The Neuroscience and Behavior major provides a strong background in the neural underpinnings of behavior and cognition. It is intended for students who plan to pursue a research career in neuroscience or a related discipline. Students electing this major are exposed to basic courses in biology, psychology and statistics, and to advanced courses in neuroscience and behavior. Majors must choose one of two areas of concentration. The behavior concentration places greater emphasis on behavioral and systems neuroscience, while the cellular concentration places greater emphasis on cellular and molecular neuroscience.

All majors engage in two semesters of independent research during the senior year while taking the Senior Research Seminar. In the junior year, majors must begin developing a plan for the senior research project. There is a meeting for junior majors during the spring semester to begin this process.

**Student Learning Goals**

- Students graduating with a major in Neuroscience and Behavior should be able to attain the following outcomes:
- Acquire a strong intellectual foundation in neuroscience.
- Develop competence in the interpretation and evaluation of neuroscience research.
- Understand the role of experimentation in neuroscience.
- Learn basic methods of experimental design and hypothesis testing.
- Acquire effective oral presentation skills.
- Demonstrate a capability to write a scientific paper.
- Understand statistical approaches to the analysis of data.

**Student Learning Outcomes**

Upon successfully completing the major, students should have the ability to

- Discuss neuroscience phenomena from many different levels of organization (e.g., explain how the destruction of myelin in people with multiple sclerosis leads to cognitive and motor deficits);
- Describe the basic features of nervous system development, organization, signaling, integration, and higher-level processing;
- Explain the neural basis of sensory-motor integration, learning and the generation of complex behaviors;
- Conceive of, implement, and present an original research project;
- Generate a testable hypothesis and develop a controlled experimental design;
- Perform modern scientific measurement techniques;
- Write an original research paper.

To elect the major in Neuroscience and Behavior, a student must have completed these courses by the end of the sophomore year with an average grade of B- or better in the four Biology courses, an average grade of B- or better in the three Chemistry courses, and a grade of B- or better in the Psychology course.
Additional Courses Required for the Behavioral Concentration Only

- PSYC BC1107 Psychology of Learning 4.5
  - PSYC BC1106 and Psychology of Learning Laboratory
- BIOL BC2280 Animal Behavior 3

Additional Courses Required for the Cellular Concentration Only

- BIOL BC2100 Molecular and Mendelian Genetics 3
- BIOL BC3310 Cell Biology 3

Select one of the following: 3

- BIOL BC2280 Laboratory in Cell Biology
- BIOL BC3303 Laboratory in Molecular Genetics
- BIOL BC3305 Project Laboratory in Molecular Genetics
- BIOL BC3311 Laboratory in Cell Biology

**NSBV BC1001 INTRODUCTION TO NEUROSCIENCE. 3 points.**

This course is required for all the other courses offered in Neuroscience and Behavior. The course introduces students to the anatomy and physiology of the nervous system. The topics include the biological structure of the nervous system and its different cell types, the basis of the action potential, principles of neurotransmission, neuronal basis of behavior, sleep/wake cycles, and basic aspects of clinical neuroscience.

**NSBV BC2002 Statistics and Experimental Design. 4 points.**

This course is for students interested in learning how to conduct scientific research. They will learn how to (i) design well-controlled experiments and identify “quack” science; (ii) organize, summarize and illustrate data, (iii) analyze different types of data; and (iv) interpret the results of statistical tests.

**NSBV BC2154 Hormones and Behavior. 3 points.**

Prerequisites: BC1001 or BIOL BC1101, BC1102, or permission of the instructor. Enrollment limited to 45 students.

This class explores the complex interactions among genetics, hormones, environment, experience, and behavior. Topics covered include the endocrine system, sexual development, reproductive behavior, and social interactions such as affiliation, aggression, parenting, as well as homeostasis, biological rhythms, stress, memory, and mood.

**NSBV BC2180 Neurodevelopmental Processes and Cognitive/Behavioral Disorders. 3 points.**

Not offered during 2020-21 academic year.

Prerequisites: BC1118/1119, BC3177, BC3380, or BIOL BC3362.

