BS and BA in Brain and Cognitive Sciences

Assessment Plan

Program Learning Objectives (PLOs)

1. Knowledge: To gain mastery of our current understanding of perception, learning, language and cognition, how they develop, and how they are supported by underlying brain mechanisms

2. Research/ Scientific Method: To understand how to study such questions in a scientific way, designing research in the field and assessing data collected in such studies

3. Analytical/ Creative Thinking: To learn to think analytically about new problems and questions in human and animal behavior.

4. Experimentation: The ability to perform basic experiments in the laboratory using the range of methodology currently in use.

5. Communication: The ability to effectively communicate scientific knowledge, experimental results, and analyses in both oral and written formats.

6. Computation: The ability to utilize computational tools and public databases.

Curriculum Structure

All students complete a set of 5 foundation/ core theory courses, a lab course, a statistics course as well as an in-depth track of 4 related courses in specialization chosen by student. These courses develop students' abilities related to PLOs 1-6. Lab courses, which all satisfy a portion of the College Writing Requirement, develop students' writing ability. The lab course also requires students to apply statistics knowledge All students complete the capstone senior seminar, BCS 310 or 311, which also develops students' abilities related to PLOs 1-6.

The following table shows program learning objectives and course alignment.

PLO Course	1 knowledge	2 research	3 analytical/ creative thinking	4 experimentation	5 communication	6 computation
Computer programming						x

(from set)						
Symbolic systems (from set)	X		X			X
Bio 110 intro biology	X		X			
BCS 110 neural foundations	X		X			
BSC 111 foundations cog.sci.	X		X			
BCS 151 perception and action	X	X	X			
BCS 152 language and psycholingustics	X	X	X			
BCS 153 cognition	X	X	X			
STT212 appl. statistics			X	X		X
BCS lab (from set 203, 204, 205, 208)		X	X	X	X	
4 BCS upper electives (3 200 level, 3 form coherent track	X	X	X		X	
3 allied field from list of approved courses	X					
Senior Seminar BCS 310 or BCS 311 (honors)	X	X	X	X	X	

Assessment methods (frequency of method implementation)

Direct methods

- Assessment of student learning in BCS Senior Seminar 310 and 311 includes methods for assessing student learning for PLOs 1-6. Students work in teams to complete an analysis of published BCS articles. Analysis of the science literature requires students to use their BCS knowledge of theory, research/ scientific

method, experimentation, use of science literature databases, and well as analytical/ creative thinking abilities to critically evaluate research in the article. They are also asked to suggest methods for improving the research, which draws on their creativity. Student teams present work in a written report which is reviewed by peers and faculty; all students must revise the paper to improve their writing. Student teams also make a formal presentation which is reviewed by peers and faculty. (annual)

- Post-graduation placement in graduate school, medical school, or employment as reported in senior survey (percentage who attend post graduate programs, percent employed by type of employer) (annual)
- Success in professional schools and ultimate job placement as reported in alumni survey (every 5 years)
- Awards and Scholarships received by students (annual)
- Senior exit interviews in which students reflect on achievement of program learning objectives using semi-structured interview protocol (every other year, first in 2012).

Indirect methods

- Level of satisfaction with overall program, advising, and teaching quality ratings in senior survey (annual)
- Level of ability self-assessment for program learning outcomes in senior survey (annual) and alumni surveys (every 5 years)

Assessment Data Review

Assessment data will be reviewed annually by the undergraduate curriculum committee.

Recent Curriculum Changes based on Data Review

Implementation report summarizes curriculum changes in report to College Dean.