Cognitive Science Concentration

Program Director: Joseph Toscano, Ph.D.
Office Location: Tolentine Hall Rm M52
Telephone: (610) 519-4755
Website

About

The Cognitive Science Program offers a course of study in the interdisciplinary field of Cognitive Science, bringing together perspectives from cognitive psychology, computer science, philosophy, and biology to understand how intelligent systems function. An undergraduate concentration and an undergraduate minor are available to all students in undergraduate colleges of the University. The program is particularly well suited to students majoring in Psychology, Computing Sciences, Philosophy, and Cognitive & Behavioral Neuroscience.

Program: Cognitive Science
Type: Concentration

Concentration Required Courses (21 credits)

Program Notes:

- Students may take CSC 1010 to fulfill the CSC 1051 requirement.
- Special topics, research, and independent study electives (BIO 6409, BIO 6509, CSC 5900, CSC 5930, CSC 5993, PHI 2990, PHI 4990, PSY 2900, PSY 5900) require approval of the Cognitive Science Program.
- For courses that have prerequisites, Cognitive Science students should apply to have the prerequisites waived. Decisions will be made on a case-by-case basis by the course instructor, or in some cases, the Director of the Cognitive Science Program, after considering the particular student’s background. In most cases, it is expected that the prerequisites will be able to be waived.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CSC 1051</td>
<td>Algorithms &amp; Data Struc I</td>
<td>4</td>
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<tr>
<td></td>
<td>CSC 4500 or CSC 4510 or MSE 2400</td>
<td>3-4</td>
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<tr>
<td>PHI 4610</td>
<td>Philosophy of Mind</td>
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<td>PSY 4500</td>
<td>Cognitive Psychology</td>
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<tr>
<td>CGS 5900</td>
<td>Cognitive Science Seminar</td>
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<tr>
<td></td>
<td>Cognitive Science Concentration Electives</td>
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Category Descriptions

CSC 4500 or CSC 4510 or MSE 2400

Credits: 3-4
Choose one:

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<tbody>
<tr>
<td>CSC 4500</td>
<td>Artificial Intelligence</td>
<td>3</td>
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<tr>
<td>CSC 4510</td>
<td>Machine Learn&amp;Theory&amp;Evolution</td>
<td>3</td>
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<tr>
<td>MSE 2400</td>
<td>CSC:Evol Lrng Cmp Robtcs Agnts</td>
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**Cognitive Science Concentration Electives**

Credits: 6

Choose two Cognitive Science approved electives from the list below.

Other accepted electives which may be accepted include: BIO 6409, 7921, ECE 3420, 5445.

**Biology**

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<td>BIO 3015</td>
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<td>BIO 4605</td>
<td>Neurobiology</td>
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<td>BIO 6509</td>
<td>Directed Research</td>
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**Cognitive Science**

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<tr>
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<td>CGS 4000</td>
<td>Bilingualism</td>
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<td>CGS 5900</td>
<td>Cognitive Science Seminar</td>
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<tr>
<td>CGS 5910</td>
<td>Psychology of Language</td>
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<tr>
<td>CGS 5990</td>
<td>Special Topics</td>
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**Computer Science**

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<tr>
<td>CSC 4170</td>
<td>Theory of Computation</td>
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<td>CSC 4380</td>
<td>Info Visualization</td>
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<td>CSC 4730</td>
<td>Human Computer Interaction</td>
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<td>CSC 5930</td>
<td>Topics Computer Science</td>
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<td>CSC 5993</td>
<td>Independent Study</td>
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<td>MSE 2400</td>
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<td>ECE 2620</td>
<td>C++, Algorithms &amp; Data Struct</td>
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## Philosophy

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<td>Information Knowledge Inquiry</td>
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<tr>
<td>PHI 4990</td>
<td>Independent Study &amp; Research</td>
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## Psychological and Brain Sciences

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<td>PSY 2050</td>
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<td>PSY 3300</td>
<td>Perception</td>
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<td>Independent Research Project</td>
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## Spanish

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<tr>
<td>SPA 3214</td>
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