

MECHANICAL ENGINEERING

(last update 10/16/2018)

| 1 st Year | Session | Course | Course Name | SH | P: Prerequisite; C: Corequisite |
|----------------------|---------|-----------|--|--------------|---|
| | ALL* | MATH:1550 | Engineering Math I: Single Variable Calculus | 4 | P: ALEKS Score ≥75 OR MPT 3 Score ≥ 9 |
| | F/Su* | ENGR:1100 | Introduction to Engineering Problem Solving | 3 | |
| | ALL | CHEM:1110 | Principles of Chemistry I | 4 | |
| | ALL | RHET:1030 | Rhetoric | 4 | |
| | F | ENGR:1000 | Engr Success for First Year Students | 1 | |
| TOTAL | | | | 16 | |
| | ALL* | MATH:1560 | Engineering Math II: Multi-Variable Calculus | 4 | P: MATH 1550 |
| | ALL | ENGR:1300 | Introduction to Engineering Computing | 3 | C: MATH:1550 |
| | ALL | PHYS:1611 | Introductory Physics I | 4 | C: MATH:1550 |
| | ALL | MATH:2550 | Engineering Math III: Matrix Algebra | 2 | P: MATH:1550 |
| | ALL | | General Education Component #1 | 3 | |
| TOTAL | | | | 16 | |
| 2 nd Year | | | | | |
| | ALL | MATH2560 | Engineering Math IV: Differential Equations | 3 | P:MATH:1560; MATH 2550 |
| | F/S*** | PHYS:1612 | Introductory Physics II (with/without lab) | 4/3 | P:PHYS:1611; C:MATH:1560 |
| | ALL* | ENGR:2110 | Engineering Fundamentals I: Statics | 2 | P:MATH:1550; C:MATH1560; C:PHYS:1611 |
| | ALL | ENGR:2120 | Engineering Fundamentals II: Electrical Circuits | 3 | C:MATH:2560 |
| | ALL | ENGR:2130 | Engineering Fundamentals III: Thermodynamics | 3 | P:CHEM:1110; PHYS:1611; C:MATH:1560 |
| | ALL | | General Education Component #2 | 3 | |
| | F | ME:2020 | Sophomore Seminar: Mechanical Engineering | 0 | Sophomore Status |
| TOTAL | | | | 18/17 | |
| | ALL | ENGR:2720 | Materials Science | 3 | P:CHEM:1110; C:MATH:1550 |
| | ALL | ENGR:2750 | Mechanics of Deformable Bodies | 3 | P:ENGR:2110; C:MATH:2560 |
| | ALL | ENGR:2710 | Dynamics | 3 | P:ENGR:2110; MATH:1550 |
| | S | ME:2200 | Introduction to Mechanical Engineering Design | 2 | P:ENGR:1100 |
| | | ME:2300 | Manufacturing Processes | 3 | C: ENGR:2720, and (ME:2200 or BME:2710) |
| OR | | STAT:2020 | Probability and Stat for Engineering & Phys Sci | 3 | |
| | ALL | | Elective Focus Area #1 | 3 | |
| TOTAL | | | | 17 | |
| 3 rd Year | | | | | |
| | F/S | MATH:3550 | Engineering Math V: Vector Calculus | 3 | P:MATH:2560 |
| | F/S | ENGR:2510 | Fluid Mechanics | 4 | P:MATH:2560; ENGR:2710 C:ENGR:2130 |
| | F | ME:3351 | Engineering Instrumentation | 2 | P:PHYS:1612; ENGR:2120 |
| | F | ME:3600 | Control of Mechanical Engineering Systems | 3 | P:MATH:2550, MATH:2560, ENGR:2710 |
| | ALL | STAT:2020 | Probability and Stat for Engineering & Phys Sci | 3 | P:MATH:1560 |
| OR | | ME:2300 | Manufacturing Processes | 3 | C ENGR:2720, and (ME:2200 or BME:2710) |
| | F/S | ME:3091 | Professional Seminar: Mechanical Engineering | 0 | Junior Status |
| TOTAL | | | | 15 | |
| | S/Su* | ME:3045 | Heat Transfer | 3 | P:ENGR:2510; MATH:3550, ENGR:1300 |
| | S/Su* | ME:3052 | Mechanical Systems | 4 | P:ENGR:2750; C:ENGR:2760 ENGR:2720; STAT:2020 |
| | ALL | | Elective Focus Area #2 | 3 | |
| | ALL | | Elective Focus Area #3 | 3 | |
| | ALL | | General Education Component #3 | 3 | |
| TOTAL | | | | 16 | |
| 4 th Year | | | | | |
| | F | ME:4048 | Energy Systems Design | 4 | P:ME:3045** |
| | F | ME:4055 | Mechanical Systems Design | 3 | P:ENGR:2710; ME:3052 |
| | ALL | | Elective Focus Area #4 | 3 | |
| OR | F/S | ME:4086 | Mechanical Engineering Design Project | 3 | C:ME:4048 or ME:4055 |
| | ALL | | Elective Focus Area #5 | 3 | |
| OR | F/S | ME:4080 | Experimental Engineering | 4 | P:ME:3351 C:ME:3052; C:ME:3045 |
| | ALL | | General Education Component #4 | 3 | |
| | F/S | ME:3091 | Professional Seminar: Mechanical Engineering | 0 | Junior Status |
| TOTAL | | | | 16 | |
| | F/S | ME:4086 | Mechanical Engineering Design Project | 3 | C:ME:4048 or ME:4055 |
| OR | ALL | | Elective Focus Area #4 | 3 | |
| | F/S | ME:4080 | Experimental Engineering | 4 | P:ME:3351 C:ME:3052; C:ME:3045 |
| OR | ALL | | Elective Focus Area #5 | 3 | |
| | ALL | | Elective Focus Area #6 | 3 | |
| | ALL | | Elective Focus Area #7 | 3 | |
| | ALL | | General Education Component | 3 | |
| TOTAL | | | | 16 | |

*Summer courses are offered subject to meeting minimum enrollment requirements.

** Effective Fall 2020. ME:4048 will be offered in Fall 2019 with pre-requisites ME:3045 and ME:3040.

*** PHYS:1612 without lab will be offered for the last time in Spring 2019.