# COMPUTER ENGINEERING, BSCP

**Requirements for Students Matriculating in or before Academic Year 2022-2023.** Learn more about University Academic Regulation 3.1 ([http://catalog.okstate.edu/university-academic-regulations/#matriculation](http://catalog.okstate.edu/university-academic-regulations/#matriculation)).

**Minimum Overall Grade Point Average:** 2.00  
**Total Hours:** 125

## Code | Title | Hours
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### General Education Requirements

All General Education coursework requirements are satisfied upon completion of this degree plan

#### English Composition

ENGL 1113 Composition I 3  
ENGL 1313 Critical Analysis and Writing I 3  
ENGL 3323 Technical Writing 3

#### American History & Government

Select one of the following: 3

- HIST 1103 Survey of American History
- HIST 1483 American History to 1865 (H)
- HIST 1493 American History Since 1865 (DH)

#### Analytical & Quantitative Thought (A)

- MATH 2144 Calculus I (A) (With a grade of "C" or better) 4  
- MATH 2153 Calculus II (A) (With a grade of "C" or better) 3  
- MATH 2163 Calculus III (With a grade of "C" or better) 3

### Humanities (H)

Courses designated (H) 6

### Natural Sciences (N)

Must include one Laboratory Science (L) course

- CHEM 1414 General Chemistry for Engineers (LN) 4  
- CHEM 1515 Chemistry II (LN)  
- PHYS 2014 University Physics I (LN) (With a grade of "C" or better) 4  
- PHYS 2114 University Physics II (LN) (With a grade of "C" or better) 4

### Social & Behavioral Sciences (S)

Course designated (S) 3

**Hours Subtotal** 43

### Diversity (D) & International Dimension (I)

May be completed in any part of the degree plan

Select at least one Diversity (D) course

Select at least one International Dimension (I) course

### College/Departmental Requirements

#### Mathematics

MATH 2233 Differential Equations (With a grade of "C" or better) 3

#### Engineering

ENGR 1111 Introduction to Engineering 1

#### Engineering Science

ECEN 3213 Computer Based Systems in Engineering (With a grade of "C" or better) 3  
ENSC 2611 Electrical Fabrication Lab (With a grade of "C" or better) 1

### Computer Science

- CS 1113 Computer Science I (A) (With a grade of "C" or better) 3  
- CS 2351 Unix Programming 1  
- CS 2433 C/C++ Programming (With a grade of "C" or better) 3  
- CS 3653 Discrete Mathematics for Computer Science (With a grade of "C" or better) 3

### Electrical & Computer Engineering

- ECEN 2714 Fundamentals of Electric Circuits (With a grade of "C" or better) 4  
- ECEN 3233 Digital Logic Design (With a grade of "C" or better) 3

**Hours Subtotal** 25

### Major Requirements

#### Mathematics

- MATH 3013 Linear Algebra (A) (With a grade of "C" or better) 3

#### Electrical & Computer Engineering

- ECEN 3314 Electronic Devices and Applications 4  
- ECEN 3513 Signal Analysis 3  
- ECEN 3613 Applied Fields and Waves I 3  
- ECEN 3714 Network Analysis (With a grade of "C" or better) 4  
- ECEN 3903 Introduction to Semiconductor Devices (With a grade of "C" or better in ECEN 3903 or PHYS 3313) 3  
- PHYS 3313 Introduction to Semiconductor Device Physics

#### Computer Science

- CS 4323 Design and Implementation of Operating Systems I 3  
- ECEN 4013 Design of Engineering Systems 3  
- ECEN 4024 Capstone Design 4  
- ECEN 4213 Embedded Computer Systems Design 3  
- ECEN 4243 Computer Architecture 3  
- ECEN 4303 Digital Integrated Circuit Design 3  
- ECEN 4503 Applications of Probability and Statistics to Random Signals 3

#### Industrial Engineering & Management

- IEM 3503 Engineering Economic Analysis 3

#### ECEN Electives

Select two courses from the departmentally approved list and with advisor approval.

**Hours Subtotal** 6

### Controlled Electives

Select 3 hours of the following controlled electives: 3

- ENSC 2113 Statics

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ENSC 2123  Elementary Dynamics

ENSC 2143  Strength of Materials

ENSC 2213  Thermodynamics

Engineering courses 3000 level and above

Other courses such as MATH, CS, STAT, etc., may be approved by advisor

<table>
<thead>
<tr>
<th>Hours Subtotal</th>
<th>3</th>
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<tbody>
<tr>
<td>Total Hours</td>
<td>125</td>
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1

If a “B” or higher is not earned in ENGL 1113 Composition I or ENGL 1313 Critical Analysis and Writing I, then ENGL 1213 Composition II or ENGL 1413 Critical Analysis and Writing II is also required (per Academic Regulation 3.5 [http://catalog.okstate.edu/university-academic-regulations/]).

Graduation Requirements

1. A minimum GPA of 2.00 Technical GPA. The Technical GPA is calculated from all courses in the curriculum with a prefix belonging to the degree program, or substitutions for these courses.
2. A “C” or better in courses listed above as requiring a “C” or better.
3. The major engineering design experience, capstone course, is satisfied by ECEN 4013 Design of Engineering Systems and ECEN 4024 Capstone Design.

Additional State/OSU Requirements

• At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
• Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
• Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
• Degrees that follow this plan must be completed by the end of Summer 2028.