Dual-Degree Engineering via the Columbia University Combined Plan

Columbia University's Combined Plan enables students to receive both a liberal arts and engineering education in a number of engineering and applied science specialties. The program is usually completed as a 3-2 program: three years in a liberal arts program and two years in Columbia engineering (with students applying in the junior year). The program may also be completed as a 4-2 program: four years in a liberal arts program and two years in Columbia engineering (with students applying in the senior year). In addition to the listed coursework, students must be enrolled full time at Augustana College for the past two years and have an overall and pre-engineering GPA of 3.30 or higher as calculated by Columbia. Additionally, the minimum grade for each pre-engineering science or MATH course must be a B or better on the first attempt.

Prerequisites for Combined plan engineering programs of study at Columbia University are listed below. The program requires that the student complete the general education requirements of Augustana College, with the one exception being that Capstone (Area 4.3) is waived provided the student leaves Augustana College within three years. A major must also be completed at Augustana, but occasionally one or more courses may be transferred back from the Columbia University in order to complete major requirements.

All engineering majors require:
MATH 151, 152, 153
PHYS 221, 222, 321
CHEM 120
COSC 210
Satisfaction of the Augustana General Education requirements including ECON 120 and ENGL 110.

Applied Mathematics or Applied Physics also requires
MATH 310
PHYS 371
Students are encouraged to take BIOL 234

Biomedical Engineering also requires
MATH 220, 310
PHYS 321, 331, 341, 371
CHEM 135 (or new General CHEMistry II equivalent course), 201

CHEMical Engineering also requires
MATH 310
CHEM 135 (or new General Chemistry II equivalent course), 201

Civil Engineering also requires
MATH 220, 310
PHYS 321, 341

Computer Engineering also requires
MATH 220, 310, 320
PHYS 371

Earth and Environmental Engineering also requires
CHEM 135 (or new General Chemistry II equivalent course),
Choose one of: CHEM 201 or PHYS 371 or BIOL 234
A course in Geology would be helpful but may be taken at Columbia.
A course in "Alternative Energy Resources" would be helpful but may be taken at Columbia.

Electrical Engineering also requires
MATH 220, 310
PHYS 331, 371

IEOR: Engineering Management Systems also requires
MATH 220, 315
COSC 260
ACCT 210
BSAD 330

IEOR: Financial Engineering also requires
MATH 220, 310, 315
COSC 260
ACCT 210
BSAD 330

IEOR: Industrial Engineering also requires
MATH 220,315
COSC 260
ACCT 210
BSAD 330

IEOR: Operations Research also requires
MATH 220,315
COSC 260
ACCT 210
BSAD 330

Engineering Mechanics also requires
MATH 310
PHYS 341

Materials Science and Engineering also requires
MATH 310
PHYS 371
CHEM 135 (or new General Chemistry II equivalent course)

Mechanical Engineering also requires
MATH 310
Choose one of: PHYS 371 or Bio 234
PHYS 331, 341