

Certificate in Neuroscience

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The undergraduate Certificate Program in Neuroscience is an interdisciplinary program requiring 20 credits of training in Neuroscience. The Program provides a group of related courses capped by a research experience. The Program is likely to be of particular interest to students who want to pursue graduate or professional training, but it is intended to appeal to any student interested in Neuroscience.

Courses taken for the certificate in the lower division (1000 and 2000 level) may satisfy general education requirements (that is, breadth requirements), if they are approved general education courses. Courses in the upper division (3000 level and above) may satisfy requirements for the student's major, consistently with the major's requirements. All required courses must be completed with a "B-" average or higher. Pass/Fail grades do not count.

Most courses required by the Certificate Program in Neuroscience have prerequisites. Some students may satisfy prerequisites by virtue of their prior curriculum. When this is not the case, students are responsible for satisfying the prerequisites.

Requirements -

The two entry level courses:		
BIOL 1831	Introductory Biology: From Molecules To Organisms ¹	5
or BIOL 1012	General Biology	
or BIOL 1102	Human Biology	
PSYCH 2211	Introduction To Biological Psychology	3
Select one of the following statistics courses:		3
BIOL 4122	Biometry	
MATH 1320	Applied Statistics I	
PSYCH 2201	Psychological Statistics	
SOC 3220	Social Statistics	
Electives		
Select two of the following: ^{+ 2}		6
BIOL 3102	Animal Behavior	
BIOL 4822	Introduction To Neuroscience	
CHEM 4712	Biochemistry	
CMP SCI 4300	Introduction To Artificial Intelligence	
CMP SCI 4340	Introduction to Machine Learning	
PHIL 2280	Minds, Brains, And Machines	
PHIL 3378	Philosophy of Mind	
PHIL 4478	Topics In Philosophy Of Mind	
PHIL 4479	Philosophy Of Cognitive Science	
PHYSICS 4347	Biophysics Of Imaging	
PSYCH 4300	Introduction To Psychopharmacology: Drugs And Mental Illness	

PSYCH 4314	Behavioral Neuroscience	
PSYCH 4330	Hormones, The Brain And Behavior	
PSYCH 4349	Human Learning And Memory	
PSYCH 4356	Cognitive Processes	
PSYCH 4372	Introduction to Social Neuroscience	
Select at least 3 credits from two one or more semesters of research experience ³		3
BIOL 4905	Research	
CHEM 3905	Chemical Research	
CMP SCI 4880	Individual Studies	
PHIL 4450	Special Readings In Philosophy	
PHYSICS 3390	Research	
PSYCH 3390	Directed Studies	
Total Hours		20

BIOL 1831 is strongly recommended, especially for those considering taking BIOL 4822 Introduction to Neurosciences towards their Neuroscience Certificate (BIOL 1831 is a prerequisite for BIOL 4822)”

^{1,2} At least one elective must be taken outside the student’s major

^{2,3} This requires completion of a Directed Research Assistantship with a Neuroscience faculty member within any of the participating departments. The research project must be approved in advance by the undergraduate advisor with the assistance of a committee of Neuroscience faculty. It is expected that this research will lead to a presentation of the research (**e.g.**, at the UM-St. Louis Neuroscience seminar ~~and~~ **or** the Undergraduate Research Symposium).

Sign-offs from other departments affected by this proposal

Department	Contact Person	Phone #	Objections
S007050	George Taylor	5397	No
Rationale	Adding a relevant course to the list of electives, streamline the requirement for the research component.		