

| YEAR TERM |        | MAJOR   |  |  |  |   | GENERAL EDUCATION   |   | TOTAL CR.   |    |
|-----------|--------|---|--|--|--|---|---|---|---|----|
| YEAR 1    | FALL   | ETCS 105<br>CAREER DISCOVERY 2  |  |  | MATH 170<br>CALCULUS I 4<br>Pre-Req: Placement Exam, MATH 141 or MATH 136                            | PHYS 170<br>GENERAL PHYSICS I 4<br>Co-Req: MATH 170                                 | CHEM 107<br>ENGINEERING CHEMISTRY I 4<br>Pre-Req: MATH 135 or MATH 141    | FCWR 101/111 3<br>FOUNDATIONS OF COLLEGE COMPOSITION<br>Pre-Req: Requires Placement | 17  |    |
|           | SPRING |   | MENG 105<br>ENGINEERING GRAPHICS 1   | MENG 201<br>ENGINEERING PROGRAMMING 3<br>Co-Req: MATH 161 or MATH 170              | MATH 180<br>CALCULUS II 4<br>Pre-Req: MATH 170   | PHYS 180<br>GENERAL PHYSICS II 4<br>Pre-Req: PHYS 170<br>Co-Req: MATH 180           |   | FCWR 151/161 3<br>FOUNDATIONS OF RESEARCH WRITING<br>Pre-Req: FCWR 101/111          | 15  |    |
| YEAR 2    | FALL   |   |  | MENG 211<br>ENGINEERING MECHANICS I (Statics) 3<br>Pre-Req: PHYS 170, MATH 180     | MATH 260<br>CALCULUS III 4<br>Pre-Req: MATH 180  | PHYS 225<br>INTRODUCTION OF MODERN PHYSICS 3<br>Pre-Req: PHYS 180                   |   | FCWR 304 3<br>COMMUNICATION FOR TECHNICAL PROFESSIONS<br>Pre-Req: FCWR 151/161      | DATA 101 3<br>MAKING SENSE OF A DATA-ORIENTED SOCIETY                       | 16 |
|           | SPRING |   | MENG 221<br>STRENGTH OF MATERIALS 3<br>Pre-Req: MENG 211 & MATH 180          | MENG 212<br>ENGINEERING MECHANICS II 3<br>Pre-Req: MENG 211<br>Co-Req: MATH 260    | MATH 320<br>DIFFERENTIAL EQUATIONS 3<br>Pre-Req: MATH 260  | MENG 240<br>THERMODYNAMICS 3<br>Pre-Req: PHYS 225, CHEM 107                         |   | ICXX 3XX* 3<br>SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS)<br>Pre-Req: FCWR 151/161  |   | 15 |
| YEAR 3    | FALL   | MENG 370 3<br>MACHINE DESIGN<br>Pre-Req: MENG 221                           | MENG 340 3<br>FLUID MECHANICS<br>Pre-Req: MENG 240                           | MENG 321 3<br>INTRO TO COMPUTER AIDED DESIGN<br>Pre-Req: MENG 105                  | MENG 310 3<br>INTRODUCTION TO MATERIAL SCIENCE<br>Pre-Req: CHEM 107 or CHEM 110                      | IENG 240 3<br>ENGINEERING ECONOMICS<br>Pre-Req: MATH 136 or MATH 141 or higher math |   |   |   | 15 |
|           | SPRING | AENG 420 3<br>HIGH SPEED FLOWS & SHOCK WAVES<br>Pre-Req: MENG 240, MENG 340 | MENG 324 3<br>VIBRATIONS AND SYSTEM<br>Pre-Req: MENG 201, MENG 212, MATH 320 | MENG 349 3<br>HEAT TRANSFER<br>Pre-Req: MENG 240 and MATH 320                      | EENG 211 3<br>ELECTRICAL CIRCUITS<br>Pre-Req: MATH 170 and PHYS 170<br>Co-Req: MATH 180 and PHYS 180 | MENG 343 1<br>THERMOFLUID LABORATORIES<br>Pre-Req: MENG 340 and MENG 240            | STEM ELECTIVE 3<br>MATH/PHYS 300 or 400 level or CoECS 300 level or above |   |   | 16 |
| YEAR 4    | FALL   | AENG 490 4<br>FLIGHT VEHICLE DESIGN<br>Pre-Req: MENG 340                    |  | AENG 410 3<br>AERODYNAMICS<br>Pre-Req: MENG 340 and MATH 320                       | IENG 245 3<br>STATISTICAL DESIGN I<br>Pre-Req: MATH 161 or MATH 170                                  | EENG 275 1<br>ELECTRONICS LAB<br>Pre-Req: EENG 211 or EENG 212 and FCWR 101         | LIBERAL ARTS ELECTIVE 3   | ICXX 3XX* 3<br>SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS)<br>Pre-Req: FCWR 151/161  |   | 17 |
|           | SPRING | MENG 438 3<br>ENGINEERING ANALYSIS<br>Pre-Req: MENG 201 and MATH 320        |  | MENG 470 4<br>SENIOR MECHANICAL ENGINEERING DESIGN<br>Department Approval Required | AENG 463 3<br>PROPULSION<br>Pre-Req: MENG 340  |   |   | ICXX 3XX* 3<br>SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS)<br>Pre-Req: FCWR 151/161  | IENG 400 3<br>TECHNOLOGY AND GLOBAL ISSUES<br>Requires Junior/Senior Status | 16 |

CREDITS 127

\*Three seminar courses must be chosen from 4 subject areas, ICLT, ICPH, ICBS and ICSS, of which ICLT, ICPH and ICBS may be duplicated.

Co-Op Option: ETCS 300 (Foundations for Success in CoECS Co-Op) and ETCS 301 (CoECS Co-Op)  
Course names, numbers and/or pre-requisites subject to change.

(Rev 4/24)

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