## Specialization in Computing

**For Psychology, Psychobiology, and Cognitive Science Majors**

Effective Fall 2017

The Specialization in Computing is a supplement to the Psychology, Psychobiology, and Cognitive Science majors. While not a major itself, it provides an extensive education in computer science and an introduction to its applications in cognitive psychology and neuroscience. Psychology, Psychobiology, and Cognitive Science majors may earn a Specialization in Computing by completing the following requirements (six courses total) with a grade of C or better in each course:

### Four (4) Courses from the following:
- Program in Computing 10A ........... Introduction to Programming
- Program in Computing 10B ........... Intermediate Programming
- Program in Computing 10C ........... Advanced Programming
- Program in Computing 15.............. Introduction to LISP and Symbolic Computation
- Program in Computing 16 ............. Python with Applications
- Program in Computing 20A ........... Principles of Java Language with Applications
- Program in Computing 30 .............. Machine Organization and Assembly Language Programming
- Program in Computing 40A ........... Introduction to Programming for Internet
- Program in Computing 60 .............. Data Structures and Algorithms
- Psychology 20A ......................MATLAB Programming for Behavioral Sciences
- Psychology 20B ......................Advanced Topics in MATLAB Programming for Behavioral Sciences

### Two (2) courses from the following:
- Psychology 85 ...........................Introduction to Cognitive Science
- Psychology 121 ...........................Laboratory in Cognitive Psychology
- Psychology 142H ......................Advanced Statistical Methods in Psychology (Honors)
- Psychology 186A ......................Cognitive Science Laboratory: Introduction to Theory and Simulation
- Psychology 186B ......................Cognitive Science Laboratory: Neural Networks
- Psychology 186C ......................Cognitive Science Laboratory: Psychophysical Theories and Methods
- Psychology 186D ......................Laboratory in Functional Neuroimaging
- Psychology 199* ......................Directed Individual Research and Study

Note that various majors offer the Specialization in Computing, but requirements may differ. The requirements listed are for Psychology, Psychobiology, and Cognitive Science majors only.

Courses for the major may be applied to the Specialization in Computing. Unlike minors or double majors, there is no cap on overlapping courses.

You must also satisfy all the requirements for a bachelor's degree in the specified major (Psychology, Psychobiology, and Cognitive Science). Students then graduate with a bachelor's degree in their major and a specialization in computing.

You may petition to declare the Specialization in Computing once you have major standing and have completed two programming courses from the first box. Petitions should be filed in the Psychology Advising Office, 1531 Franz. The Specialization in Computing will be indicated on your transcript and diploma after you complete all requirements.

*Project must be approved by the Vice Chair.