Enrollment limited to 30 students.

Explores the evolution of disorders affecting children due to some impairment in the brain or nervous system. Constitutional vulnerabilities demonstrate that nervous system injury varies as a function of neurodevelopmental stage. Disorders to be studied include those impacting language, hearing, vision, movement, mood and emotion, and learning.

**NSBV BC3001 SYSTEMS AND BEHAVIORAL NEUROSCIENCE. 3 points.**

Not offered during 2020-21 academic year.

**NSBV BC3099 INDEPENDENT STUDY. 0 points.**

This course can be worth 1 to 4 credits (each credit is equivalent to approximately three hours of work per week) and requires a Barnard faculty as a mentor who has to provide written approval. The course entails a scholarly component; for this, a research report is required by the end of the term. The research report can take the form that best suits the nature of the project. The course will be taken for a letter grade, regardless of whether the student chooses 1, 2, 3, or 4 credits.

**NSBV BC2154 Transformative Landmarks in Neuroscience. 4 points.**

Not offered during 2020-21 academic year.

Modern neuroscience incorporates topics from molecular neurobiology to cognition. Cognate disciplines include psychology, biology, biochemistry, chemistry, neuroparmacology, neurology and psychiatry, physics, computational science. We review neuroscience landmarks through readings of scientific publications, news reports, and controversies surrounding apparently transformative research, and contemplate contemporary viewpoints that have the benefit of hindsight.
NSBV BC3376 Psychobiology of Infant Development. 4 points.
Prerequisites: BC1001 and BC1128/1129 Developmental (lab and lecture taken together) or BC1129 (only lecture). Or permission of the instructor. Enrollment limited to 15 students.
Analysis of human development during the fetal period and early infancy. Review of effects of environmental factors on perinatal perceptual, cognitive, sensory-motor, and neurobehavioral capacities, with emphasis on critical conditions involved in both normal and abnormal brain development. Other topics include acute and long term effects of toxic exposures (stress, smoking, and alcohol) during pregnancy, and interaction of genes and the environment in shaping the developing brain of 'high-risk' infants, including premature infants and those at risk for Sudden Infant Death Syndrome.

Fall 2020: NSBV BC3376
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<th>Course Number</th>
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<th>Instructor</th>
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<td>T 4:10pm - 6:00pm</td>
<td>William Fifer</td>
<td>4</td>
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NSBV BC3377 Adolescent Neurobehavioral Development. 4 points.
Not offered during 2020-21 academic year.
Prerequisites: PSYC BC1001 Introduction to Psychology, or its equivalent; and permission of the instructor.
This seminar will explore neurobehavioral development throughout pubertal and adolescent stages of development. Specifically, topics will include how neuroendocrine changes induce pubertal onset, structural and functional changes in the adolescent brain, and how these developmental changes influence normal and abnormal psychophysiological processes. Students who complete this seminar will learn to: 1) demonstrate experimental methods used in developmental psychobiological research; 2) demonstrate the impact of structural and functional changes in the nervous system on the physiology and behavior of an individual; 3) critically read and interpret the primary research literature and discuss the strengths and weaknesses of experimental results; 4) conduct literature searches and synthesize these searches in to a comprehensive literature review; and 5) write a scientific literature review.

Fall 2020: NSBV BC3377
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<th>Course Number</th>
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<td>Russell Romeo</td>
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NSBV BC3380 Cognitive Neuroscience. 4 points.
Prerequisites: BC1001 and permission of the instructor. Enrollment limited to 20 students.
Exposition of research and theory in neuroscience with an emphasis on the use of neural imaging techniques (EEG, evoked potentials, MEG, PET, fMRI) for exploring sensation, perception, and cognition in the healthy, intact brain.

