



# Engineering Science

## Transfer Certificate

Program ENGR.SCI.CERT  
CIP 141301

The certificate program in Engineering Science generally prepares students for transfer to the sophomore year of a four-year college in a specific engineering program major.

### PROGRAM OUTCOMES

- Apply the principles of physics to the solution of engineering problems;
- Use calculus in the solution of engineering problems;
- Present information in written or graphic form.

The complete program is available full-time or part-time. Day students usually complete several required courses in the evening.

Admission requires a high school diploma or its equivalent with the mathematical preparation (advanced algebra and trigonometry) needed for college-level calculus. At least one year of a laboratory science (chemistry or physics) is required. Both sciences are preferred. Applicants will be evaluated according to test scores or other available indicators of potential success in this demanding university-parallel program.

Those who do not meet established admission criteria are strongly advised to enroll in Civil Engineering Technology or Electronics Engineering Technology. These engineering technology programs help students determine their skills in engineering while they are developing their English and/or math skills. After one successful year in an engineering technology program, students may reapply to the Engineering Science program.

### Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
CHE 101	General Chemistry I (3/3)	4
ENG 101	English Composition I (3/0)	3
MAT 151	Calculus I (4/0) <sup>1</sup>	4
PHY 115	University Physics I (3/3)	4
COS —	Elective <sup>2</sup>	4
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CHE 102	General Chemistry II (3/3)	4
ENG 102	English Composition II (3/0)	3
ENT 116	Engineering Graphics (1/2)	
	OR	2
DRA 190	Introduction to Computer-Aided Drafting (1/2)	
MAT 152	Calculus II (4/0)	4
PHY 215	University Physics II (3/3)	4
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NOTE: Select courses in consultation with an academic advisor in order to assure maximum transfer of credits.

<sup>1</sup> Provisional acceptance may be granted to students not prepared for MAT 151, but serious consideration should be given to entering an engineering technology program. Provisionally accepted students should select MAT entry level from MCCC placement guidelines and must be alert to MAT pre/corequisites for other desired courses.

<sup>2</sup> COS 101 or another computer science course approved by an advisor. Students wishing to transfer to Rutgers University should take COS 102.