# Bachelor of Science — Industrial and Systems Engineering

## Degree Plan (checklist)

### Catalog: 2017-18

**Last Name**

**First Name**

**M.I.**

**UTEP ID**

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

### Core Curriculum (45 SCH)

**Semester** | **Final Grade** | **SCH** | **Sub #**
--- | --- | --- | ---
1 | Communication (6 credit hours required) |  |  |
   | RWS 1301* | Rhetoric and Composition I |  |  |
   | RWS 1302* | Rhetoric and Composition II |  |  |
2 | Mathematics (4) |  |  |
   | MATH 1411* | Calculus I |  |  |
3 | Life and Physical Sciences (8) |  |  |
   | CHEM 1305 | General Chemistry |  |  |
   | CHEM 1105* | General Chemistry Lab |  |  |
   | PHYS 2420* | Introductory Mechanics |  |  |
4 | Language, Philosophy, and Culture (3) |  |  |
   | PHIL 2306* | Ethics |  |  |
5 | Creative Arts (3) |  |  |
   | ART 1300*, ARTH 1305*, 1306*, DANC 1304*, FILM 1390*, MUSL 1321*, 1324*, 1327*, THEA 1313* |  |  |
6 | American History (6) |  |  |
   | HIS 1301* | History of the U.S. to 1865 |  |  |
   | HIS 1302* | History of the U.S. since 1865 |  |  |
7 | Government/Political Science (6) |  |  |
   | POLS 2310* | Introduction to Politics |  |  |
   | POLS 2311* | American Govt. & Politics |  |  |
8 | Social and Behavioral Sciences (3) |  |  |
   | CE 2326* | Econ. For Engrs & Scientists |  |  |
9 | Component Area Option (6) |  |  |
   | UNIV 1301* | Foundations of Engineering |  |  |
   | COMM 1302 | Business/Prof. Communications |  |  |

### Foundational Math & Science (15 SCH)

**Semester** | **Completed** | **Grade** | **SCH** | **Sub #**
--- | --- | --- | --- | ---
1 | MATH 1312* | Calculus III |  |  |
2 | MATH 2313* | Calculus III |  |  |
3 | MATH 2326* | Differential Equations |  |  |
4 | MATH 3323* | Matrix Algebra |  |  |
5 | MATH 4329* | Numerical Analysis |  |  |

### Major: Required Lower Division Courses (13 SCH)

**Semester** | **Final Grade** | **SCH** | **Sub #**
--- | --- | --- | ---
MECH 1305* | Graphic Design Fundamentals |  |  |
MECH 2131* | Manufacturing Engineering Lab |  |  |
MME 2303* | Materials & Manufacturing Processes |  |  |
CE 2315* | Statics |  |  |
IE 2377* | Electro-Mechanical Systems |  |  |

### Major: Required Upper Division Courses (38 SCH)

**Semester** | **Completed** | **Final Grade** | **SCH** | **Sub #**
--- | --- | --- | --- | ---
IE 3331 | Systems Engineering |  |  |
IE 3332 | Safety Engineering |  |  |
IE 3352 | Design of Experiments |  |  |
IE 3373* | Engineering Probability & Statistical Models |  |  |
IE 3390 | Operations Research I |  |  |
IE 3477 | Methods and Industrial Ergonomics |  |  |
IE 3483 | Industrial Systems Simulation |  |  |
IE 3494 | Industrial Layout |  |  |
IE 3499 | Statistical Quality Control and Reliability |  |  |
IE 3490 | Probabilistic Operations Research |  |  |
IE 4391 | Production and Inventory Control |  |  |
IE 4466 | Senior Design |  |  |

### Technical Elective*** (9 SCH)

**Select and circle the three you chose:**

<table>
<thead>
<tr>
<th><strong>Semester</strong></th>
<th><strong>Completed</strong></th>
<th><strong>Final Grade</strong></th>
<th><strong>SCH</strong></th>
<th><strong>Sub #</strong></th>
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</thead>
<tbody>
<tr>
<td>ENGL 3359, IE 4312, 4333, 4371, 4395, 4396, 4397, or any other upper division course from the College of Engineering, College of Science, and College of Business Administration</td>
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### Substitutions**

<table>
<thead>
<tr>
<th><strong>IN</strong></th>
<th><strong>Course on degree plan to substitute</strong></th>
<th><strong>Institution where course was taken</strong></th>
<th><strong>Name of Course as it appears on UTEP Transcript</strong></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>MATH 1312*</td>
<td></td>
<td>Calculus III</td>
</tr>
<tr>
<td>2</td>
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<td></td>
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<td>5</td>
<td>MATH 4329*</td>
<td></td>
<td>Numerical Analysis</td>
</tr>
</tbody>
</table>

### BSIE Total Hours

120

### Approval:

**ADVISOR**

**DATE**

**CHAIR**

**DATE**

**Rev. 06-26-2017**

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**NOTES:**

- a – MECH 2331 may be substituted.
- b – MECH 1321 may be substituted.
- c – MECH 2342 may be substituted.

* -- C or better required

** -- official substitution form available at http://engineering.utep.edu/plaza/AcademicForms/index.html

*** -- in addition to provided courses, any other upper division course from the College of Engineering, College of Science, or College of Business Administration may be substituted.