NSBV BC3383 Neuropharmacology and Behavior. 4 points.
Prerequisites: BC1001 and one of the following: BC1115, BC1119, or BIOL BC3280. Permission of the instructor is required. Enrollment limited to 20 students.
Basic principles of the study of drugs that influence the neural systems and induce changes in behavior. Molecular, biochemical and behavioral characterization of psychotropic drugs: stimulants, sedative-hypnotics, anxiolytics, alcohol, hallucinogens, and opiates. Etiology and treatment of psychological and neurological disorders.
NSBV BC3396 Topics in Systems Neuroscience: The Receptive Field. 4 points.
Prerequisites: (Psyc BC1119) or (Biol BC3362)
How should we think about the brain? How can we simplify and interpret its dizzying complexities? And specifically, what conceptual frameworks are useful in constraining our interpretations of neuronal activity? This seminar – Topics in Systems Neuroscience – is aimed at defining and dissecting the ideas and models that guide our thinking about the brain. This semester the focus will be on the concept of the receptive field. We will examine how this idea has been applied across brain regions and sensory modalities and has been examined with experimental/computational approaches. Attention will be paid to both the historical background and contemporary views. The receptive field has provided a useful conceptual framework since the early 20th century. As developing the traditional concept of a sensory receptive field, we will critically examine the limits of this concept. This potentially simplifying concept underlying brain function also contains open questions regarding perception, cognition and behavior. By the end of the course we will develop a richer understanding of how conceptual frameworks, in general, can help (and hurt!) but ultimately hone our thinking.

Spring 2020: NSBV BC3396
Course Number  Section/Call Number  Times/Location  Instructor  Points  Enrollment
NSBV 3396  002/000280  T 9:00am - 10:50am 318 Milbank Hall  Andrew Fink  4  3/20

NSBV BC3397 Neural Modulation. 4 points.
Prerequisites: BC1001 and permission of the instructor. Enrollment determined at first class meeting.
Excitatory and inhibitory neurotransmission is often influenced and altered by neuromodulators such as dopamine, acetylcholine, and serotonin. Imbalances in neuromodulation are implicated in many psychiatric disorders. This course will assess the role of neuromodulation under normal circumstances and how dysfunction in neuromodulation can lead to psychiatric disorders. This course will draw from groundbreaking primary literature and review articles published in the field of neuroscience.

NSBV BC3398 Psychobiology of Sleep. 4 points.
Prerequisites: PSYC BC 1001, or equivalent, and permission of instructor. Enrollment limited to 20 students.
This seminar will explore sleep and circadian rhythms, emphasizing how these factors and their disruption influence health, function, and well-being. Topics will include the physiological and neurobiological generation of sleep and circadian rhythms, and the interaction between these systems with cognitive, behavioral, endocrine, metabolic, and mood/psychiatric variables in humans.

Spring 2020: NSBV BC3398
Course Number  Section/Call Number  Times/Location  Instructor  Points  Enrollment
NSBV 3398  001/000281  T 6:10pm - 8:00pm
501 Diana Center  Ari Shechter  4  11/12

NSBV BC3405 The Neuroscience of Trauma: Theory, Research and Treatment. 4 points.
Prerequisites: PSYBC1119
This course provides a comprehensive overview of theoretical models and research relevant to the neurobiology, neurophysiology, neuroanatomy and neurodevelopmental processes underlying psychological trauma. Cognitive, emotional and behavioral symptoms associated with post traumatic experience are examined from a neuroscience perspective. Neurotherapeutic treatment interventions are reviewed and critiqued as models of applied clinical neuroscience.

Spring 2020: NSBV BC3405
Course Number  Section/Call Number  Times/Location  Instructor  Points  Enrollment
NSBV 3405  001/00736  W 12:10pm - 2:00pm
306 Milbank Hall  E'mett McCaskill  4  19/16

NSBV BC3593 Senior Research Seminar: Neuroscience and Behavior. 4 points.
Prerequisites: Open to senior Neuroscience and Behavior majors.
Permission of the instructor. This is a year-long course. By the end of the spring semester program planning period during junior year, majors should identify the lab they will be working in during their senior year. Discussion and conferences on a research project culminate in a written and oral senior thesis. Each project must be supervised by a scientist working at Barnard or at another local institution. Successful completion of the seminar substitutes for the major examination.

