

Certificate in Neuroscience

The Certificate in Neuroscience will provide students the opportunity to pursue the many neuroscience related disciplines: brain imaging, molecular neuroscience, cognitive neuroscience, behavioral neuroscience, bio-engineering, clinical neuroscience, developmental neuroscience, and neuropsychology. The certificate will prepare students to work in neuroscience related jobs and disciplines, both in research and industry. These areas would include but are not limited to medicine, neuro-rehabilitation, occupational therapy, clinical therapists, physical therapy, forensics, biotechnology industry, hospitals, science writing and science education.

Requirements

Twelve credit hours are required for completion of the certificate. At least 6 hours must be at the 3000-level or above. A maximum of 6 hours from a department may be applied to the 12 hour requirement. All grades must be "S" or "C-" or better. Grades of "U" or "D+" or below will not be accepted. A maximum of 3 hours from problems/readings and/or internship sections may be applied and the student must demonstrate that the experiential learning was related to neuroscience. All certificate coursework must be completed at the University of Missouri-Columbia.

A certificate consists of at least 12 credits; at least 12 credits must be taken in MU course work. Students must meet the minimum GPA requirements for a certificate, which in no case can be lower than 2.0. In addition, a student cannot receive a grade lower than a C- in any course applied towards a certificate in the College. For more information, please see Requirements for an Optional Certificate (<http://catalog.missouri.edu/collegeofartsandscience/#requirementsforanoptionalcertificate>).

Bioengineering

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| BME 2017 | World of Neuroscience | 1 |
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Biological Sciences

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| BIO_SC 2017 | World of Neuroscience | 1 |
| BIO_SC 2020 | How the Brain Works | 1 |
| BIO_SC 3700 | Human Physiology | 5 |
| BIO_SC 4500 | Neurobiology | 3 |
| BIO_SC 4590 | Computational Neuroscience | 4 |
| BIO_SC 4640 | Behavioral Biology | 3-4 |

Biomedical Engineering

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|--------------|----------------|---|
| BIOL_EN 4070 | Bioelectricity | 3 |
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Computer Science

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| CMP_SC 2017 | World of Neuroscience | 1 |
| CMP_SC 4540 | Neural Models and Machine Learning | 3 |
| CMP_SC 4590 | Computational Neuroscience | 4 |
| CMP_SC 4730 | Building Intelligent Robots | 4 |

Electrical & Computer Engineering

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| ECE 2001 | Experimental Course | 1-99 |
| ECE 2017 | World of Neuroscience | 1 |
| ECE 4590 | Computational Neuroscience | 4 |

Electrical Engineering

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| BIOL_EN 4075 | Brain Signals and Brain Machine Interfaces (Electrical & Computer Engineering) | 3 |
| BIOL_EN 2017 | World of Neuroscience | 1 |

Medical School

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| MPP 3202 | Elements of Physiology | 5 |
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| MPP 4202 | Medical Physiology | 4 |
| MPP 4204 | Medical Pharmacology | 4 |

Psychological Sciences

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| PSYCH 2017 | World of Neuroscience | 1 |
| PSYCH 2110 | Learning, Memory, and Cognition | 3 |
| PSYCH 2210 | Mind, Brain, and Behavior | 3 |
| PSYCH 2220 | Drugs and Behavior | 3 |
| PSYCH 3140 | Cognitive Psychology | 3 |
| PSYCH 3150 | Human Memory | 3 |
| PSYCH 3160 | Perception and Thought | 3 |
| PSYCH 3511 | Emotion Regulation and the Brain | 3 |
| PSYCH 3890 | Music and the Mind | 3 |
| PSYCH 4110 | Perception | 3 |
| PSYCH 4210 | Physiological Psychology | 3 |
| PSYCH 4240 | Cognitive Neuroscience | 3 |
| PSYCH 4561 | Psychosis and the Brain | 3 |
| PSYCH 4564 | Psychobiology of Sex and Gender | 3 |
| PSYCH 4570 | Pediatric Neuropsychology | 3 |
| PSYCH 4973W | Human Cognition Capstone - Writing Intensive | 3 |
| PSYCH 4974W | Psychology of Art Capstone - Writing Intensive | 3 |
| PSYCH 4986W | Perception and Action Capstone - Writing Intensive | 3 |

Speech, Language and Hearing Sciences

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| SLHS 3890 | Music and the Mind | 3 |
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