COMPUTER SYSTEMS OPTION

This option is offered within the following major(s):

- Computer Science - College of Engineering (http://catalog.oregonstate.edu/college-departments/engineering/school-electrical-engineering-computer-science/computer-science-ba-bs-hba-hbs/)

The Bachelor of Science (BS) and Honors Bachelor of Science (HBS) degrees for the Computer Systems Option of the Computer Science program are accredited by the Computing Accreditation Commission of ABET, http://www.ABET.org (http://www.abet.org/).

The Computer Systems option is for students who want to take up computer science as a career and seek an in-depth understanding of computer science as an academic discipline. This option provides excellent preparation for those who plan to work for companies developing systems software or embedded systems. It also provides excellent preparation for those who plan to pursue an MS or PhD in computer science.

Option Code: 334

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>COMM 111</td>
<td>*PUBLIC SPEAKING</td>
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<td>or COMM 114</td>
<td>*ARGUMENT AND CRITICAL DISCOURSE</td>
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<tr>
<td>CS 160</td>
<td>COMPUTER SCIENCE ORIENTATION</td>
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<td>CS 161</td>
<td>INTRODUCTION TO COMPUTER SCIENCE I</td>
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<td>CS 162</td>
<td>INTRODUCTION TO COMPUTER SCIENCE II</td>
<td>4-8</td>
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<tr>
<td>or CS 165</td>
<td>ACCELERATED INTRODUCTION TO COMPUTER SCIENCE</td>
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<tr>
<td>CS 261</td>
<td>DATA STRUCTURES</td>
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<tr>
<td>CS 290</td>
<td>WEB DEVELOPMENT</td>
<td>4</td>
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<tr>
<td>ECE 271</td>
<td>DIGITAL LOGIC DESIGN</td>
<td>4</td>
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<td>ECE 272</td>
<td>DIGITAL LOGIC DESIGN LABORATORY</td>
<td>4</td>
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<tr>
<td>MTH 231</td>
<td>ELEMENTS OF DISCRETE MATHEMATICS</td>
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<tr>
<td>or CS 225</td>
<td>DISCRETE STRUCTURES IN COMPUTER SCIENCE</td>
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<td>MTH 251</td>
<td>*DIFFERENTIAL CALCULUS</td>
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<td>MTH 252</td>
<td>INTEGRAL CALCULUS</td>
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<td>MTH 254</td>
<td>VECTOR CALCULUS</td>
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<tr>
<td>MTH 306</td>
<td>MATRIX AND POWER SERIES METHODS</td>
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<tr>
<td>PH 211</td>
<td>*GENERAL PHYSICS WITH CALCULUS</td>
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<td>PH 221</td>
<td>RECITATION FOR PHYSICS 211 ¹</td>
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<td>WR 121</td>
<td>*ENGLISH COMPOSITION</td>
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Additional Major Requirements

- PH 212   | *GENERAL PHYSICS WITH CALCULUS                     | 8       |
- PH 222   | RECITATION FOR PHYSICS 212                         | 2       |
- ST 314   | INTRODUCTION TO STATISTICS FOR ENGINEERS           | 3       |
- WR 214   | *WRITING IN BUSINESS                               | 3       |
- WR 327   | *TECHNICAL WRITING                                 | 3       |

Total Credits: 79-83

Code | Title                                              | Credits |
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<tr>
<td>CS 221</td>
<td>INTRODUCTION TO THEORY OF COMPUTATION</td>
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<tr>
<td>CS 235</td>
<td>ANALYSIS OF ALGORITHMS</td>
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<td>CS 340</td>
<td>INTRODUCTION TO DATABASES</td>
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<td>CS 344</td>
<td>OPERATING SYSTEMS I</td>
<td>4</td>
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Computer Science Restricted Electives 12

Select three to four from the following:

- CS 300–400 level courses (excluding CS 410 and courses required for Professional Program)
- CS 401-CS 406 (limited to 6 total credits)
- ECE 300–400 level courses (excluding courses required for Professional Program)
- MTH 351 INTRODUCTION TO NUMERICAL ANALYSIS
- MTH 440 COMPUTATIONAL NUMBER THEORY
- MTH 451 NUMERICAL LINEAR ALGEBRA
- MTH 452 NUMERICAL SOLUTION OF ORDINARY DIFFERENTIAL EQUATIONS
- MTH 453 NUMERICAL SOLUTION OF PARTIAL DIFFERENTIAL EQUATIONS

Others may apply with prior department approval

Baccalaureate Core

Biological Science Course

- 4

Difference, Power, and Discrimination Course

- 3-4

HHS 231 | *LIFETIME FITNESS FOR HEALTH

- 2

HHS 241 | *LIFETIME FITNESS (or any PAC course)

- 1

Perspectives Course (Cultural Diversity)

- 3-4

Perspectives Course (Literature & Arts)

- 3-4

Perspectives Course (Social Processes & Institutions)

- 3-4

Perspectives Course (Western Culture)

- 3-4

Synthesis Course (Contemporary Global Issues)

- 3-4

Unrestricted Electives

- 0-6

Total credits required for graduation 180

1

3 credits of PH 221, PH 222, and PH 223 can be substituted with a physical science course (3 cr. or higher).

* Baccalaureate Core Course (BCC)

& Writing Intensive Course (WIC)

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