Fall 2020: NSBV BC3593
Course Number  Section/Call Number  Times/Location  Instructor  Points  Enrollment
NSBV 3593  001/00133  Th 2:10pm - 4:00pm
Room TBA  Peter Balsam  4  9/20
NSBV 3593  002/00134  Th 2:10pm - 4:00pm
Room TBA  Elizabeth Bauer  4  7/20
NSBV 3593  003/00135  T 4:10pm - 6:00pm
Room TBA  Maria de la Paz Fernandez  4  19/20

NSBV BC3594 Senior Research Seminar: Neuroscience and Behavior. 4 points.
Prerequisites: Open to senior Neuroscience and Behavior majors.
Permission of the instructor. This is a year-long course. By the end of the spring semester program planning period during junior year, majors should identify the lab they will be working in during their senior year. Discussion and conferences on a research project culminate in a written and oral senior thesis. Each project must be supervised by a scientist working at Barnard or at another local institution. Successful completion of the seminar substitutes for the major examination.

Spring 2020: NSBV BC3594
Course Number  Section/Call Number  Times/Location  Instructor  Points  Enrollment
NSBV 3594  011/00283  M 1:10pm - 3:00pm
214 Milbank Hall  John Glendinning  4  14/20
NSBV 3594  012/00284  M 2:10pm - 4:00pm
306 Milbank Hall  Rae Silver  4  10/20
NSBV 3594  013/00285  T 4:10pm - 6:00pm
318 Milbank Hall  Russell Romeo  4  13/20
Cross-Listed Courses

Biological Sciences (Barnard)

BIOL BC1500 Introduction to Organismal and Evolutionary Biology. 3 points.

Prerequisites: This course is suitable for majors & fulfillment of pre-health requirements. A high school biology background or equivalent preparation is highly recommended. For those without this background seeking to major in biology, BIOL BC1002 & BIOL BC1012 are recommended in the fall of their freshmen year, followed by the year-long 1500-level lecture & lab sequence. BIOL BC1500 & BIOL BC1502 do not have to be taken in a fall to spring sequence.

Detailed introduction to biological phenomena above the cellular level; development, anatomy, and physiology of plants and animals; physiological, population, behavioral, and community ecology; evolutionary theory; analysis of micro-evolutionary events; and systematics.

BIOL BC1501 Introductory Lab in Organismal and Evolutionary Biology. 2 points.

Prerequisites: BIOL BC1500 lecture is a pre- or co-requisite (preferred). Students must also enroll for a section of BIOL BC1511 recitation. A high school biology background or equivalent preparation is highly recommended. This course is suitable for fulfillment of biology major and pre-health requirements. Enrollment is limited to 16 students per section.

A laboratory-based introduction to the major groups of living organisms; anatomy, physiology, evolution, and systematics; and laboratory techniques for studying and comparing functional adaptations.

Fall 2020: BIOL BC1501

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<td>Jessica Goldstein, James Casey, Henry Truong</td>
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</table>
BIOL BC1502 Introduction to Cell and Molecular Biology. 3 points.
Prerequisites: BIOL BC1002 or equivalent preparation. Course suitable for fulfillment of premedical requirements. Together with BIOL BC1500 this course is part of a yearlong introductory sequence. BIOL BC1500 and BIOL BC1502 do not need to be taken in sequence. Detailed introduction to cellular and subcellular biology: cell structures and functions, energy metabolism, biogenesis of cell components, biology of inheritance, molecular genetics, regulation of gene expression, and genes in development.

BIOL BC1503 Introductory Lab in Cell and Molecular Biology. 2 points.
Prerequisites: BIOL BC1502 lecture is a pre- or co-requisite (preferred). Students must also enroll for a section of BIOL BC1513 recitation. A laboratory-based introduction to cell and molecular biology. Both classic and modern approaches are used to investigate principles of heredity as well as the structure and function of cells and their molecular components. Lab exercises introduce practical techniques and data analysis.

