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 1107 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 1307 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

ADMISSION, PROGRESSION, AND GRADUATION REQUIREMENTS, if applicable:

Graduation requirements
In addition to the graduation requirements listed in the UTRGV 2017-2018 Undergraduate Catalog, demonstration of proficiency in a language other than English is required at the undergraduate level equivalent to a minimum of six credit hours. Proficiency can be demonstrated by a college credit exam, a placement test approved through the UTRGV Department of Writing and Language Studies, and/or up to six credit hours of college-level language coursework.