## Major: Electrical and Computer Engineering  
**Program of Study:** Computer Engineering  
**Degree:** Bachelor of Science in Electrical and Computer Engineering (BSECE)

### Program of Study:

- **Electrical and Computer Engineering Program of Study:** Computer Engineering

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**General Education** (24 HRS)

- **One GE must be a US Social or Global Diversity Course.**
- **Must take Philos 1332 for ethics**

### English & Comm Skills (6 hr)

- English 1110.xx  
  - 3 cr.

### Social Sciences (6 hrs)

- Only one course per Social Science group may count

### Core (87 HRS)

<table>
<thead>
<tr>
<th>Course</th>
<th>AU</th>
<th>SP</th>
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</thead>
<tbody>
<tr>
<td>Engr (Survey)</td>
<td>1100</td>
<td>1</td>
</tr>
<tr>
<td>Engr (Fund. Of Engr I)</td>
<td>1181</td>
<td>2</td>
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<tr>
<td>Math (Calculus I)</td>
<td>1151</td>
<td>5</td>
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<tr>
<td>Physics I</td>
<td>1250</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry for Engineers</td>
<td>1250</td>
<td>4</td>
</tr>
<tr>
<td>Math (Linear Algebra)</td>
<td>2568</td>
<td>3</td>
</tr>
<tr>
<td>ECE (Digital Logic)</td>
<td>2060</td>
<td>3</td>
</tr>
<tr>
<td>CSE (Dev Software I)</td>
<td>2221</td>
<td>4</td>
</tr>
<tr>
<td>ECE 3090 (Tech writing)</td>
<td>3090</td>
<td>1</td>
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<tr>
<td>ECE (Electronics)</td>
<td>3020</td>
<td>3</td>
</tr>
<tr>
<td>Math (Ord &amp; Part Diff EQNS)</td>
<td>2415</td>
<td>3</td>
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<tr>
<td>(Adv. Digital Design)</td>
<td>3561</td>
<td>3</td>
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<tr>
<td>ECE (Microcontrollers Lab)</td>
<td>3567</td>
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<tr>
<td>ISE (Engr. Econ.)</td>
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<tr>
<td>ECE (Capstone Design I)</td>
<td>3900</td>
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</tr>
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</table>

### Electives (18 HRS)

- At least 9 hours of the Technical Electives must be ECE or CSE courses selected from the lists below.
- Must include at least one 5000 level ECE or CSE Technical Elective.
- Up to 9 hours of the Electives may be Directed Electives from the ECE approved list. Directed Electives generally include: courses required for entry into other engineering majors; required and technical elective courses in other engineering majors; pre-med courses, business or entrepreneurship courses; math, statistics, physics and chemistry courses at higher level than required in the ECE core; and other physical science or biological science courses. For physical science or biological science courses a maximum of 7 hours numbered below 2000 may be counted as Directed Electives.

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### VLSI (Very Large Scale Integrated Circuits) & Computer Aided Design

- **ECE 5020 (3)**
- **ECE 5580 (3)**

### Microprocessor Based Systems

- **ECE 5465 (3)**

### Digital Design and Computer Architecture

- **ECE 5462 (3)**

### Computer Networks

- **ECE 5101 (3)**
- **CSE 3461 (3)**
- **ECE 4567 (4)**

### Signals and Systems

- **ECE 3050 (3)**

### Robotics and Control for Automation

- **ECE 3551 (3)**
- **ECE 5463 (3)**
- **ECE 5554 (3)**

### Digital Signal Processing/Image Processing/Machine Learning

- **ECE 5200 (3)**
- **ECE 5206 (3)**
- **ECE 5460 (3)**
- **One of ECE 5500 (4300)**

### Numerical Analysis

- **CSE 5361 (3)**

### Database/Algorithms

- **CSE 3241 (3)**
- **CSE 5242 (3)**

### High Performance Computing

- **CSE 5441 (3)**

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**Hours Req’d for Degree:** 128  
**Earned Hours to Date:** 128  
**Final CHPR:**      
**Final MGPA:**      
**OK to Graduate?**  Yes  
**Program Approved:**

Revised 6/17/20: AMK