402	2
Engineering Clinic Consultant ECE 09400	1	Engineering Clinic Consultant ECE 09400	1
CpE Core Elective (Note 2)	3	Seminar: Engr. Frontiers ECE 09498	1
CpE Elective (Note 2)	2	ECE Elective (Note 2)	3
EE Core Elective (Note 2)	3	Technology Focus Elective (Note 3)	3
Technology Focus Elective (Note 3)	3	General Education IV	3
		General Education V	3
NOTES OR COMMENTS			