

Gettysburg College  
**University of Pittsburgh Dual-Degree Plan Curriculum Guide**

Foundation Courses Required of All Majors

|                   |   |
|-------------------|---|
| Mathematics:      | Math111, Math112                                      |
| Physics:          | Phy111, 112, 211 or Phy109, Phy110 (all include labs) |
| Chemistry:        | Chem105 or 107, Chem108 (both include lab)            |
| Computer Science: | CS 107 (Matlab)                                       |

Liberal Arts Curriculum must include 5 courses (20 credits) from the Humanities, Social Science or Arts, three of which are from three different disciplines and 2 of which are from one discipline, the second of which is non-introductory.)

Student must have been enrolled at Gettysburg College for two years prior, have an overall GPA of 3.0 or higher (3.5 for Bioengineering) and a GPA of 3.0 or higher in pre-engineering courses with a grade of C or better in each pre-engineering course.

**Additional Courses are required by the programs below.**

Biomedical Engineering (All Tracks, 3-year program at Pitt)

|                    |   |
|--------------------|---|
| Math:              | Math 211, Math 212, Math 225, Math 353 or Econ241   |
| Chemistry:         | Chem 203, Chem 204 (both include lab)   |
| Biology:           | HS-209 (requires Bio110,111, or 113 AND Bio112 all with lab)                                      |
| Science electives: | 2 courses in advanced natural sciences, computer science, or math as approved by the Pitt liaison |
| Engineering:       | Statics and Mechanics of Materials off campus or at Pitt  |

### Chemical Engineering

|                        |   |
|------------------------|---|
| Math:                  | Math 211, Math 225, Math 353  |
| Chemistry:             | Chem 203, Chem 204, Chem 305, Chem 333 (all include lab)  |
| Science elective:      | 1 course from: Bio 212, Chem 317, Chem 353  |
| Engineering elective:  | Statics and Mechanics of Materials off campus or at Pitt  |
| Professional elective: | 2 courses in communication, advanced natural science, computer science, math, or co-op education. |

### Civil Engineering

|                       |  |
|-----------------------|--|
| Math:                 | Math 211, Math 225, Math 353   |
| Economics:            | Econ 103   |
| Engineering:          | Phys 319 (Dynamics), Statics off campus or at Pitt, Mechanics of Materials off campus or at Pitt, Computer Methods in Civil and Environmental Engineering off campus or at Pitt, Engineering Economics off campus or at Pitt |
| Science elective:     | 1 course from: Bio 110,111, or 113, Chem 317, Chem 353   |
| Engineering elective: | 1 course from Phy111+112, Phy240, Phy312, ES230  |

### Computer Engineering

|                                    |   |
|------------------------------------|---|
| Math:                              | Math 212, Math 225  |
| Computer Science:                  | CS111(Java) instead of CS107  |
| Communications and Open electives: | Gettysburg Curricular requirements  |
| Technical electives:               | 2 courses in advanced natural sciences, computer science, or math as approved by the Pitt liaison |

### Electrical Engineering

Math: Math 211, Math 212, Math 225, Math 353

Computer Science: CS111(Java) instead of CS107

Communications and Open electives: Gettysburg Curricular requirements

Technical electives: 3 courses in advanced natural sciences, computer science, or math as approved by the Pitt liaison

### Engineering Science – *Engineering Physics Emphasis*

Math: Math 211, Math 212, Math 225, Math 353, Math 364

Physics: Phy111/112/211 instead of Phy109/110, Phy319, Phy330, Phy352

Engineering: Phy240 recommended or COE/ECE 0031/0032 at Pitt

### Engineering Science – *Nanotechnology: Chemistry/Bioengineering Emphasis*

Math: Math 211, Math 212, Math 225, Math 353, Math 364

Chemistry: 3 courses from: Chem 203, Chem 204, Chem 353, Chem 305, Chem 306, Chem 333

Engineering: Materials Structure and Properties off campus or at Pitt

### Engineering Science – *Nanotechnology: Physics/Materials Emphasis*

Math: Math 211, Math 212, Math 225, Math 353, Math 364

Physics: Phy111/112/211 instead of Phy109/110, Phy330 or Phy352

Engineering: Phy240 recommended or COE/ECE 0031/0032 at Pitt, Materials Structure and Properties off campus or at Pitt

### Industrial Engineering

- Math: Math 211, Math 212, Math 225, Math 353
- Physics: Phy111/112/211 instead of Phy109/110, Phy330 or Phy352
- Engineering: Phy240 recommended or COE/ECE 0031/0032 at Pitt, Materials Structure and Properties, Engineering Economic Analysis off campus or at Pitt, Probability and Statistics for Engineers II off campus or at Pitt
- Engineering Electives: 3 courses from Phy240, Phy312, Materials Structure and Properties off campus or at Pitt, Statics and Mechanics of Materials off campus or at Pitt.
- Technical Electives: 2 courses in advanced natural sciences, computer science, or math as approved by the Pitt liaison

### Materials Science and Engineering

- Math: Math 211, Math 212, Math 225, Math 353
- Engineering: Phy240 recommended or MEMS 0031 at Pitt, Statics off campus or at Pitt, Mechanics of Materials off campus or at Pitt
- Communications: Gettysburg Curricular Requirements
- Philosophy: Phil 105 or Phil 107 (may be counted toward 5 humanities/social sciences courses)

### Mechanical Engineering

- Math: Math 211, Math 212, Math 225, Math 353
- Engineering: Phy240, Phy319, Statics off campus or at Pitt, Mechanics of Materials off campus or at Pitt
- Communications: Gettysburg Curricular Requirements
- Philosophy: Phil 105 or Phil 107 (may be counted toward 5 humanities/social sciences courses)