

Spring 2024 Neuroscience Course Directory

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

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RESEARCH FOR CREDIT

If you are working or intend to work in a lab during the Spring 2024 semester, you are welcome to apply for a Directed Study in order to receive academic credits towards graduation. Guidelines and the application can be found at <https://www.bu.edu/neuro/academics/undergraduate/research/>.

REGISTRATION DATES

Class Year	Start Date	Start Time
Seniors	October 29	9:00a
Juniors	October 29	12:00p
Sophomores	November 5	9:00a
Freshmen	November 12	9:00a

WAITLISTS

You can find more information about waitlists here:

https://docs.google.com/forms/d/e/1FAIpQLSfy_EeDNb3fiNd4H1NPetM8Mpxry0XU0T_lww3F2-SerwBx_g/viewform

REGISTRATION NOTES

- You **must** schedule an advising appointment with your **assigned advisor** prior to registration at bu.joinhandshake.com
- Full time status is a minimum of **12 credits** per semester.
- To change your class standing, apply for an overload fee waiver, and more, visit the CAS Advising page: <http://www.bu.edu/cas/current-students/undergraduate/casadvising/forms/>
- PDP, ROTC, and CAS FY/SY courses **do not** count toward the 128 credits needed to graduate.
- Find more info about the Undergraduate Neuroscience Program at bu.edu/neuro/undergraduate
- Learn more about the BU Hub at bu.edu/hub
- Declare a second major, change your major, or add a minor here:
Major: <https://www.bu.edu/cas/cas-advising-major-declaration-form/> Minor:
<https://www.bu.edu/cas/academics/undergraduate-education/academic-advising/advising/minor-declaration-form/>
- Change your class standing here:
<http://www.bu.edu/cas/current-students/undergraduate/casadvising/forms/cas-advising-change-of-class-year-form/>

Last Updated: 9/28/23

Continue to check Student Link for most up to date scheduling information.

Core Neuroscience Courses

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

NE 101: Introduction to Neuroscience

4 cr | Hub: SI1 | Div Studies: NS | Prereq: None

An introduction to the biological basis of behavior and cognition. Includes theoretical and practical foundations rooted in psychology, biology, neuropharmacology, and clinical sciences (e.g., neurology and neuropsychiatry). Neuroethical dilemmas are highlighted and integrated when relevant to discussion topics. Note: You cannot receive credit for NE 101 and PS 231.

Lecture

A1 Stevens MWF 10:10a-11:00a

Discussion

B1 Stevens W 9:05a-9:55a

NE 102: Principles of Neuroscience

4 cr | Hub: SI2; ETR; TWC; WIN

A cellular and molecular approach to nervous system function. Includes molecular and genetic basis of neurons; structure and function of ion channels, synapses, and glia; mechanisms of signal transduction; neuroendocrinology; and sensory systems and transduction. Project labs focused on anatomy and physiology of neurons.

Lecture

A1 Tullai MWF 1:25p-2:15p

Lab

L1	Staff	M	9:05a-12:50p
L2	Staff	M	2:30p-6:15p
L3	Staff	T	12:30p-4:15p
L4	Staff	T	5:30p-9:15p
L5	Staff	W	9:05a-12:50p
L6	Staff	W	2:30p-6:15p
L7	Staff	R	12:30p-4:15p
L8	Staff	R	5:30p-9:15p

NE 116: Introduction to Cell and Molecular Biology with Integrated Science Experience 1 Lab

4 cr | Hub: SI2; ETR; WIN

Integration of general chemistry with biology and neuroscience, with an emphasis on how each discipline interacts experimentally. Laboratory focuses on projects relating to enzymes and their function. 3 lecture hours (meets with CAS NE 102 lecture), 3 hours lab.

Lecture

A1 Tullai MWF 1:25p-2:15p

Lab

L1	Staff	TBD	
L2	Bushell	WF	2:30p-5:15p

NE 202: Intro. to Cognitive Neuroscience

4 cr | Prereq: CAS NE 101 or PS 231; sophomore standing

Cognitive neuroscience seeks to understand the brain basis of cognition. This course introduces research methods and human neuroanatomy, and provides a survey of topics including learning and memory, attention, perception, language, social cognition, and executive function. Also offered as CAS PS 339.

Lecture

A1 Somers TR 2:00p-3:15p

Discussion

A2	Staff	W	9:05-9:55a
A3	Staff	W	10:10a-11:00a
A4	Staff	W	11:15a-12:05p
A5	Staff	W	12:20p-1:10p

Core Neuroscience Courses

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

NE 204: Intro. to Computational Models of Brain and Behavior

4 cr | Prereq: CAS MA 121 and MA 122; or CAS MA 123 and CAS MA 124; and sophomore standing; or consent of instructor

Introduction to important concepts in cognitive neuroscience and computational modeling of biological neural systems. Combines a systems-level overview of brain function with an introduction to modeling of brain and behavior using neural networking

Lecture

A1	Yazdanbakhsh	TR	3:30p-4:45p
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Discussion

B1	Staff	F	10:10a-11:00a
B2	Staff	F	2:30p-3:20p
B3	Staff	F	3:35p-4:25p
B4	Staff	F	4:40p-5:30p

NE 212: Intro to MATLAB Programming

4 cr | Hub: QR1, CRT | Prereq: (NE 101 or PS 101) & one semester of calculus

Teaches computer programming concepts, core statistical concepts, and related skills via MATLAB. Programming examples that cover four steps of neuroscience research (experiment control; random samples; data analysis; brain process simulation) promote "constructive" understanding of the quantitative reasoning behind decisions based on descriptive and inferential statistics (e.g., confidence intervals, linear regression models, model-specific anovas). Explains numerical integration programs in two settings: probability distributions, and simulations of neural dynamics.

