

Engineering

Dual-degree Program

PRE-PROFESSIONAL PROGRAM

Total Hours Required at Frostburg State University:

72-80

Coordinator:

Mohammed Eltayeb, Chair,
Department of Physics and
Engineering

- A dual degree program of Frostburg State University and the University of Maryland, College Park's College of Engineering is available to the student who seeks a career in one of several engineering fields and who also wants a general undergraduate education.
- This program allows you to earn undergraduate degrees from both institutions over a five-year period.
- In this program you attend FSU for approximately three academic years and the University of Maryland, College Park's College of Engineering for approximately two academic years. After completing the academic requirements of FSU — usually at the end of the fourth year (the first year at the University of Maryland, College Park) — you will receive a bachelor's degree from Frostburg State University. Upon meeting all requirements in the Clark School of Engineering, you earn one of several baccalaureate engineering degrees from the University of Maryland, College Park, majoring in any of the following areas:

- Aerospace Engineering
- Biological Resources Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Engineering Materials
- Fire Protection
- Materials Engineering
- Mechanical Engineering
- Nuclear Engineering

Summary of Requirements at FSU for Dual Degree in Engineering

1. Chemistry: (8-16 hours)

CHEM 201 & 202 General Chemistry I & II (CHEM 201 - GEP Group C)

*CHEM 301 & 302 Organic Chemistry I & II

*Organic chemistry courses required for students in chemical engineering.

2. Computer Science: (4 hours)

COSC 240 Computer Science I

or ENEE 114 Programming Concepts for Engineers

3. Mathematics: (18 hours)

MATH 236, 237, 238 Calculus I, II & III (MATH 236 - Core Skill 3)

MATH 420 Advanced Calculus, or MATH 436 Mathematical Physics

MATH 432 Differential Equations

4. Engineering: (3 hours)

ENES 100 Intro to Engineering Design

5. Physics: (39 hours)

PHYS 261 Principles of Physics I (GEP Group C)

PHYS 262 Principles of Physics II

PHYS 263 Principles of Physics III

PHYS 264 Principles of Physics IV

PHYS 310 Classical Mechanics

PHYS 312 Electricity & Magnetism

PHYS 320 Experimental Physics

PHYS 491 Seminar

PHYS 492 Senior Research & Seminar (Capstone)

Choose one track: (9 hours)

a. Traditional Physics

PHYS 311 Thermodynamics

PHYS 417 Quantum Physics

plus one 300-400 level physics elective

b. Engineering Physics

With permission of the Department Chair, as many as 6 credits of mechanical or electrical engineering courses at the 200 level or above may be applied.

Courses listed in the study program not to be applied toward the student's major field of study may be applied toward satisfaction of the General Education Program requirements where appropriate.

Dual Degree Requirements at FSU

1. Completion of required courses in the dual degree study program (listed above), 72-82 semester hours depending on field of engineering.
2. Completion of a minimum of 90 semester hours.
3. Completion of FSU's Core Skill Requirements and Modes of Inquiry in the General Education Program (a waiver of Group E courses, requiring a total of at least 26 credit hours in Modes of Inquiry). Students must complete at least six of the additional nine credits of General Education course work required by the University of Maryland, College Park (Advance Studies CORE requirement) to satisfy the General Education requirements at Frostburg State University.
4. Completion of a major program as approved by the respective Frostburg State Department Chair.
5. Recommendation from the designated official at Frostburg State University (Coordinator of the Dual Degree Program in Engineering).

Requirements for Admission to University of Maryland, College Park

To become a Dual Degree candidate at the University of Maryland, College Park, a student must have satisfied all specified requirements at Frostburg State University. Additionally, the student must have the following:

1. A minimum cumulative 3.0 grade point average at Frostburg;
2. Recommendation from the designated official at Frostburg (Coordinator of the Dual Degree Program in Engineering).

Admission to the College of Engineering of the University of Maryland, College Park is guaranteed to the Frostburg State University Dual Degree student provided the above stated requirements have been satisfied.