

ENGINEERING

undergraduate program

Students pursuing a Bachelor of Science Degree in Engineering will complete 60-72 credits at Pitt-Bradford. Once this is accomplished as well as earning a minimum 3.0 Grade Point Average, students can apply for relocation to the University of Pittsburgh's Swanson School of Engineering in Pittsburgh to finish their degree requirements.

Employment Opportunities:

Application Engineer
 Associate Planner
 Biomedical Engineer
 Civil Engineer
 Conservation Engineer
 Controls Engineer
 Design Engineer
 Distribution Engineer
 Electrical Engineer
 Environmental Engineer
 Fleet Engineer
 Food Engineer
 Illuminating Engineer
 Manufacturing Engineer
 Mechanical Engineer
 Molding Analysis Engineer
 Node Specialist
 Packaging Engineer
 Pharmaceutical Engineer
 Plant Process Engineer
 Process Engineer
 Product Application Engineer
 Project Engineer
 QC Lab Technician
 Research Engineer
 Sales Engineer
 Service Manager
 Software Engineer
 Systems Engineer
 Task Engineer
 Test Engineer
 Trust Designer



Engineering is about creating new solutions to existing or future problems. Engineers are problem solvers who employ science, math, analysis and synthesis to design unique and practical solutions to everyday problems. They must accomplish this often under the constraints of time, budgets, and safety and health issues. Engineers also must be

concerned about the environmental, political and social impact their answers will create.

Engineering majors at Pitt-Bradford complete a two-year program that involves courses in engineering, chemistry, calculus, and physics. After completing the two years students can relocate to the School of Engineering at the University of Pittsburgh in Pittsburgh to complete a bachelor's degree in chemical and petroleum engineering, computer engineering, mechanical engineering, civil and environmental engineering, or electrical engineering.

Required Skills:

- Mathematics
- Problem Solving
- Communications (Written & Oral)
- Organization
- Time Management
- Leadership

Possible Employers:

- Corporation
- Industry
- Design Firm
- Government
- Research Firm
- Military
- Manufacturing Firm
- College or University

PROFESSIONAL ORGANIZATIONS:

The Institute of Electrical and Electronic Engineering
 American Society of Civil Engineers
 American Society of Mechanical Engineers
 American Society of Chemical Engineers

www.ieee.org
www.asce.org
www.asme.org
www.aiche.org

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www.engineerjobs.com
www.tryengineer.org
www.bls.gov/ocos027.htm
www.upb.pitt.edu/career/asp



Engineering (BS) – Curriculum Guide

Student Name:

Advisor:

REQUIREMENTS FOR ALL MAJORS-FIRST YEAR

FIRST TERM

- CHEM 0101 General Chemistry I (4)
- ENGR 0015 Engineering Analysis I (3)
- ENGR 0081 Engineering Seminar (0)
- MATH 0140 Calculus I (4)
- PHYS 0201 Foundations of Physics I (4)
- Humanities or social science elective course

SECOND TERM

- CHEM 0102 General Chemistry II (4)
- ENGR 0016 Engineering Analysis II (3)
- ENGR 0082 Engineering Seminar (0)
- MATH 0150 Calculus II (4)
- PHYS 0202 Foundations of Physics II (4)
- Humanities or social science elective course

SECOND YEAR REQUIREMENTS

MECHANICAL ENGINEERING

- ME 0024 Introduction to Mechanical Engineer Design (3)
- MEMS 0051 Introduction to Thermodynamics (3)
- ECE 0031 Linear Circuits I (4)
- ENGR 0022 Material Structure and Properties (3)
- ENGR 0135 Statics and Mechanics of Materials I (3)
- ENGR 0145 Statics and Mechanics of Materials II (3)
- ENGR 0085 Engineering Seminar (0)
- MATH 0201 Calculus III (4)
- MATH 0202 Ordinary Differential Equations (3)
- MATH 0206 Linear Algebra (3)
- Humanities or social science elective course

CIVIL & ENVIRONMENTAL ENGINEERING

- CE 0109 Computer Methods in Civil Engineering I (3)
- ENGR0022 Material Structure and Properties (3)
- ENGR 0131 Statics for Civil and Environmental Eng. (3)
- ENGR 0141 Mech. of Materials for Civil and Env. Eng. (3)
- ENGR 0085 Engineering Seminar (0)
- ECON 0102 Introductory Microeconomics (3)
- MATH 0201 Calculus III (4)
- MATH 0202 Ordinary Differential Equations (3)
- MATH 0206 Linear Algebra (3)
- Humanities or social science elective courses

CHEMICAL & PETROLEUM ENGINEERING

- CHE 0035 Introductory Chemical Engineering (4)
- CHE 0036 Thermodynamics (3)
- CHE 1008 Introduction to Staged Separations (3)
- CHEM 0206/0207 Organic Chemistry I & Lab (4)
- CHEM 0208/0209 Organic Chemistry II & Lab (4)
- ENGR 0135 Statics and Mechanics of Materials I (3)
- ENGR 0085 Engineering Seminar (0)
- MATH 0201 Calculus III (4)
- MATH 0202 Ordinary Differential Equations (3)
- MATH 0206 Linear Algebra (3)
- Humanities or Social Science Elective

ELECTRICAL ENGINEERING

- ECE 0031 Linear Circuits I (4)
- ECE 0041 Linear Circuits II (3)
- ECE 0132 Digital Logic (3)
- ECE 0142 Computer Organization (3)
- ECE 0257 Analysis and Design of Electronic Circuits (3)
- ENGR 0085 Engineering Seminar (0)
- MATH 0201 Calculus III (4)
- MATH 0202 Ordinary Differential Equations (3)
- MATH 206 Linear Algebra (3)
- Humanities or social science elective courses

COMPUTER ENGINEERING

- CIST 0150 Programming Fundamentals (3)
- ECE 0031 Linear Circuits I (4)
- ECE 0041 Linear Circuits II (3)
- ECE 0132 Digital Logic (3)
- ECE 0142 Computer Organization (3)
- ECE 0257 Analysis and Design of Electronic Circuits (3)
- ENGR 0085 Engineering Seminar (0)
- MATH 0202 Ordinary Differential Equations (3)
- MATH 0206 Linear Algebra (3)
- Humanities or social science elective courses