## General Education

<table>
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<th>Sophomore</th>
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### Milestones

- **A1 (3 Units)**
  - Oral Communication
  - *Must pass with a C or better

- **D2 (3 Units)**
  - American Government

- **B3 (0-3 Units)**
  - Lab

- **D1 (3 Units)**
  - American History

### General Education

- **A2 (3 Units)**
  - Written Communication
  - *Must pass with a C or better

### Major

- **GE Area B2**
  - BIOL 10 (3 Units)
  - Life Sciences
  - *Not open to students with credit in BIOL 1A

- **GE Area C2**
  - PHIL 1 or 10 (3 Units)
  - Humanities
  - *See course catalog for prerequisite requirements

- **ECE 81**
  - OR
  - CSCI 41 (4 Units)
  - [Pre-Req: CSCI 40]

- **ECE 72**
  - (2 Units)
  - [Pre-Req: ECE 71 or CSCI 40]

- **ECE 103**
  - (2 Units)

- **GE Area B1**
  - CHEM 3A (4 Units)
  - Physical Sciences
  - [Pre-Req: GE B4 (may be taken concurrently)]
  - *No credit for CHEM 3A after CHEM 1A

- **GE Area D3**
  - ECON 40 or 50 (3 Units)
  - Social Science

- **GE Area IB**
  - ECE 186B (3 Units)
  - Physical Universe & Its Life Forms
  - [Pre-Req: ECE 186A; UDWS]
Computer Engineering, B.S. (124 Units)
Valid for Catalog Years: 2018/2019 to 2019/2020
*Official planning guide approved by the Lyles College of Engineering

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<tr>
<td>GE Area B4</td>
<td>MATH 75 (4 Units)</td>
<td>Quantitative Reasoning [Pre-Req: Elementary geometry, intermediate algebra, &amp; trigonometry OR precalculus. Passing score on department's Calculus Readiness Test; ELM]</td>
<td>ECE 71 OR CSCI 40 (4 Units) [Pre-Req: ELM or College Intermediate Algebra (C or better); trigonometry]</td>
<td>ECE 85 (3 Units) [Pre-Req: MATH 77]</td>
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<td>MATH 76 (4 Units) [Pre-Req: MATH 75 or MATH 75A &amp; B]</td>
<td>ECE 85L (1 Unit) [Pre-Req: ECE 85 (may be taken concurrently)]</td>
<td>ECE 90L (1 Unit) [Pre-Req: ECE 90 (may be taken concurrently); PHYS 4BL]</td>
<td>ECE 128 (3 Units) [Pre-Req: ECE 90]</td>
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<td>PHYS 4A (3 Units) [Pre-Req: GE B4; MATH 76 (may be taken concurrently)]</td>
<td>MATH 77 (4 Units) [Pre-Req: MATH 76]</td>
<td>ECE 106 (3 Units) [Pre-Req: ECE 85 or equivalent]</td>
<td>ECE 128L (1 Unit) [Pre-Req: ECE 90L; ECE 128 (may be taken concurrently)]</td>
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<td>PHYS 4B (3 Units) [Pre-Req: PHYS 4A; MATH 77 (may be taken concurrently)]</td>
<td>PHYS 4A (3 Units) [Pre-Req: ECE 85, ECE 71 OR CSCI 40]</td>
<td>ECE 118 (3 Units) [Pre-Req: ECE 106]</td>
<td>ECE 176 (3 Units) [Pre-Req: PHYS 4B; MATH 77]</td>
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## Computer Engineering, B.S. (124 Units)

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<td>MATH 81 (3 Units)</td>
<td>ECE 118L (1 Unit)</td>
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<td>(1 Unit)</td>
<td>[Pre-Req: MATH 77] OR ENGR 101 (3 Units)</td>
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<td>[Pre-Req: PHYS 4B]</td>
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<td>Additional Graduation Requirements</td>
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<td>Technical Elective (3 Units)</td>
<td>Technical Electives (6 Units)</td>
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<td>*Upper Division Writing Exam OR &quot;W&quot; Course (must pass with a C or better)</td>
<td>*See footnotes</td>
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**FOOTNOTES:**

Prerequisites/Corequisites: Other restrictions may apply. Please see your course catalog for detailed prerequisite/corequisite requirements. Students violating any course prerequisites may be required to take an additional course (if they earned a C) or repeat a course (if they earned a D or less.) Repeated violations of prerequisites may trigger disciplinary action.

