

Virginia Wesleyan University

ODU Courses for Pre-Engineering Program

Pre-Engineering Program

Program Description

The Pre-Engineering Program offers students the opportunity to earn both a Bachelor of Science degree from Virginia Wesleyan University and a Master of Civil, Environmental, Mechanical, Electrical, Computer, or Aerospace Engineering from Old Dominion University in five years. Students attend Virginia Wesleyan for four years and ODU for one year. Starting their junior year, students take one or two engineering courses each semester at ODU while enrolled at VWU. After graduating from VWU, **students are automatically admitted to the one-year Master of Engineering graduate program at ODU. Students are also eligible for the longer Master of Science in Engineering program.**

Procedures:

- Students should declare their intention to participate in the program during their first year at VWU. The pre-engineering advisor should be a co-advisor along with the first-year advisor or the major advisor.
- The student's VWU grade point average (gpa) must be at least 3.0, both overall and in mathematics and physics, to be eligible to begin the engineering portion of the program.
- Students will major in Biology (BS), Chemistry, Computer Science (BS), Earth and Environmental Science (BS), or Mathematics (BS).
- The students will successfully complete the following courses at VWU.

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- Math 172 Calculus II
- Math 210 or Math 310, one statistics course
- Math 217 Linear Algebra
- Math 273 Multivariable Calculus
- Math 274 Differential Equations
- CS 112 Computer Programming I

- PHY 221 University Physics I
- PHY 222 University Physics II
- CHEM 120 Introductory Chemistry
- CHEM 200 Inorganic Chemistry

ADDITIONAL LEVELING REQUIREMENTS FOR MASTER'S PROGRAMS

CIVIL ENGINEERING (27 credits total)

- CEE 204 Statics (3 credits)
- MAE 205 Dynamics (3 credits)
- MAE 220 Engineering Mechanics II- Solid Mechanics (3 credits)
- CEE305 CEE Computations (3 credits)
- CEE 310 Structures I (3 credits)
- CEE 323 Soil Mechanics (3 credits)
- CEE 330 Hydromechanics (3 credits)
- CEE 340 Hydraulics & Water Resources (3 credits)
- CEE 410 Concrete Design I (3 credits)

ENVIRONMENTAL ENGINEERING (15 credits total)

- CEE 204 Statics (3 credits)
- CEE305 CEE Computations (3 credits)
- CEE 330 Hydromechanics (3 credits)
- CEE 340 Hydraulics & Water Resources (3 credits)
- CEE 350 Environmental Pollution and Control (3 credits)