# B.S. in Human-Computer Interaction

(120 credits)

## First Year

<table>
<thead>
<tr>
<th>1st Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 100 Roadmap to Computing</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101 English Composition: Introduction to Academic Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 101 or MATH 138 Foundations of Mathematics for the Liberal Arts or General Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>IS 117 Introduction to Website Development</td>
<td>3</td>
</tr>
<tr>
<td>FYS SEM First-Year Student Seminar</td>
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<tr>
<td><strong>Term Credits</strong></td>
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<table>
<thead>
<tr>
<th>2nd Semester</th>
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</thead>
<tbody>
<tr>
<td>IS 218 Building Web Applications</td>
<td>3</td>
</tr>
<tr>
<td>PSY 210 or R830 101 Introduction to Psychology or Principles Of Psychology I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 102 English Composition: Introduction to Writing for Research</td>
<td>3</td>
</tr>
<tr>
<td>IS 247 Designing the User Experience</td>
<td>3</td>
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<tr>
<td><strong>Term Credits</strong></td>
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## Second Year

<table>
<thead>
<tr>
<th>1st Semester</th>
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<tbody>
<tr>
<td>General Elective 1</td>
<td>3</td>
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<tr>
<td>Select one of the following:</td>
<td></td>
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<tr>
<td>AD 150 Color and Composition</td>
<td>3</td>
</tr>
<tr>
<td>R085 102 Design Fundamentals</td>
<td></td>
</tr>
<tr>
<td>R085 103 3-D Design Fund</td>
<td></td>
</tr>
<tr>
<td>R080 121 Intro To Drawing</td>
<td></td>
</tr>
<tr>
<td>MATH 105 Elementary Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>IS 350 Computers, Society and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>R830 102 Prin Of Psychology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
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<table>
<thead>
<tr>
<th>2nd Semester</th>
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<tbody>
<tr>
<td>HCI Specialization Elective 1</td>
<td>3</td>
</tr>
<tr>
<td>IS 375 Discovering User Needs for UX</td>
<td>3</td>
</tr>
<tr>
<td>R830 301 Stat Meth Cog &amp; Beh</td>
<td>4</td>
</tr>
<tr>
<td>R830 304 Cognitive Processes</td>
<td>3</td>
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<tr>
<td>YWCC 207 Computing &amp; Effective Com</td>
<td>1</td>
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<td><strong>Term Credits</strong></td>
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## Third Year

<table>
<thead>
<tr>
<th>1st Semester</th>
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</tr>
</thead>
<tbody>
<tr>
<td>IS 331 Database Design Management and Applications</td>
<td>3</td>
</tr>
<tr>
<td>IS 448 Usability &amp; Measuring UX</td>
<td>3</td>
</tr>
<tr>
<td>IE 355 or AD 201 Human Factors or Human Factors/Ergonomics</td>
<td>3</td>
</tr>
<tr>
<td>General Elective 2</td>
<td>3</td>
</tr>
<tr>
<td>IS 390 Requirements Analysis and Systems Design (General Elective 2)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Term Credits</strong></td>
<td><strong>15</strong></td>
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</tbody>
</table>
2nd Semester
General Elective 3
Select one of the following:
- History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)
General Elective 4
R830 302 Exp Meth Cog & Beh
COM 312 Oral Presentations
or COM 313 or Technical Writing
YWCC 307 Professional Dev in Computing

Term Credits 14

Fourth Year
1st Semester
General Elective 5
General Elective 6
HCI Specialization Elective 2
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)
IE 492 Engineering Management
or ENTR 210 or Introduction to Entrepreneurship

Term Credits 15

2nd Semester
IS 491 Senior Project - IS
or IT 491 or IT Capstone Project
General Elective 7
General Elective 8
HCI Specialization Elective 3
HCI Specialization Elective 4

Term Credits 15

Total Credits 120

1 If already taking a 300-level Humanities & History GER course as part of the HCI Specialization, then you may take a general elective here.

