NRSC - NEUROSCIENCE (NRSC)

NRSC 201/VIBS 201 History of Neuroscience

Credit 1. 1 Lecture Hour. Wide spectrum of neuroscience discovery beginning at the turn of the 20th Century; emphasis on key discoveries and their rationale, experimental design, experimental methods, major findings and interpretation of results. **Prerequisites:** Sophomore classification. **Cross Listing:** VIBS 201/NRSC 201.

NRSC 289 Special Topics in...

Credits 1 to 4. 1 to 4 Lecture Hours. 0 to 4 Lab Hours. Selected topics in an identified area of neuroscience. May be repeated for credit. **Prerequisite:** Approval of instructor.

NRSC 401/VIBS 401 Developmental Neurotoxicology

Credits 3. 3 Lecture Hours. Effects of exposure to toxic substances on the developing nervous system; content to include mechanisms of toxicity of substances potentially devastating to the developing nervous system including lead, mercury and other heavy metals, alcohol, nicotine (smoking), pesticides, flame retardants, and others. **Prerequisites:** Grade of C or better in CHEM 258 or CHEM 228; junior or senior classification; VIBS 277 or NRSC 277 recommended. **Cross Listing:** VIBS 401/NRSC 401.

NRSC 407/VIBS 407 Core Ideas in Neuroscience

Credits 2. 2 Lecture Hours. General overview of selected core ideas across the full spectrum of neuroscience. **Prerequisite:** Junior or senior classification; background in science courses recommended. **Cross Listing:** VIBS 407/NRSC 407.

NRSC 428/BIOL 428 Cellular Neuroscience

Credits 3. 3 Lecture Hours. Cell biology, molecular biology and biophysics of neurons as it pertains to their fundamental role in the physiological basis of behavior; study of how neurons create, maintain and exploit electrical signals for information coding and transmission; principles of electrical and chemical signaling between neurons, and the role of intracellular signaling for signal modulation and synaptic plasticity; exploration of a broad range of state-of-the-art molecular tools currently used to study the nervous system, and the cellular basis for many of the most common neurological disorders affecting humans as well as the strategies and therapies for their treatment. **Prerequisites:** BIOL 213 and PSYC 235, or approval of instructor. **Cross Listing:** BIOL 428.

NRSC 434/BIOL 434 Regulatory and Behavioral Neuroscience

Credits 3. 3 Lecture Hours. Cell biology and biophysics of neurons; functional organization of the vertebrate nervous system; physiological basis of behavior. **Prerequisites:** BIOL 213; BIOL 319, BIOL 320, BIOL 388, BIOL 413, or PBSI 235, or approval of instructor. **Cross Listing:** BIOL 434/NRSC 434.

NRSC 444/BIOL 444 Neural Development

Credits 3. 3 Lecture Hours. Cellular and molecular mechanisms of nervous system development including neural induction and the basis of complex behaviors; use of a wide range of model organisms with a specific emphasis on vertebrate nervous system development. **Prerequisites:** BIOL 213, BIOL 319, BIOL 320, BIOL 413, BIOL 388, or PBSI 235. **Cross Listing:** BIOL 444/NRSC 444.

NRSC 485 Directed Studies

Credits 0 to 3. 0 to 3 Other Hours. Directed readings or research problems in selected areas designed to supplement existing course offerings conducted under the direction of a member of the Faculty of Neuroscience. May be repeated for credit. **Prerequisite:** Approval of member of the faculty of neuroscience.

NRSC 489 Special Topics in...

Credits 1 to 4. 1 to 4 Lecture Hours. Selected topics in an identified area of neuroscience. May be repeated for credit. **Prerequisite:** Approval of instructor.

NRSC 491 Research

Credits 0 to 4. 0 to 4 Other Hours. Research conducted under the direction of a member of the Faculty of Neuroscience. May be repeated for credit. **Prerequisites:** Junior or senior classification and approval of member of the faculty of neuroscience.