BIOL BC2100 Molecular and Mendelian Genetics. 3 points.
Prerequisites: BIOL BC1500, BIOL BC1501, BIOL BC1502, BIOL BC1503 or the equivalent. This course is a pre-requisite for most 3000-level courses. Mendelian and molecular genetics of both eukaryotes and prokaryotes, with an emphasis on human genetics. Topics include segregation, recombination and linkage maps, cytogenetics, gene structure and function, mutation, molecular aspects of gene expression and regulation, genetic components of cancer, and genome studies.

BIOL BC2272 Ecology. 3 points.
Prerequisites: BIOL BC1500, BIOL BC1501, BIOL BC1502, BIOL BC1503 or the equivalent. This course is a pre- or co-requisite for BIOL BC2873 Laboratory in Ecology. Introduction to evolutionary ecology; life history strategies, population growth, competition, predator-prey interactions, population regulation, species diversity, community organization, and biogeography. Lectures integrate theory with empirical studies.

BIOL BC2280 Animal Behavior. 3 points.
Prerequisites: BIOL BC1500, BIOL BC1501, BIOL BC1502, and BIOL BC1503 or the equivalent. This course is a pre-requisite for BIOL BC2281 Laboratory in Animal Behavior. This introduction to animal behavior takes an integrative approach to understand the physiological and genetic basis of behavior, the ecological context of behavior, and the evolutionary consequences of behavior. This course focuses on the process of scientific research, including current research approaches in animal behavior and practical applications of these findings.

BIOL BC2286 Statistics and Research Design. 3 points.
Not offered during 2020-21 academic year.

Prerequisites: BIOL BC1500, BIOL BC1501, BIOL BC1502, BIOL BC1503 or the equivalent, college-level algebra or the equivalent. General Educational Requirement: Quantitative and Deductive Reasoning (QUA) Introduction to basic principles of statistics and experimental design. Topics include common statistical procedure, analysis of data, sampling populations, power analysis, and the design of experiments. This course differs from traditional statistics courses by explicitly integrating statistics into research process.
BIOL BC3303 Laboratory in Molecular Biology. 3 points.
Prerequisites: BIOL BC2100 (which can be taken as a pre- or co-requisite).
Enrollment is limited to 16; must attend first lab to hold place.
Introduction to the use of molecular techniques to answer questions about subcellular biological phenomena. Techniques include isolation of genomic and plasmid DNAs, restriction enzyme analysis, DNA and protein electrophoresis, bacterial transformation, and plasmid subcloning.

Spring 2020: BIOL BC3303

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<td>Rishita Shah</td>
<td>3</td>
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BIOL BC3310 Cell Biology. 3 points.
Prerequisites: (BIOL BC1500)(BIOL BC1501)(BIOL BC1502)(BIOL BC1503) and BIOL BC2100 or equivalent.
This course explores the components, systems, and regulatory mechanisms involved in eukaryotic cellular function. Topics include: signal transduction, translational and protein quality control, organelar and cytoskeletal dynamics, and some coordinated responses such as proliferation and programmed cell death. Throughout the course we will see how general cell biology can be specialized to achieve specific cellular functions through regulation of the basic machinery. We will also explore the cellular and molecular bases for a variety of human pathologies, with an emphasis on cancer. In addition to lecture, we will spend some time discussing the material, including selected articles from the primary literature, and learning through group presentations.

Fall 2020: BIOL BC3310

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BIOL BC3311 Laboratory in Cell Biology. 3 points.
Prerequisites: BIOL BC3310 (which can be taken as a pre- or co-requisite). Enrollment is limited to 16; must attend first lab to hold place.
Introduction to cell biological techniques used to investigate structural, molecular, and physiological aspects of eukaryotic cells and their organization into tissues. Techniques include light and electron microscopy, cell culture, isolation of cellular organelles, protein electrophoresis, and Western Blot analysis.