2 Independent Study (optionally leading to the Undergraduate Thesis Option): We encourage you to consider an independent study (IS 488) as part of your electives as juniors and seniors. You could then continue with an Undergraduate Thesis (IS 489), which optionally can substitute for IS 491 or IT 491. The thesis option is explained further on the Informatics Department web site. Please consult your advisor as early.

HCI Specializations:
Students choose, with Advisor approval a coherent sequence of 4 courses, chose from one of the HCI specializations given below.

Cognitive Design

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>STS 351</td>
<td>Minds and Machines</td>
<td></td>
</tr>
<tr>
<td>PSY 359</td>
<td>Foundations of Cyberpsychology</td>
<td></td>
</tr>
<tr>
<td>R830 103</td>
<td>Cognitive Science</td>
<td></td>
</tr>
<tr>
<td>R830 104</td>
<td>Cognitive Science II</td>
<td></td>
</tr>
<tr>
<td>R830 324</td>
<td>Psycho Of Adolescent</td>
<td></td>
</tr>
<tr>
<td>R830 335</td>
<td>Social Psychology</td>
<td></td>
</tr>
<tr>
<td>R830 346</td>
<td>Psychology Of Language</td>
<td></td>
</tr>
<tr>
<td>R830 354</td>
<td>Adult &amp; Aging</td>
<td></td>
</tr>
<tr>
<td>R830 371</td>
<td>Psychology &amp; Personality</td>
<td></td>
</tr>
<tr>
<td>R830 405</td>
<td>Psycho Of Emotion</td>
<td></td>
</tr>
<tr>
<td>R830 410</td>
<td>Perceptual Dev</td>
<td></td>
</tr>
</tbody>
</table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>R830 411</td>
<td>Intro To Cog Neurosc</td>
<td></td>
</tr>
<tr>
<td>R830 424</td>
<td>Health Psychology</td>
<td></td>
</tr>
<tr>
<td>R830 431</td>
<td>Media Psych</td>
<td></td>
</tr>
</tbody>
</table>

**Game Design and Production**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>IT 201</td>
<td>Information Design Techniques</td>
<td></td>
</tr>
<tr>
<td>IT 265</td>
<td>Game Architecture and Design</td>
<td></td>
</tr>
</tbody>
</table>

Select two of the following:

For students who want to focus on designing games in existing engines/development environments, consider these courses:

- IT 286 Foundations of Game Production
- IT 287 Advanced Game Production

For students who are more artistic, design or asset creation focused, consider these courses:

- IT 386 3D Modeling and Animation

For students who want to be challenged with C/C++ programming to develop their own 2D and 3D games, consider these courses:

- IT 266 Game Modification Development
- IT 276 Game Development

Students may also want to consider these interesting Digital Design courses:

- DD 275 History of Games
- DD 301 Acting Fundamentals for Animators

**Graphical Arts Design**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD 112</td>
<td>Communication in Art and Design - Digital Media</td>
<td>1</td>
</tr>
<tr>
<td>AD 150</td>
<td>Color and Composition</td>
<td></td>
</tr>
<tr>
<td>DD 284</td>
<td>Video and Animation</td>
<td></td>
</tr>
<tr>
<td>DD 321</td>
<td>Interactive and Reactive Environments</td>
<td></td>
</tr>
<tr>
<td>ID 203</td>
<td>Past, Present and Future of Design</td>
<td></td>
</tr>
<tr>
<td>R080 121</td>
<td>Intro To Drawing</td>
<td>1</td>
</tr>
<tr>
<td>R085 102</td>
<td>Design Fundamentals</td>
<td></td>
</tr>
<tr>
<td>R085 103</td>
<td>3-D Design Fund</td>
<td></td>
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</table>

Select four of the following, which were not taken to fulfill other requirements:

See the General Education Requirements. “Refer to the General Education Requirements for specific information for GER courses”