

**TEXAS A&M UNIVERSITY-CORPUS CHRISTI**  
**BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING- TENTATIVE DEGREE PLAN**  
**2018-19 CATALOG YEAR**

Name: \_\_\_\_\_  
 ID#: \_\_\_\_\_

**IMPORTANT NOTES:**

- Students are responsible for achieving a 2.25 GPA in their major to graduate as well as meeting all graduation minimums
- Any changes/exceptions to this Degree Plan must be filed via the Undergraduate Degree Plan Exceptions Form (see your advisor FMI)
- See your Faculty Mentor every semester (RECOMMENDED). See your Academic Advisor as needed.
- This degree plan remains an unofficial document until certified by the Dean of the College of Science & Engineering .
- Prerequisites and semesters offered are subject to change with each catalog year
- Students are responsible for taking courses in the proper sequence to ensure orderly progression of work
- You must maintain a minimum GPA of 2.0 throughout your academic career to avoid Academic Probation or Suspension
- Upper division classes are any 3xxx or 4xxx level classes, you must have 45 upper division hrs to graduate

**UNIVERSITY CORE CURRICULUM**

|                                      |   | Grade | Hrs | Prerequisites  |
|--------------------------------------|---|-------|-----|----------------|
| COMM 1311                            | FOUNDATION OF COMMUNICATION   |       | 3   | n/a            |
| ENGL 1302                            | COMPOSITION II  |       | 3   | n/a            |
| MATH 2413                            | CALCULUS I  |       | 4   | Math placement |
| CHEM 1411                            | GENERAL CHEMISTRY I   |       | 4   | Math 1314      |
| PHYS 2425                            | UNIVERSITY PHYSICS I  |       | 4   | Math 2413      |
| LANGUAGE,<br>PHILOSOPHY &<br>CULTURE | CHOOSE ONE: ENGL 2332,2333,2334 OR 2335 OR<br>SPAN 3307,3308, 3309 OR 3310 OR PHIL 1301 OR 2306 |       | 3   | n/a            |
| HIST 1301                            | US HISTORY TO 1865  |       | 3   | n/a            |
| HIST 1302                            | US HISTORY SINCE 1865   |       | 3   | n/a            |
| POLS 2305                            | US GOVT & POLITICS  |       | 3   | n/a            |
| POLS 2306                            | STATE/LOCAL POLITICS  |       | 3   | n/a            |
| CREATIVE ARTS                        | CHOOSE ONE: ARTS 1301 OR 1303, MUSI 1306 OR<br>1307 OR THEA 1310 OR 1351 OR COMM 1305           |       | 3   | n/a            |
| SOC SCIENCE<br>COMPONENT             | PSYC 2301 OR SOCI 1301 OR ECON 2301 OR 2302   |       | 3   | n/a            |
| AREA OPTION                          | MATH 2414 CALCULUS II   |       | 4   | n/a            |

**COMMON ENGINEERING, MATH & SCIENCE COURSES**

| MATH 2413, MATH 2414, PHYS 2425, PHYS 2426 |   | SEE ABOVE |   |                                    |
|--|---|-----------|---|------------------------------------|
| COSC 1330                                  | PROGRAMMING FOR SCIENTISTS, ENGINEERS<br>& MATHEMATICIANS |           | 3 | Math 1314 or beyond                |
| MATH 2415                                  | CALCULUS III  |           | 4 | Math 2414                          |
| PHYS 2426                                  | UNIVERSITY PHYSICS II                                     |           | 4 | Phys 2425 and Math 2414            |
| MATH 3315                                  | DIFFERENTIAL EQUATIONS                                    |           | 3 | Math 2414                          |
| ENGR 1211                                  | INTRODUCTION TO ENGINEERING                               |           | 2 | n/a                                |
| ENGR 1312                                  | ENGINEERING GRAPHICS I                                    |           | 3 | Engr 1211                          |
| ENGR 3316                                  | THERMODYNAMICS  |           | 3 | Phys 2425, Math 2414               |
| ENGR 3322                                  | MATERIALS SCIENCE   |           | 3 | Phys 2425                          |
| ENGR 2325                                  | STATICS   |           | 3 | Phys 2425                          |
| ENGR 2326                                  | DYNAMICS  |           | 3 | Engr 2325                          |
| ENGR 2460                                  | CIRCUIT ANALYSIS  |           | 4 | Phys 2426                          |
| ENGR 3315                                  | FLUID MECHANICS   |           | 3 | Engr 2326, Math 3315 & Math 3470   |
| ENGR 3320                                  | STRENGTH OF MATERIALS                                     |           | 3 | Engr 2325 & Engr 2322              |
| ENGR 3350                                  | MANUFACTURING PROCESSES                                   |           | 3 | Engr 1312, Engr 3320 and Engr 2326 |

