# Bachelor of Science in COMPUTER SCIENCE

**with**

- Business Applications Option
- Statistical Applications Option
- Electronic Control Systems Option
- Technical Communications Option
- Engineering Applications Option
- Technical Communications Option
- Game Development Option
- No Option

### 2012-2013 Catalog

#### FALL SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
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<th>Sem</th>
<th>Grade</th>
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<tbody>
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<td>Fund. of Computer Science I</td>
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**Total Credits: 16**

#### SPRING SEMESTER

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**Total Credits: 15**

#### SOPHOMORE YEAR

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<td>Data Struct &amp; Algorithms</td>
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<td>CSCI 246</td>
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<td>Discrete Structures</td>
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<td>CSCI 255</td>
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<td>Intro. To Embedded Systems</td>
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<td>M 273</td>
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<td>Multivariable Calculus</td>
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**Total Credits: 17**

#### JUNIOR YEAR

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<td>CSCI 305</td>
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<td>Concepts of Prog. Languages</td>
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<td>ESOF 322</td>
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<td>Software Engineering</td>
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<td>STAT 332</td>
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**Total Credits: 13**

#### SENIOR YEAR

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<td>Theory of Computation</td>
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<tr>
<td>CSCI 466</td>
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<td>Networks</td>
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<td>WRIT 321</td>
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<td>***</td>
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<td>Professional Elective</td>
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**Total Credits: 14**

**Minimum credits for B.S. degree in Computer Science = 120**

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*Science electives must include a two-semester sequence of laboratory science (min. of 11 credits total): Either (1) BIOB 101/102, BIOB 117 & BIOE 172 plus 3 more science credits; (2) CHMY 141 w/lab 142, CHMY 143 w/lab 144 plus 3 more science credits; (3) GEO 101, GEO 257, GEO 259 plus 4 more science credits (4) PHSX 234, 235 w/lab 236, and PHSX 237 w/lab 238 (take the physics sequence for the Electronic Control Systems Option.)

**COMM 1226 Public Speaking or COMM 1216 Prin. of Speaking can replace COMM 2016. CSCI 486 Senior Project can replace internship. WRIT 325 Writing in the Sciences or WRIT 322 Advanced Business Writing can replace WRIT 321

**Professional electives are the classes that meet the Computer Science degree options. (Professional electives on other side.)

**Students in the Statistics Option need to take STAT 332 before beginning the courses in the option.

Official in catalog 2012-2013
### COMPUTER SCIENCE DEGREE OPTIONS

Professional Electives --- Junior and Senior Years

12 Credits for Each Option

#### Business Applications

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Fall</th>
<th>Spring</th>
<th>Sem/Gr</th>
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<tbody>
<tr>
<td>ACTG 201</td>
<td>Principles of Fin Acct</td>
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<tr>
<td>ACTG 202</td>
<td>Principles of Mang Acct</td>
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| Senior Year |  |  |  |
|-------------|-----------------|--------|
| * BMKT 325W | Principles of Marketing | 3 |  |
| * BGEN 235  | Business Law I | 3 |  |
| * BMGT 335W | Management and Organization | 3 |  |
| * BFIN 322  | Business Finance | 3 |  |

*select 2 courses out of 4

#### Electronic Control Systems

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Fall</th>
<th>Spring</th>
<th>Sem/Gr</th>
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<tbody>
<tr>
<td>PHSX 322</td>
<td>Electronics for Scientists (prereq PHSX 237)</td>
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<tr>
<td>EELE 201</td>
<td>Circuits I for Engineering (coreq PHSX 237)</td>
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<tr>
<td>** EELE 202</td>
<td>Circuits I for Engineering Lab (coreq EELE 201)</td>
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| Senior Year |  |  |  |
|-------------|-----------------|--------|
| * EELE 203  | Circuits II for Engineering (prereq EELE 201, 202 & M 274) | 4 |  |
| * EELE 261  | Intro. To Logic Circuits (prereq EELE 104, PHSX 322) | 3 |  |
| * EELE 317  | Electronics (prereq EELE 203 and PHSX 322) | 3 |  |
| * GEOP 446  | Applied Linear Systems (prereq EELE 203 or M 405 or PHSX 453) | 3 |  |

| Electric Circuits Sequence |  |  |  |
|----------------------------|-----------------|--------|
| EELE 203                   |  |  |  |
| ** EELE 202                |  |  |  |

| Electric Control Sequence |  |  |  |
|----------------------------|-----------------|--------|
| EELE 423                  | Process Instrumentation and Control (prereq EELE 201; EELE 202) | 3 |  |
| ** EELE 424                | Process Instrumentation and Control Lab(coreq EELE 423) | 1 |  |
| EELE 261                  | Intro. to Logic Circuits (prereq EELE 104, PHSX 322) | 3 |  |

| Microprocessor Sequence |  |  |  |
|-------------------------|-----------------|--------|
| * EELE 261              | Intro. to Logic Circuits (prereq EELE 104, PHSX 322) | 3 |  |
| EELE 465                | Microcontroller Applications (prereq EELE 261) (even years only) | 3 |  |

*select 1 course of 3; **Labs are optional; + take EELE 261 in Junior year and EELE 201 in Senior year.

#### Engineering Applications

<table>
<thead>
<tr>
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<tr>
<td>* EGEN 105</td>
<td>Introduction to General Engineering</td>
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<td>EGEN 201</td>
<td>Statics (prereq PHSX 234)</td>
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<td>EGEN 215</td>
<td>Introduction to Computer Aided Design &amp; Problem Solving</td>
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<td>* EGEN 202</td>
<td>Dynamics (prereq EGEN 201 &amp; M 172)</td>
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| Senior Year |  |  |  |
|-------------|----------------|--------|
| EGEN 305    | Mechanics of Materials (prereq EGEN 201 & M 172) | 3 |  |
| * EGEN 306  | Mechanics of Materials Lab | 1 |  |
| * EGEN 318  | Computer Applications for Engineering Design (prereq EGEN 215/305) | 2 |  |
| * ENGR 4150 | Engineering Computer Applications (even years only) | 3 |  |

* select 2 or more courses to reach a minimum of 12 elective credits within the option.
### Junior Year

<table>
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<th>Course</th>
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### Senior Year

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<td>STAT 422</td>
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<td>STAT 435</td>
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*select 3 courses out of 4*

### Technical Communication

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*only one may be used to satisfy GEN Ed 300-level writing requirement.*

*select 3 courses out of 9*

### Health Care Informatics

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### Senior Year

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*Select 3 courses of 8; student must have the approval of the student’s advisor & the HCI department*

### Game Development

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### Senior

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