This roadmap is a recommended semester-by-semester plan of study for this major. However, courses and milestones designed as critical (!) must be completed in the semester listed to ensure a timely graduation.

### Critical Course Subject and Title

<table>
<thead>
<tr>
<th>Critical</th>
<th>Course Subject and Title</th>
<th>Credit Hours</th>
<th>Upper Div. Min.</th>
<th>Major GPA</th>
<th>Type</th>
<th>Term Taken</th>
</tr>
</thead>
</table>

#### Semester One [17 Credits]

**Note:** Students who have earned an associate degree will have 34 credits of technical coursework articulate to the bachelor’s degree program and will not have to take the electives for a minor or individualized specialization.

- **CS 10061 Introduction to Computer Programming** or **DSCI 15310 Computational Thinking and Programming** or **EERT 22003 Technical Computing** 3  ■
- **MATH 11010 Algebra for Calculus** 3  KMC
- **US 10097 Destination Kent State: First Year Experience** 1
- Kent Core Requirement 3
- Applied Courses from Associate Degree, Minor or Individualized Specialization 7

#### Semester Two [19 Credits]

- **ENG 20002 Introduction to Technical Writing** or **ITAP 26638 Business Communications** 3  ■
- **MATH 11012 Intuitive Calculus** 3  KMC
- **MATH 11022 Trigonometry** 3  KMC
- Kent Core Requirement 3
- Applied Courses from Associate Degree, Minor or Individualized Specialization 7

#### Semester Three [16 - 18 Credits]

- **PHY 12201 Technical Physics I** (3) or **PHY 13001 General College Physics I** (4) and **PHY 13021 General College Physics Laboratory I** (1) 3 - 5  KBS
- Kent Core Requirement 3
- Applied Courses from Associate Degree, Minor or Individualized Specialization 10

#### Semester Four [16 - 17 Credits]

- **PHY 12202 Technical Physics II** (4) or **PHY 13012 College Physics II** (2) and **PHY 13022 General College Physics Laboratory II** (1) 3 - 4  KBS
- Kent Core Requirement 3
- Applied Courses from Associate Degree, Minor or Individualized Specialization 10

#### Semester Five [8 Credits]

1. **TECH 31020 Automated Manufacturing** 3  ■
2. **ECON 22060 Principles of Microeconomics** 3  KSS
3. **ITAP 26636 Project Management for Administrative Professionals** 1
4. **Electrical/Electronics Elective** 3  ■
5. Kent Core Requirement 3

#### Semester Six [12 Credits]

1. **TECH 36620 Project Management in Engineering and Technology** 3  ■
2. **TECH 33363 Metallurgy and Materials Science** 3  ■
3. **Electrical/Electronics Elective** 3  ■
4. **General Elective** 3  ■

#### Semester Seven [12 Credits]

1. **EERT 21010 Engineering and Professional Ethics** or **TECH 31010 Engineering and Professional Ethics** 3  ■
2. **Electrical/Electronics Elective** 3  ■
3. Kent Core Requirement 3
4. **General Elective** 3  ■

#### Semester Eight [13 - 14 Credits]

1. **IAB 47900 Technical and Applied Studies Capstone** 3  ■ C  ELR
2. **TECH 31090 Cultural Dynamics of Technology** or **TECH 33892 Cooperative Education - Professional Development** 3  ■ C  DD/WIC ELR/WIC
3. **TECH 43080 Industrial and Environmental Safety** 3  ■
4. **Electrical/Electronics Elective** 3  ■
5. **General Elective** 2 - 3  ■

### Graduation Requirements Summary

<table>
<thead>
<tr>
<th>Minimum Total Hours</th>
<th>Minimum Upper-Division Hours</th>
<th>Minimum Kent Core Hours</th>
<th>Minimum Major GPA</th>
<th>Minimum Overall GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>39</td>
<td>36</td>
<td>2.000</td>
<td>2.000</td>
</tr>
</tbody>
</table>

1. US 10097 is not required of transfer students with 25 credits or students age 21+ at time of admission.
2. Applied Courses from Associate Degree, Minor or Individualized Specialization (34 credit hours)

**Choose From the following**

- Any EERT course
- ERT 12005 Applications in Computer-Aided Design (2)
- MERT 12000 Engineering Drawing (3)
- TECH 33095 Special Topics: Applied Science and Technology (1 - 3)
- Others by program director approval
3. Electrical/Electronics Electives (12 credit hours)

Choose from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EERT 32005</td>
<td>Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>GAE 42002</td>
<td>Energy Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>TECH 31032</td>
<td>Power Technology</td>
<td>3</td>
</tr>
<tr>
<td>TECH 33016</td>
<td>PC/Network Engineering and Troubleshooting</td>
<td>3</td>
</tr>
<tr>
<td>TECH 33031</td>
<td>Programmable Logic Controllers</td>
<td>3</td>
</tr>
<tr>
<td>TECH 33223</td>
<td>Electronic Communication</td>
<td>3</td>
</tr>
<tr>
<td>TECH 43220</td>
<td>Electrical Machinery</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Credits required depends on meeting minimum 120 credit hours and minimum 39 upper-division credit hours.

5. To fulfill the writing-intensive requirement, either TECH 31000 or TECH 33056 must be earned with minimum C (2.000) grade.

### University Requirements Summary

<table>
<thead>
<tr>
<th>Type</th>
<th>Categories</th>
<th>Remaining Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>KCM</td>
<td>Kent Core I. Composition</td>
<td>6</td>
</tr>
<tr>
<td>KMC</td>
<td>Kent Core II. Mathematics and Critical Reasoning</td>
<td>fulfilled</td>
</tr>
<tr>
<td>KHU</td>
<td>Kent Core III. Humanities</td>
<td>3</td>
</tr>
<tr>
<td>KFA</td>
<td>Kent Core IV. Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>KFH</td>
<td>Kent Core V. Humanities or Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>KSS</td>
<td>Kent Core VI. Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>KBS</td>
<td>Kent Core VII. Basic Sciences</td>
<td>fulfilled</td>
</tr>
<tr>
<td>KAD</td>
<td>Kent Core VIII. Additional</td>
<td>fulfilled</td>
</tr>
<tr>
<td>DD</td>
<td>Domestic Diversity Course Requirement</td>
<td>fulfilled</td>
</tr>
<tr>
<td>DG</td>
<td>Global Diversity Course Requirement</td>
<td>one course</td>
</tr>
<tr>
<td>ELR</td>
<td>Experiential Learning Requirement</td>
<td>fulfilled</td>
</tr>
<tr>
<td>WIC</td>
<td>Writing-Intensive Course Requirement</td>
<td>fulfilled</td>
</tr>
</tbody>
</table>

- **KCM**: Kent Core I. Composition
- **KMC**: Kent Core II. Mathematics and Critical Reasoning
- **KHU**: Kent Core III. Humanities
- **KFA**: Kent Core IV. Fine Arts
- **KFH**: Kent Core V. Humanities or Fine Arts
- **KSS**: Kent Core VI. Social Sciences
- **KBS**: Kent Core VII. Basic Sciences
- **KAD**: Kent Core VIII. Additional
- **DD**: Domestic Diversity Course Requirement
- **DG**: Global Diversity Course Requirement
- **ELR**: Experiential Learning Requirement
- **WIC**: Writing-Intensive Course Requirement