Interdisciplinary Program in Engineering Science

The complexity of modern engineering, physical and life sciences problems often requires a team effort that can involve professionals from several other disciplines. For students interested in interdisciplinary problem solving, the engineering science programs offer challenging educational opportunities. The engineering science program is designed to prepare the student upon graduation to pursue advanced education in either graduate or professional school or to enter directly into the professional workforce. Students must consult with the program advisor before undertaking a course of study in any engineering science option.

B.S. in Engineering Science
(127 credit minimum)

A minimum of 127 credits is required for the B.S. in Engineering Science. Of those 127 credits, at least 30 credits are in an option. Approval from the director is required prior to admission to the program.

Options consist of advanced undergraduate courses that show a progression in depth of knowledge in a given area of study, culminating with a senior project or undergraduate thesis. Option courses may be from different departments, but they must comprise a coherent program of study. Specific courses required by the engineering science curriculum may be counted among the 30 credits if appropriate. An option need not be one in which NJIT offers a B.S. degree. The specific course of study for any particular option will be developed with the approval of the program director.

Courses in biological sciences are available at the adjacent Newark Campus of Rutgers University. Students who demonstrate exceptional ability may choose from offerings at the graduate level at NJIT, Rutgers-Newark, or RBHS.

A minimum of 30 engineering credits is required for the degree.

Materials Sciences and Engineering
Provides a strong background in the principles underlying the development of novel engineering materials that will be needed for the advanced technologies of the future.

Premedicine/Pre-Dentistry/Pre-Optometry
These options provide students with excellent preparation for medical, dental or optometric schools.

NJIT Courses

ESC 310. Work Experience I. 3 credits, 3 contact hours (0;0;3).
ESC 491. Research and Independent Study I. 3 credits, 3 contact hours (0;0;3).
Restriction: senior standing in engineering science. Provides the student with an opportunity to work on a research project under the individual guidance of a program faculty member.

ESC 491H. Honors Research and Independent Study I. 3 credits, 3 contact hours (0;0;3).
Restriction: senior standing in engineering science and enrolled in the Honors College. Same as ESC 491, but projects are more comprehensive and are of greater depth.

ESC 492. Research and Independent Study II. 3 credits, 3 contact hours (0;0;3).
Prerequisite: ESC 491. A continuation of ESC 491.