

DOCTOR OF PHILOSOPHY IN BRAIN AND COGNITIVE SCIENCES FIELDS

Department of Brain and Cognitive Sciences (<https://catalog.mit.edu/schools/science/brain-cognitive-sciences/#graduatetext>)

Program Requirements

Required Subjects

9.401	Tools for Robust Science	12
9.901	Responsible Conduct in Science	2

Core Subjects ¹ **24-36**

Must complete two subjects from the following list with a grade of B or higher:

9.011	Systems Neuroscience Core I
9.012	Cognitive Science
9.013[[]]	Molecular and Cellular Neuroscience Core II
9.014	Quantitative Methods and Computational Models in Neurosciences ²
9.015[[]]	Molecular and Cellular Neuroscience Core I
9.360	Neurobiology of Self

Statistics ³ **12**

Must complete one 12-unit subject with a grade of B or higher:

9.014	Quantitative Methods and Computational Models in Neurosciences
9.073[[]]	Statistics for Neuroscience Research
9.272[[]]	Topics in Neural Signal Processing
9.520[[]]	Statistical Learning Theory and Applications
9.521[[]]	Mathematical Statistics: a Non-Asymptotic Approach
12.444	MatLab, Statistics, Regression, Signal Processing
16.391	Statistics for Engineers and Scientists

Electives ⁴ **24**

Select at least two 12-unit graduate-level subjects relevant to student's research.

Professional Development ⁵

9.990	Professional Development	1
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Teaching and Research

9.919	Teaching Brain and Cognitive Sciences	24
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9.921	Research in Brain and Cognitive Sciences ⁶	222-330
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Thesis

9.941	Graduate Thesis Proposal	6
9.THG	Graduate Thesis	36

Total Units 363-483

¹ Harvard courses PSY2170, PSY2020 and MCB231 may also satisfy core requirement.

² 9.014 can be counted as a Core Requirement or a Statistics subject, but not both.

³ Harvard courses PSY 1950 Intermediate Statistical Analysis in Psychology and MCB 131 Computational Neuroscience can also be used to fulfill this requirement. Students can petition for a different course to fulfill this requirement by contacting the BCS graduate officer.

⁴ Students are encouraged to ask for advice from their advisor. All 12-unit BCS graduate subjects (<https://catalog.mit.edu/subjects/9>) (excluding the Core Subjects) are approved electives. In some cases, students may wish to replace one 12-unit subject with two 6-unit subjects; take a course in any other MIT department (<https://catalog.mit.edu/subjects>); count an upper-level undergraduate class as an elective; or enroll in a subject outside MIT (e.g., Harvard, BU, etc); these exceptions require advance approval of the BCS graduate officer. An additional statistics subject, beyond that used to fulfill the Statistics requirement, can be used to meet one Elective subject requirement.

⁵ Students must participate in two department-approved professional development activities, registering for 9.990 during each term of participation. One credit unit will be awarded only upon completion of two activities. A list of pre-approved professional development activities is available on the BCS website. Students may also petition other professional development activities.

⁶ Research units will vary depending on how long the student remains in the program. After the fourth year of the program, students will register for 36 units of research each semester.