

| YEAR TERM | | MAJOR | | | | | CORE | | TOTAL CR. | |
|-----------|--------|--|---|---|---|--|--|--|--|----|
| YEAR 1 | FALL | ETCS 105 CAREER DISCOVERY 2 | | | MATH 170 CALCULUS I Pre-Req: Placement exam, MATH 141 or MATH 136 4 | PHYS 170 GENERAL PHYSICS I Co-Req: MATH 170 4 | CHEM 107 ENGINEERING CHEMISTRY I Pre-Req: MATH 135 or MATH 141 4 | FCWR 101* FOUND. OF COLLEGE COMPOSITION Pre-Req: Placement Exam or WRIT 100 3 | | 17 |
| | SPRING | MENG 201 ENGINEERING PROGRAMMING Co-Req: MATH 161 or MATH 170 3 | MENG 105 ENGINEERING GRAPHICS 1 | | MATH 180 CALCULUS II Pre-Req: MATH 170 4 | PHYS 180 GENERAL PHYSICS II Pre-Req: PHYS 170 Co-Req: MATH 180 4 | | FCWR 151* FOUNDATIONS OF RESEARCH WRITING Pre-Req: FCWR 101 3 | | 15 |
| YEAR 2 | FALL | | | MENG 211 ENGINEERING MECHANICS I (Statics) Pre-Req: PHYS 170, MATH 180 3 | MATH 260 CALCULUS III Pre-Req: MATH 180 4 | PHYS 225 INTRODUCTION OF MODERN PHYSICS Pre-Req: PHYS 180 3 | | FCWR 304 COMMUNICATION FOR TECHNICAL PROFESSIONS Pre-Req: FCWR 151 3 | FCSP 105 FOUNDATIONS OF SPEECH COMMUNICATION 3 | 16 |
| | SPRING | MENG 270 INSTRUMENTATION AND MEASUREMENT Pre-Req: PHYS 170 1 | MENG 221 STRENGTH OF MATERIALS Pre-Req: MENG 211 & MATH 180 3 | MENG 212 ENGINEERING MECHANICS II Pre-Req: MENG 211 Co-Req: MATH 260 3 | MATH 320 DIFFERENTIAL EQUATIONS Pre-Req: MATH 260 3 | MENG 240 THERMODYNAMICS Pre-Req: PHYS 225, CHEM 107 3 | | LIBERAL ARTS ELECTIVE 3 | | 16 |
| YEAR 3 | FALL | MENG 310 INTRODUCTION TO MATERIAL SCIENCE Pre-Req: CHEM 107 or CHEM 110 3 | MENG 340 FLUID MECHANICS Pre-Req: MENG 240 3 | MENG 321 INTRO TO COMPUTER AIDED DESIGN Pre-Req: MENG 105 3 | EENG 211 ELECTRICAL CIRCUITS Pre-Req: MATH 170 and PHYS 170 Co-Req: MATH 180 and PHYS 180 3 | IENG 240 ENGINEERING ECONOMICS Pre-Req: MATH 141 or MATH 136 3 | | | | 15 |
| | SPRING | MENG 420 MODERN MANUFACTURING Pre-Req: MENG 310 and MENG 321 4 | MENG 370 MACHINE DESIGN Pre-Req: MENG 221 3 | MENG 324 VIBRATIONS AND SYSTEM Pre-Req: MENG 201 or CSCI 125, MENG 212, and MATH 320 3 | MENG 349 HEAT TRANSFER Pre-Req: MENG 240 and MATH 320 3 | EENG 275 ELECTRONICS LAB Pre-Req: EENG 211 or EENG 212 and FCWR 101 1 | STEM ELECTIVE MATH/PHYS 300 or 400 level or CoECS 300 level or above 3 | | | 17 |
| YEAR 4 | FALL | MENG 438 ENGINEERING ANALYSIS Pre-Req: MENG 201 and MATH 320 3 | MENG 320 OR 343 1 Pre-Req: MENG 310 and MENG 221 or MENG 340 and MENG 240 | | DESIGN ELECTIVE (+) 4 | IENG 245 STATISTICAL DESIGN I Pre-Req: MATH 161 or MATH 170 3 | | ICSS 309/IENG 400 TECHNOLOGY AND GLOBAL ISSUES** Limited to Juniors & Seniors 3 | ICPH 3XX** PHILOSOPHY CHOICE 3 | 17 |
| | SPRING | MENG 470 SENIOR M.E. DESIGN Pre-Req: MENG 324, MENG 340, MENG 370, and MENG 349 4 | | MECHANICAL ENGINEERING ELECTIVE*** 3 | DESIGN ELECTIVE (+) 4 | | | ICBS 3XX** BEHAVIORAL SCIENCE CHOICE 3 | ICLT 3XX** LITERATURE CHOICE 3 | 17 |

CREDITS 130

*Non-native English speakers take FCWR 111 instead of FCWR 101 and FCWR 161 instead of FCWR 151.

Course names, numbers and/or pre-requisites subject to change. (Rev 6/21)

**Pre-Req: FCIQ 101, FCSP 105, FCSC 101, FCWR 101, and FCWR 151

***Mechanical Engineering Elective Options: Select 3 credits from non-required AENG, IENG, MENG 300 level or above, or graduate MENG courses with Chairperson Approval.

[Note] Students must receive 'C-' or higher in all required Math, Science, ETCS, EENG, MENG & CSCI courses.

| (+) DESIGN ELECTIVES: Choose 8 credits from below | | |
|--|---------|--------------------------------------|
| COURSE | CREDITS | PRE-REQUISITES |
| AENG 490 | 4 | MENG 340 |
| MENG 486 | 4 | MENG 370, MENG 212 |
| MENG 446 | 4 | MENG 340, MENG 240; Co-Req: MENG 349 |
| MENG 443 | 4 | MENG 340 and MENG 349 |