### B.S. in COMPUTER ENGINEERING

**Suggested 4-Year Academic Flowchart**

**2017-2019 Catalog**

**Updated 2/23/18**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
</tr>
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<tbody>
<tr>
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**FRESHMAN**

- **Fall**
  - Calculus I: MATH 141 (3)
  - Programming Fundamentals: CPE 100 (3)
  - Linear Analysis I: MATH 244 (3)

- **Winter**
  - Calculus II: MATH 142 (4)
  - Discrete Structures: CPE 202 (4)

- **Spring**
  - Discrete Structures: CPE 203 (4)
  - Data Structures: CPE 201 (4)

**SOPHOMORE**

- **Fall**
  - Calculus III: MATH 241 (4)
  - Computer Programming: CPE 101 (4)

- **Winter**
  - General Physics IA: PHYS 131 (4)
  - Modern Physics I: PHYS 411 (4)

**JUNIOR**

- **Fall**
  - General Physics III: PHYS 133 (4)
  - General Physics III: PHYS 141 (4)

- **Winter**
  - Linear Analysis II: MATH 243 (4)
  - General Physics IA: PHYS 131 (4)

**SENIOR**

- **Fall**
  - Electives: CPE 329 (4)
  - General Physics II: PHYS 132 (4)

- **Winter**
  - Electives: CPE 346 (4)
  - Modern Physics I: PHYS 211 (4)

**Notes:**

- Most General Education Courses can be taken in any order as long as prerequisites are met.

- One course from each of the following GE areas must be completed: A1, A2, B1, C1, C2, C3, C4, D1, D2, D3, D4.

- Spring courses are offered depending on the term.

- **GE Area:**
  - A1: First-Year Writing
  - A2: Oral Communication
  - B1: Introduction to Computing
  - B2: Digital Design
  - C1: General Physics IA
  - C2: General Physics II
  - C3: Calculus I
  - C4: Calculus II
  - D1: Linear Programming
  - D2: Signals & Systems
  - D3: Digital Electromagnetics
  - D4: Digital Electronics & Integrated Circuits

**Legend:**

- Course Title (req. units)
- GE Area
- Major (95)
- Support (53-56)
- General Ed. (44)

**Courses:***

- CPE 101 (4): Programming Fundamentals
- CPE 102 (4): Object-Oriented Programming & Design
- CPE 200 (4): Data Structures
- CPE 201 (4): Linear Analysis I
- CPE 202 (4): Discrete Structures
- CPE 203 (4): In the Winter quarter of freshman year.
- MATH 141 (4)
- MATH 142 (4)
- PHYS 131 (4)
- PHYS 132 (4)
- PHYS 133 (4)
- PHYS 211 (4)
- CHEM 124 (4)

**Prerequisites:**

- All courses require prior completion of MATH 140/142, PHYS 131, or equivalent.
- Courses taken in the Fall quarter are marked as **Fall**, Winter quarter as **Winter**.
- General Education (GE) courses are listed as **GE**.

**Important Notes:**

- Students are encouraged to consult with advisors before selecting approved electives; courses may impact pursuit of post-baccalaureate studies.
- All double-counting with other degree requirements is prohibited.

**Required Courses:**

- Calculus I (MATH 141)
- Computer Programming Fundamentals (CPE 100)
- Data Structures (CPE 201)
- Linear Analysis I (MATH 244)
- Discrete Structures (CPE 203)

**Electives:**

- CPE 329 (4)
- CPE 346 (4)
- MATH 241 (4)
- PHYS 132 (4)
- PHYS 133 (4)
- PHYS 211 (4)
- CHEM 124 (4)

**Application:**

- Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year.

**Total Units:**

192-195