
The Manufacturing Engineering Department will provide a quality engineering education to prepare students for the practice of engineering. A strong laboratory component in the curriculum, with opportunities for industrial internships and research experiences will provide engineering skills that enhance the understanding of the applications of engineering sciences and the realization of the importance of lifelong learning. A strong emphasis on verbal and written communications will be stressed.

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

020 – Mathematics – 3 hours

MATH 2413 Calculus I (or MATH 2487 Honors) three-hour lecture

030 – Life and Physical Science – 6 hours

PHYS 2425 Physics for Scientists and Engineers I three-hour lecture

PHYS 2426 Physics for Scientists and Engineers II three-hour lecture

040 – Language, Philosophy, and Culture – 3 hours

Choose one:

PHIL 1310 Ethics, Happiness, and the Good Life (Must be Engineering/Computer Science section)

PHIL 2326 Ethics, Technology, and Society

090 – Integrative and Experiential Learning – 6 hours

PHYS 2425 Physics for Scientists and Engineers I one-hour lab

PHYS 2426 Physics for Scientists and Engineers II one-hour lab

CSCI 1380 Computer Science

Choose corresponding lab from Support Courses:

CHEM 1109 Chemistry for Engineers Lab

CHEM 1111 General Chemistry I Lab

B – MAJOR REQUIREMENTS – 64 HOURS (54 advanced)

1 – Manufacturing Engineering Core – 49 hours (39 advanced)

MANE 1101 Introduction to Manufacturing Engineering

MANE 1204 Manufacturing Engineering Graphics

MANE 2332 Engineering Statistics

MANE 2403 Engineering Mechanics

MANE 3164 Manufacturing Processes Lab

MANE 3364 Manufacturing Processes

MANE 3300 Computer-Aided Design

MANE 3302 Computer-Aided Manufacturing

MANE 3337 Engineering Economics

MANE 3340 Fundamentals of Industrial Engineering

MANE 3351 Manufacturing Engineering Analysis

MANE 3437 Thermal and Fluid Sciences

MANE 4173 Product Design and Mass Customization

MANE 4311 Quality Control

MANE 4365 Tool Design

MANE 4331 Manufacturing Planning and Control

MANE 4340 Operations Research

MANE 4352 Manufacturing Simulation

2 – Senior Design – 6 hours (6 advanced)

MANE 4361 Senior Design I

MANE 4362 Senior Design II

3 – Technical Electives – 9 hours (9 advanced)

Choose any advanced MANE course.

C – SUPPORT COURSES – 25 HOURS (6 advanced)

Choose one:

- CHEM 1309 Chemistry for Engineers
- CHEM 1311 General Chemistry I
- ELEE 2317 Electrical and Electronic Systems
- MATH 2413 Calculus I (or MATH 2487 Honors) one-hour lecture
- MATH 2414 Calculus II (or MATH 2488 Honors)
- MATH 2415 Calculus III
- MATH 3341 Differential Equations
- MECE 2140 Engineering Materials Lab
- MECE 2340 Engineering Materials
- MECE 3321 Mechanics of Solids

TOTAL CREDIT HOURS FOR GRADUATION – 131 HOURS

TOTAL ADVANCED HOURS – 60 HOURS