Fall 2020: BIOL BC3311

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BIOL BC3352 Development. 3 points.
Prerequisites: BIOL BC1500, BIOL BC1501, BIOL BC1502, BIOL BC1503, and BIOL BC2100 or the equivalent.
Introduction to animal developmental biology and its applications. This course will examine the basic mechanisms through which animal bodies organize themselves, from an integrative perspective at the levels of genes and gene networks, cell properties and behaviors, coordinated interactions of cells in developing tissues, organs and organ systems, and the role of developmental processes in morphological evolution. Topics include: fertilization, cleavage and gastrulation, establishment of body axes, neural development, organ formation, tissue and organ regeneration, stem cells and medical applications, evolution of developmental programs, and teratogenesis.

BIOL BC3360 Physiology. 3 points.
Prerequisites: BIOL BC1500, BIOL BC1501, BIOL BC1502, and BIOL BC1503 or the equivalent.
This course examines how mammals carry out basic functions like manipulating objects, sensing the external world, oxygenating tissues, and processing food. Emphasis is placed on (a) how the body regulates itself through the integrated action of multiple organ systems and (b) what goes awry in disease.

Spring 2020: BIOL BC3360

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<td>John Glendinning</td>
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BIOL BC3362 Molecular and Cellular Neuroscience. 3 points.
Prerequisites: (BIOL BC1500)(BIOL BC1501)(BIOL BC1502)(BIOL BC1503) and CHEM BC3230 or the equivalent.
Structure and function of neural membranes; ionic basis of membrane potential and action potential; synaptic transmission and neurochemistry; sensory transduction and processing; reflexes and spinal cord physiology; muscle structure and function; neuronal circuitry; and nervous system development.

Fall 2020: BIOL BC3362

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<th>Course Number</th>
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<td>Elizabeth Bauer</td>
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BIOL BC3363 Laboratory in Molecular and Cell Neuroscience. 3 points.
Prerequisites: BIOL BC3362 (which can be taken as a pre- or co-requisite). Enrollment is limited to 16; must attend first lab to hold place.
Introduction to techniques commonly used in current neurobiological research, including intracellular and extracellular recording of action potentials, neuroanatomical methods, and computer simulation of the action potential.
BIOL BC3590 Senior Seminar. 4 points.
Prerequisites: BIOL BC1500, BIOL BC1501, BIOL BC1502, BIOL BC1503, and BIOL BC2100 or the equivalent. Enrollment is limited to 12; must attend first class to hold place.
Required for all majors who do not select the year-long Senior Thesis Research & Seminar (BIOL BC3593 & BC3594) to fulfill their senior capstone requirement. These seminars allow students to explore the primary literature in the Biological Sciences in greater depth than can be achieved in a lecture course. Attention will be focused on both theoretical and empirical work. Seminar periods are devoted to oral reports and discussion of assigned readings and student reports. Students will write one extensive literature review of a topic related to the central theme of the seminar section. Topics vary per semester and include, but are not limited to: Plant Development, Animal Development & Evolution, Molecular Evolution, Microbiology & Global Change, Genomics, Comparative & Reproductive Endocrinology, and Data Intensive Approaches in Biology.

CHEM BC3282 Biological Chemistry. 3 points.
Prerequisites: (CHEM BC3230) and (CHEM BC3231) BIOL BC1502. Lecture: MWF 9:00-9:50.

Chemistry (Barnard)

CHEM BC2001 General Chemistry I. 5 points.
Students enrolled in CHEM BC2001 must also register for a section of CHEM BC2012.
Corequisites: CHEM BC2012
Atoms; elements and compounds; gases; solutions; equilibrium; acid-base, precipitation, and oxidation-reduction reactions; thermochemistry. Lecture MWF 11:11:50am or 12:12:50pm; laboratory one day a week. Laboratory experience with both qualitative and quantitative techniques. Counts towards Lab Science Requirement.