**REQUIRED MECHANICAL ENGINEERING COURSES**

|           |  |  |   |  |
|-----------|--|--|---|--|
| MEEN 3310 | ENGINEERING ANALYSIS FOR MECH ENG          |  | 3 | Math 3315                              |
| MEEN 3330 | SOLID MECHANICS FOR MECHANICAL ENGINEERING |  | 3 | Engr 3320                              |
| MEEN 3230 | SOLID MECHANICS LAB                        |  | 2 | Pre-req or Co-req with Meen 3330       |
| MEEN 3345 | HEAT TRANSFER                              |  | 3 | Engr 2316, Pre-req or Co-req Engr 3315 |
| ENGR 4240 | PROJECT MANAGEMENT                         |  | 2 | Meen 3330 & Meen 3345                  |
| MEEN 4351 | DYNAMICAL SYSTEMS ANALYSIS AND MODELING    |  | 3 | Cosc 1330, Engr 2460, meen 3345        |
| MEEN 4420 | ENGINEERING LAB MEASUREMENTS               |  | 4 | Engr 2460 and Senior Standing          |
| MEEN 4360 | THERMAL SYSTEM DESIGN                      |  | 3 | Meen 3345                              |
| MEEN 4365 | MECHANICAL SYSTEM DESIGN                   |  | 3 | Meen 3330                              |
| ENGR 4370 | CAPSTONE PROJECTS                          |  | 3 | Meen 4240 & coreq Meen 4360 & 4365     |

**TECHNICAL ELECTIVES BLOCK (FOUR COURSES FROM THE FOLLOWING LIST FOR A TOTAL OF 12 HRS.)**

**COMPLETE ONE OF THIS COURSE:**

|   |  |   |  |
|---|--|---|--|
| MATH/PHYSICS/CHEM/BIOI - 3xxx or 4xxx upper level |  | 3 |  |
|---|--|---|--|

**SELECT THREE OF THE FOLLOWING COURSES:**

|           |  |  |        |                                       |
|-----------|--|--|--------|---------------------------------------|
| MEEN 3335 | INTRO TO UNMANNED AIRCRAFT SYSTEMS             |  | 3      | Junior Level Standing                 |
| MEEN 3340 | SOLID MODELING AND FINITE ELEMENTS             |  | 3      | Meen 3310, Engr 3320                  |
| MEEN 4325 | ENERGY CONVERSION                              |  | 3      | Engr 2316                             |
| MEEN 4330 | INTR TO PLASMA ENGINEERING & APPL              |  | 3      | Engr 2322 & Engr 2460 or Phys 2426    |
| MEEN 4335 | INTR TO AIRCRAFT AERODYNAMICS & PERF           |  | 3      | Engr 2326 & Cosc 1330                 |
| MEEN 4345 | SENSORS AND SYSTEMS                            |  | 3      | Math 2414, Phys 2426 & Engr 2460      |
| MEEN 4350 | CONTROLS, AUTOMATIONS AND ROBOTICS             |  | 3      | Math 3315, Engr 2326 & Engr 2460      |
| MEEN 4355 | MARINE FABRICATION                             |  | 3      | Engr 3350                             |
| MEEN 4375 | FUEL CELLS                                     |  | 3      | Engr 2316, Meen 3345 & Chem 1411      |
| MEEN 4380 | RENEWABLE ENERGY                               |  | 3      | Engr 2316, Engr 2460, Meen 4325       |
| MEEN 4385 | OFFSHORE ENERGY MANAGEMENT                     |  | 3      | Meen 3345                             |
| MEEN 4390 | INTRO TO COMPUTATIONAL FLUID DYNAMICS          |  | 3      | Meen 3345                             |
| MEEN 4395 | OFFSHORE WATER EXPLORATION & DESALINATION SYST |  | 3      | Engr 2316                             |
| EEEN 4333 | MACHINE VISION AND IMAGE PROCESSING            |  | 3      | Cosc 1330 or 1435 & Engr 2460 or 2305 |
| ENGR 4390 | SPECIAL TOPICS IN ENGINEERING                  |  | Varies | Varies                                |
| ENTC 4496 | DIRECTED INDEPENDENT STUDY                     |  | Varies | Varies                                |

**UNIVERSITY REQUIREMENTS**

|                                |                    |  |   |   |
|--------------------------------|--------------------|--|---|---|
| FOREIGN LANGUAGE (2 SEMESTERS) |                    |  |   | Met via HS Transcript or College-level course |
| UCCP 1101                      | FIRST-YEAR SEMINAR |  | 1 | n/a   |
| UCCP 1102                      | FIRST-YEAR SEMINAR |  | 1 | n/a   |

**GENERAL ELECTIVES**

none required

**TOTALS FOR DEGREE PLAN**

|                                     |            |                  |
|-------------------------------------|------------|------------------|
| TOTAL HOURS:                        | <b>130</b> | 128 WITH NO UCCP |
| TOTAL UPPER DIVISION HOURS (MIN 45) | <b>53</b>  |                  |