Cooperative Program in Engineering (3-2 Engineering)

Fordham College at Rose Hill and Fordham College at Lincoln Center offer a five-year program that combines a broad liberal arts education with professional training in engineering. The cooperative program in engineering is an educational affiliation between Fordham University and the School of Engineering and Applied Science of Columbia University, which enables students to prepare for careers in applied science or engineering. This plan leads to a B.A. or B.S. degree from Fordham as well as a B.S. degree from Columbia University. Fordham University also has an affiliation with Case Western Reserve University in Cleveland, Ohio.

Rose Hill students who enter this program may choose to major in chemistry, computer and information sciences, engineering physics, physics, mathematics, or the joint major in mathematics and computer and information sciences. Students at Lincoln Center typically major in either mathematics or the joint major in mathematics and computer and information sciences. The B.S. degree from Columbia University or Case Western Reserve is in one of the following fields: applied mathematics, applied physics, biomedical engineering, chemical engineering, civil engineering, computer engineering, computer science, earth and environmental engineering, electrical engineering, engineering and management systems, engineering mechanics, industrial engineering, materials science, mechanical engineering, and operations research.

The program consists of three years at Fordham and two years at the engineering school. Students who wish to enter the program should have completed a minimum mathematics level of pre-calculus before entering Fordham, since Calculus I (MATH 1206) and Calculus II (MATH 1207) must be taken in the first year. By the end of the junior year at Fordham, the student must have completed all of the major requirements. The cooperative program is very intensive, and it may be necessary for the student to take certain core curriculum courses during the summer at additional expense. Some courses taken at the engineering school fulfill some of Fordham's degree requirements. At Rose Hill and at Lincoln Center, both the Fordham and Columbia degrees are awarded at the end of the fifth year.

To retain membership in the cooperative engineering program at Fordham and to permit admission to the engineering college, the student must maintain a 3.0 cumulative grade point average and a 3.0 grade point average in mathematics and science courses. Admission to Columbia is not guaranteed and has among its guidelines a 3.3 cumulative grade point average as well as a minimum grade of B in each pre-engineering requirement.

At the beginning of the spring semester of the junior year, the student must submit an online application for admission to the engineering college. If the student has maintained the required 3.0 averages and successfully completed the required academic program, then the program coordinator will send a recommendation for admission. Official transcripts must also be forwarded at this time. While attending classes at the engineering college, the student must maintain matriculation at Fordham. Students who choose to exit the program may remain at Fordham in their chosen majors.

 Occasionally, a student wishes to apply for admission to the engineering school after graduation from Fordham. Such students will be treated as graduate students and will most likely be excluded from any financial aid considerations at the engineering school.

During the FCRH and FCLC New Student Orientations, a special session is held regarding the 3-2 cooperative program in engineering. All students interested in the program are expected to attend the session at their college.

For more information
Visit the cooperative program in engineering physics webpage.
The Columbia University website for this program is: www.seas.columbia.edu.
The Case Western Reserve website for this program is: engineering.case.edu/desp/dualdegree.

Requirements
1. At least 27 credits in the humanities.
2. A completed major at Rose Hill in chemistry, engineering physics, or physics, or at either campus in mathematics, computer and information sciences, or in the joint major in mathematics and computer & information sciences.
3. The following pre-engineering requirements:
   - Two years of calculus
   - One year of physics with lab
   - One semester of chemistry with lab
   - One class in computer science (C++)
   - One class in economics
   - One class in English composition
4. Additional required courses for the intended field of engineering at either Columbia or Case Western Reserve.