CHEM BC3230 Organic Chemistry I. 3 points.
Prerequisites: CHEM BC2001 or equivalent. Credit will not be given for any course below the 3000 level after completing CHEM BC3230 or its equivalent. Lecture: MWF 10:00 - 10:50 AM
Corequisites: With lab, counts towards Lab Science requirement. Atomic and molecular structure; stereochemistry of organic molecules; introduction to organic reactions, reaction mechanisms, and synthesis.
CHEM BC3328 Introductory Organic Chemistry Laboratory. 2.5 points.
Prerequisites: (CHEM BC2001) General Chemistry I with lab.
Corequisites: CHEM BC3230

Spring 2020: CHEM BC3328
Course Number | Section/Call Number | Times/Location | Instructor | Points | Enrollment
--- | --- | --- | --- | --- | ---
CHEM 3328 | 001/00336 | M 1:10pm - 2:00pm 805 Altschul Hall | Meenakshi Rao, Judith Kamm | 2.5 | 22/20
CHEM 3328 | 001/00336 | M 2:10pm - 3:30pm 716 Altschul Hall | Meenakshi Rao, Judith Kamm | 2.5 | 22/20
CHEM 3328 | 002/00337 | T 1:10pm - 2:00pm 805 Altschul Hall | Meenakshi Rao, Jean Vadaikan, Craig Allen | 2.5 | 22/20
CHEM 3328 | 002/00337 | T 2:10pm - 3:30pm 716 Altschul Hall | Meenakshi Rao, Jean Vadaikan, Craig Allen | 2.5 | 22/20
CHEM 3328 | 003/00338 | W 1:10pm - 2:00pm 805 Altschul Hall | Meenakshi Rao, Jean Vadaikan | 2.5 | 21/20
CHEM 3328 | 003/00338 | W 2:10pm - 3:30pm 716 Altschul Hall | Meenakshi Rao, Jean Vadaikan | 2.5 | 21/20
CHEM 3328 | 004/00339 | Th 1:10pm - 2:00pm 805 Altschul Hall | Meenakshi Rao, Jean Vadaikan, Craig Allen | 2.5 | 22/20
CHEM 3328 | 004/00339 | Th 2:10pm - 3:30pm 716 Altschul Hall | Meenakshi Rao, Jean Vadaikan, Craig Allen | 2.5 | 22/20
CHEM 3328 | 005/00340 | F 1:10pm - 2:00pm 805 Altschul Hall | Meenakshi Rao, Craig Allen, Judith Kamm | 2.5 | 22/20
CHEM 3328 | 005/00340 | F 2:10pm - 3:30pm 716 Altschul Hall | Meenakshi Rao, Craig Allen, Judith Kamm | 2.5 | 22/20
CHEM 3328 | 006/00344 | Th 8:10am - 9:00am 805 Altschul Hall | Meenakshi Rao, Jean Vadaikan, Craig Allen | 2.5 | 21/20
CHEM 3328 | 006/00344 | Th 9:10am - 12:30pm 716 Altschul Hall | Meenakshi Rao, Jean Vadaikan, Craig Allen | 2.5 | 21/20

Psychology (Barnard)
PSYC BC1001 Introduction to Psychology. 3 points.
Prerequisites: This course is prerequisite for all other psychology courses.
Prerequisites: This course is prerequisite for all other psychology courses.
Lecture course introducing students to the chief facts, principles, and problems of human and animal behavior, through systematic study of a text, lectures, exercises, reading in special fields, and participation in several current experiments (an alternative to participation in experiments can be arranged at the start of the semester at the student's request.)

Spring 2020: PSYC BC1001
Course Number | Section/Call Number | Times/Location | Instructor | Points | Enrollment
--- | --- | --- | --- | --- | ---
PSYC 1001 | 001/00125 | M W 8:40am - 9:55am 202 Altschul Hall | E'mett McCaskill | 3 | 199/170
PSYC 1001 | 002/00126 | M W 4:10pm - 5:25pm 328 Milbank Hall | Patricia Stokes | 3 | 47/55
PSYC 1001 | 003/00127 | T Th 2:40pm - 3:55pm 202 Altschul Hall | Sabina Jhanwar | 3 | 133/150