Grade Requirements: Courses in mathematics, the physical sciences, or engineering taken CR/NC are not counted toward fulfillment of degree requirements in Computer Engineering. The following prerequisite courses must be completed with a letter grade of C or better: ECE 72, 71, 85, 85L, 90, 90L.

Technical Area (9 units): Select at least 9 units from ECE 114, 126, 132, 134, 135, 138, 138L, 140, 146, 148, 155, 172, 173; CSCI 144, or 156.

Upper Division Writing Skills requirement (UDWS): All undergraduate students must demonstrate competency in writing skills by passing the Upper Division Writing Exam (UDWE) or by obtaining a C or better in an approved upper division writing course, identified by the letter "W."

Substitutions: If substitutions/exceptions/waivers are made for any major courses that also meet GE and/or the Multicultural/International graduation requirement, the student is responsible for completing additional courses to satisfy the respective areas (GE and/or MI). This also includes the upperdivision writing requirement.
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<td>ECE 118 (3 Units)</td>
<td>[Pre-Req: ECE 85; CSCI 40 or ECE 71]</td>
<td>ECE 107 (3 Units)</td>
<td>[Pre-Req: ECE 124]</td>
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<td>ECE 107 (3 Units)</td>
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<td>CSCI 150 (3 Units)</td>
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## Computer Engineering, B.S. (124 Units)

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### Major

- **Fall**
  - MATH 76 (4 Units)
    - [Pre-Req: MATH 75 or MATH 75A & B]
  - PHYS 4A (3 Units)
    - [Pre-Req: GE B4; MATH 76 (may be taken concurrently)]
  - PHYS 4B (3 Units)
    - [Pre-Req: PHYS 4A; MATH 77 (may be taken concurrently)]
  - PHYS 4BL (1 Unit)
    - [Pre-Req: Corequisite: PHYS 4B]

- **Spring**
  - MATH 77 (4 Units)
    - [Pre-Req: MATH 76]
  - PHYS 77 (4 Units)
    - [Pre-Req: ECE 85 or equivalent]
  - ECE 106 (3 Units)
    - [Pre-Req: ECE 85 or equivalent]
  - ECE 115 (3 Units)
    - [Pre-Req: ECE 85; CSCI 40 or ECE 70]

### Electives

- **Fall**
  - MATH 81 (3 Units)
    - [Pre-Req: MATH 77]  
  - PHYS 81 (3 Units)
    - [Pre-Req: MATH 77]  

- **Spring**
  - PHYS 107 (3 Units)
    - [Pre-Req: ECE 106]
  - ECE 176 (3 Units)
  - [Pre-Req: ECE 106]

- **Electives**

### Fall

- ECE 90L (1 Unit)
  - [Pre-Req: ECE 90 (may be taken concurrently); PHYS 4BL]
- ECE 118L (1 Unit)
  - [Pre-Req: ECE 118, 85L]
- ECE 125 (3 Units)
  - [Pre-Req: ECE 124]
- ECE 126 (3 Units)
  - [Pre-Req: ECE 120L, 176]
- ECE 174 (3 Units)
  - [Pre-Req: ECE 115]
- Technical Area (3 Units)
  - [See footnotes]

### Spring

- ECE 1 (1 Unit)
- PHYS 4A (3 Units)
  - [Pre-Req: GE B4; MATH 76 (may be taken concurrently)]
- PHYS 4B (3 Units)
  - [Pre-Req: PHYS 4A; MATH 77 (may be taken concurrently)]
- PHYS 4BL (1 Unit)
  - [Pre-Req: Corequisite: PHYS 4B]
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### Footnotes

- *Upper Division Writing Exam OR "W" Course (must pass with a C or better)
- *See footnotes

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For assistance or to schedule an advising appointment, please contact the Department of Electrical and Computer Engineering at 559-278-2726, Engineering East 254A.

Lyle College of Engineering Advising Center: 559-278-1076, Engineering East 383.
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