

# Bachelor of Science – Engineering Innovation and Leadership

## Degree Plan - Materials & Metallurgical Engineering Concentration (checklist)

2024

Catalog: 2023-2024

Expires: 08/01/2030

Last Name \_\_\_\_\_

First Name \_\_\_\_\_ M.I. \_\_\_\_\_

UTEP ID \_\_\_\_\_

**NOTE: Overall GPA ≥ 2.0 AND In-Major GPA ≥ 2.0 REQUIRED for graduation**

| A Core Curriculum (45 SCH)<br>(minimum of "C" grade required)   |                                   | Semester Completed | Final Grade | SCH | Sub # |
|---|-----------------------------------|--------------------|-------------|-----|-------|
| <b>1 Communication (6 credit hours required)</b>  |                                   |                    |             |     |       |
| RWS 1301*   | Rhetoric and Composition I        |                    |             |     |       |
| RWS 1302*   | Rhetoric and Composition II       |                    |             |     |       |
| <b>2 Mathematics (4)</b>  |                                   |                    |             |     |       |
| MATH 1411*  | Calculus I                        |                    |             |     |       |
| <b>3 Life and Physical Sciences (8)</b>   |                                   |                    |             |     |       |
| PHYS 2320*  | Introductory Mechanics            |                    |             |     |       |
| PHYS 2120*  | Laboratory for PHYS 2320          |                    |             |     |       |
| PHYS 2321*  | Introductory Electromagnetism     |                    |             |     |       |
| PHYS 2121*  | Laboratory for PHYS 2321          |                    |             |     |       |
| <b>4 Language, Philosophy, and Culture (3)</b>  |                                   |                    |             |     |       |
| PHIL 2306*  | Ethics                            |                    |             |     |       |
| <b>5 Creative Arts (3)</b><br>Select and circle one:  |                                   |                    |             |     |       |
| ART 1300*, ARTH 1305*, 1306*, CHIC 1311*, DANC 1304*,<br>FILM 1390*, MUSL 1324*, 1327*, 2321*, THEA 1313* |                                   |                    |             |     |       |
| <b>6 American History (6)</b>   |                                   |                    |             |     |       |
| HIST 1301*  | History of the U.S. to 1865       |                    |             |     |       |
| HIST 1302*  | History of the U.S. since 1865    |                    |             |     |       |
| <b>7 Government/Political Science (6) -- all 6 SCH must be completed at the same institution</b>          |                                   |                    |             |     |       |
| POLS 2310*  | Introduction to Politics          |                    |             |     |       |
| POLS 2311*  | American Govt. & Politics         |                    |             |     |       |
| <b>8 Social and Behavioral Sciences (3)</b>   |                                   |                    |             |     |       |
| CE 2326*  | Econ. For Engrs & Scientists      |                    |             |     |       |
| <b>9 Component Area Option (6)</b>  |                                   |                    |             |     |       |
| EL 1301*  | Eng. Innovation & Leadership      |                    |             |     |       |
| CS 1320**   | Computer Programming Sci. / Engr. |                    |             |     |       |

| B Foundational Math & Science (12 SCH) |                        | Semester Completed | Final Grade | SCH | Sub # |
|--|------------------------|--------------------|-------------|-----|-------|
| CHEM 1305*                             | General Chemistry      |                    |             |     |       |
| MATH 1312*                             | Calculus II            |                    |             |     |       |
| MATH 2313*                             | Calculus III           |                    |             |     |       |
| MATH 2326*                             | Differential Equations |                    |             |     |       |

| H Upper Division Math/Science Elective (3 SCH) |                | Semester Completed | Final Grade | SCH | Sub # |
|--|----------------|--------------------|-------------|-----|-------|
| MATH 3323*                                     | Matrix Algebra |                    |             |     |       |

| SUBSTITUTIONS** |                                     |                        |   |   |
|-----------------|-------------------------------------|------------------------|---|---|
| Sub #           | Course on degree plan to substitute | where course was taken | Name of Course as it appears on UTEP Transcript | Course as it appears on UTEP Transcript |
| ex              | EL 1402                             | Other                  |   | ENGR 14TR                               |
| 1               |                                     |                        |   |   |
| 2               |                                     |                        |   |   |
| 3               |                                     |                        |   |   |
| 4               |                                     |                        |   |   |

| C Engineering Leadership Coursework (25 SCH) |  | Semester Completed | Final Grade | SCH | Sub # |
|--|--|--------------------|-------------|-----|-------|
| EL 1402*                                     | Fund of Leadership, Design and Graphics                                  |                    |             |     |       |
| EL 2301*                                     | Modeling and Simulation  |                    |             |     |       |
| EL 3302*                                     | Engineering Measurements   |                    |             |     |       |
| EL 3003*                                     | Professional Practice I  |                    |             |     |       |
| EL 3005*                                     | Professional Practice II   |                    |             |     |       |
| EL 3331*                                     | Engineering Design: People to Products                                   |                    |             |     |       |
| EL 3332*                                     | Engineering Entrepreneurship: Products to People                         |                    |             |     |       |
| EL 3373* or IE 3373 or EE 3384               | Engineering Probability & Stat. Models<br>Engr Probability & Stat Models |                    |             |     |       |
| EL 4395*                                     | Capstone Design I: Definition & Exploration                              |                    |             |     |       |
| EL 4396*                                     | Capstone Design II: Development & Evaluation                             |                    |             |     |       |
| D MMEConcentration (13 SCH)                  |  | Semester Completed | Final Grade | SCH | Sub # |
| CE 2377 or IE 2377 or MECH 2342              | Electro Mechanical Systems   |                    |             |     |       |
| MME 2303                                     | Intro to Materials Sci & Engrg   |                    |             |     |       |
| MME 2434                                     | Mechanics of Materials   |                    |             |     |       |
| MME 4316                                     | Failure Analysis   |                    |             |     |       |

| E Major: Emphasis Courses (15 SCH)<br>for MMEConcentration |  | Semester Completed | Final Grade | SCH | Sub # |
|--|--|--------------------|-------------|-----|-------|
|  |  |                    |             |     |       |
|  |  |                    |             |     |       |
|  |  |                    |             |     |       |
|  |  |                    |             |     |       |

| F Upper Division MME Technical Electives (12 SCH)<br>see advisor for approved courses |  | Semester Completed | Final Grade | SCH | Sub # |
|---|--|--------------------|-------------|-----|-------|
|   |  |                    |             |     |       |
|   |  |                    |             |     |       |
|   |  |                    |             |     |       |
|   |  |                    |             |     |       |

**BSEL Total Hours 125**

a--COMM 1302 is required for CS Concentration  
 \* -- C or better required  
 \*\* -- requires submission of official substitution form available at  
<https://www.utep.edu/engineering/student-resources/student-resources-forms.html>

| APPROVALS: |      |
|------------|------|
| ADVISOR    | DATE |
| CHAIR      | DATE |