Fall 2020: PSYC BC1001
Course Number | Section/Call Number | Times/Location | Instructor | Points | Enrollment
--- | --- | --- | --- | --- | ---
PSYC 1001 | 001/00476 | T Th 8:40am - 9:55am Room TBA | E'mett McCaskill | 3 | 75/75
PSYC 1001 | 002/00477 | M W 4:10pm - 5:25pm Room TBA | Patricia Stokes | 3 | 40/50
PSYC 1001 | 003/00478 | T Th 1:10pm - 2:25pm Room TBA | Sabina Jhanwar | 3 | 75/75
PSYC 1001 | 004/00479 | T Th 10:10am - 11:25am Room TBA | Kathleen Taylor | 3 | 32/60
**PSYC BC1101 Statistics. 4 points.**
Prerequisites: BC1001 and instructor permission. Enrollment limited to 20 students per recitation section.
Lecture course introducing students to statistics and its applications to psychological research. The course covers basic theory, conceptual underpinnings, and common statistics.

### Spring 2020: PSYC BC1101

<table>
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<th>Course Number</th>
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<th>Times/Location</th>
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<td>001/000131</td>
<td>M W 2:40pm - 3:55pm</td>
<td>Doris Zahner</td>
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<td>001/000131</td>
<td>M 4:10pm - 6:00pm</td>
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<td>4</td>
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<td>Katherine</td>
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<td>PSYC 1101</td>
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<td>T Th 10:10am - 11:25am</td>
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### Fall 2020: PSYC BC1101

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**PSYC BC2106 Psychology of Learning Laboratory. 1.5 point.**
Prerequisites: BC1001 and instructor permission. Enrollment limited to 24 students per section.
Corequisites: PSYC BC2107
Lecture course covering the basic methods, results, and theory in the study of how experience affects behavior. The roles of early exposure, habituation, sensitization, conditioning, imitation, and memory in the acquisition and performance of behavior are studied.

### Fall 2020: PSYC BC2107

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<td>Peter Balsam</td>
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**PSYC BC2107 Psychology of Learning. 3 points.**
Prerequisites: BC1001 or permission of the instructor. Enrollment limited to 72 students.
Lecture course covering the basic methods, results, and theory in the study of how experience affects behavior. The roles of early exposure, habituation, sensitization, conditioning, imitation, and memory in the acquisition and performance of behavior are studied.

### Fall 2020: PSYC BC2118 Systems and Behavioral Neuroscience Laboratory. 1.5 point.
Prerequisites: BC1001 Introduction to Psychology and instructor permission. Enrollment limited to 16 students per section.
Corequisites: PSYC BC2119
Laboratory course to accompany BC2119. Students conduct experiments related to the physiological bases of behavior: development, organization and function of the nervous system; neurochemistry, neurophysiology and synaptic transmission. Topics include: the neural bases of sensory systems; homeostasis; sexual behavior; biological rhythms; emotionality and stress; learning and memory; and psychopathology. A portion of this course uses rats as experimental subjects and involves brain dissections.

### Spring 2020: PSYC BC2118

<table>
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<th>Course Number</th>
<th>Section/Call Number</th>
<th>Times/Location</th>
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<td>Kara Pham, 1.5</td>
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**PSYC BC2119 Systems and Behavioral Neuroscience. 3 point.**
Prerequisites: BC1001 or permission of the instructor.
Lecture course covering an introduction to the physiological bases of behavior: development, organization and function of the nervous system; neurochemistry, neurophysiology and synaptic transmission. Topics include: the neural bases of sensory systems; homeostasis; sexual behavior; biological rhythms; emotionality and stress; learning and memory; and psychopathology.

### Spring 2020: PSYC BC2119

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<th>Course Number</th>
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<td>Russell Romeo</td>
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**PSYC BC2177 Psychology of Drug Use and Abuse. 3 points.**
Prerequisites: BC1001 or permission of the instructor. Enrollment limited to 75 students.
Examines the biological, psychological, and social factors that lead to drug use and abuse. A biopsychosocial model will be used to examine the behavioral effects of prescription, over the counter, and street drugs. Treatments, therapies, and theories of addictive behaviors will be explored.

### Spring 2020: PSYC BC2177

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<tr>
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<th>Instructor</th>
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