Degree Type – Bachelor of Science (BS)
Degree Title – Engineering Technology

Engineering Technology is the profession in which knowledge of mathematics and natural science, gained by higher education, experience, and practice, is devoted primarily to the implementation and extension of existing technology for the benefit of humanity. Engineering Technology education focuses primarily on the applied aspects of science and that portion of the technological spectrum closest to product improvement, industrial practices, and engineering operational functions.

STUDENT LEARNING OUTCOMES:

1. **An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;**
2. **An ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;**
3. **An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;**
4. **An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;**
5. **An ability to function effectively as a member or leader on a technical team;**
6. **An ability to identify, analyze, and solve broadly-defined engineering technology problems;**
7. **An ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature;**
8. **An understanding of the need for and an ability to engage in self-directed continuing professional development;**
9. **An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;**
10. **A knowledge of the impact of engineering technology solutions in a societal and global context; and**
11. **A commitment to quality, timeliness, and continuous improvement.**

A – GENERAL EDUCATION CORE – 42 HOURS

Students must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education core requirements.

Required

Mathematics – 3 hours

MATH 1314 College Algebra

Life and Physical Sciences – 6 hours

PHYS 1401 General Physics I three-hour lecture
CHEM 1311 General Chemistry I

Integrative and Experiential Learning – 5 hours

PHYS 1401 General Physics I one-hour lab
CHEM 1111 General Chemistry I Lab
CSCI/CMPE 1370 Engineering Computer Science I (or CSCI/CMPE 1378 Honors)

B – MAJOR REQUIREMENTS – 67 HOURS (45 advanced)

1 – Engineering Technology Core – 59 hours (37 advanced)

ENGT 1101 Introduction to Engineering Technology
ENGT 1310 Design Graphics I

ENGT 1320 Design Graphics II
ENGT 1321 Basic Architectural CAD
ENGT 2307 Engineering Materials I for Engineering Technology
ENGT 2310 Introduction to Manufacturing Processes
ENGT 2321 Basic Electronics
ENGT 2350 Residential Architectural CAD
ENGT 3310 Fundamentals of Product Design
ENGT 3311 Statics and Strength of Materials
ENGT 3312 Renewable Energy Technology
ENGT 3320 Computer Integrated Manufacturing
ENGT 3321 Solar Energy Systems
ENGT 3330 Green Building Design I
ENGT 3333 Quality Control
ENGT 3350 Commercial Architectural CAD
ENGT 4210 Senior Project I
ENGT 4220 Senior Project II
ENGT 4311 Wind Energy Systems
ENGT 4312 Production Planning and Control
ENGT 4322 Machine Design

2 – Advanced Engineering Technology Electives – 8 hours (8 advanced)

Choose 8 hours of advanced Engineering Technology or courses approved by faculty advisor.

C – SUPPORT COURSES – 11 HOURS

MATH 2412 Precalculus
MATH 2413 Calculus I (or MATH 2487 Honors)
MATH 1342 Elementary Statistical Methods (or MATH 1387 Honors)

TOTAL CREDIT HOURS FOR GRADUATION – 120 HOURS

TOTAL ADVANCED HOURS – 45 HOURS