Lecture

A1	Chandrasekar	TR	3:30p-4:45p
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Discussion

B1	Staff	W	10:10a-11:00a
B2	Staff	W	2:30p-3:20p
B3	Staff	W	3:35p-4:25p
B4	Staff	W	4:40p-5:30p

NE 370: Neuroscience Communications

2 cr | Hub: WIN | Prereq: WR 120 and NE 102/NE 203, or BI 325, or PS 231, or consent of instructor

Students explore diverse neuroscience career paths by practicing writing for different genres related to science journalism and business careers. Attention to stylistic revision and multimedia design and communication informed by the needs of the different audiences these careers reach.

Independent

A1	Gobrogge	R	11:00a-12:15p
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****The NE 370 course is not a required core course, but is a new 2-credit course that started in Spring 2023!!**

Group 1: Neurobiology

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

NE 349: Neurotoxins in Biology, Medicine, Agriculture, and War

4 cr | Hub: QR1, CRT | Prereq: (NE 102 or BI 108) or equivalent

Neurotoxins used as a lens to study the consequences of venom on mammalian physiological systems; potential clinical applications of neurotoxins; neurotoxins at cellular and molecular levels; mechanisms and possible impacts of neurotoxic pesticides; and physiological effects of neurotoxic chemical weapons.

Independent

A1	Lin	TR	3:30p-5:15p
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NE 481: Molecular Biology of the Neuron

4 cr | Hub: OSC, SI2, RIL | Prereq: (NE 102 or BI 203) or equivalent

Topics include electrical properties of neurons, a survey of neurotransmitters, molecular structure and function of receptors, synaptic transmission, intracellular signaling, and the molecular biology of sensory transduction. Three hours lecture, one hour discussion. Also offered as CAS BI 481.

Independent

A1	Ho	MW	2:30p-4:15p
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NE 525: Biology of Neurodegenerative Diseases

4 cr | Hub: OSC, ETR, RIL | Prereq: (NE 102 or BI 203) & (NE 203 or BI 325)

An in-depth look at molecular mechanisms of neurodegenerative diseases and their impact and relevance in clinical diagnosis and treatment. Topics include the molecular pathways of Alzheimer's, Parkinson's, Huntington's, and Creutzfeldt-Jakob Disease, and Amyotrophic Lateral Sclerosis. Also offered as CAS BI 525.

Independent

A1	Pastorino	MWF	9:05a-9:55a
		W	10:10a-11:00a

Group 1: Neurobiology

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

NE 542: Neuroethology

4 cr | Hub: OSC, SI2, RIL | Prereq: (NE 102 and NE 203), NE Major, and junior or senior standing

An in-depth study of the neural mechanisms underlying natural behaviors in animals, integrating perspectives from behavioral ecology and neurobiology. Behaviors that are central to fitness will be studied in detail, including the sensory and motor bases of prey detection, predator avoidance, communication, courtship, navigation, and migration. A wide variety of non-model organisms such as honeybees, owls, bats, and crickets are discussed. Lectures are integrated with student-led discussions of relevant research papers.

Independent

A1 Muscedere TR 9:00a-10:45a

NE 556: Drug Discovery in Neuroscience

4 cr | Hub: DME, SI2, CRI | Prereq: NE 102 (or BI 108) & CH 102; NE/PS 333 strongly recommended.

The process of drug discovery is complex especially when a drug is intended to treat a neurological disease. This discussion-heavy course examines the specific challenges of modern neuroscience drug discovery, including: target selection, pharmacodynamics, animal models, and clinical trials. Effective Fall 2021, this course fulfills a single unit in each of the following BU Hub areas: Digital/Multimedia Expression, Scientific Inquiry II, Creativity/Innovation.

Independent

A1 Bushell MW 12:20p-2:05p

NE 589: Neural Impacts on Tumorigenesis

4 cr | Hub: OSC, SI2, RIL | Prereq: NE 102 & NE 203, and NE major; junior or senior standing

Explores neuronal invasion and mechanisms of neurogenesis into solid tumors, cross-talk in tumor microenvironments, and nervous system influence on cancer modulators that enhance tumorigenesis. Enhancement of cancer from environmental stress at this interface is also examined.

Independent

A1 Tullai TR 12:30p-1:45p

Group 2: Cognitive

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

NE 234: Psychology of Learning

4 cr | Hub: SI1, SO1, CRT | Div Studies: SS | Prereq: PS 101

The aim of this course is to review the major traditional and current theories of learning and memory. Students will begin with an understanding of simple learning, including theories and basic principles of classical and operant conditioning. Students will then be introduced to the memory system, the three stages of memory, implicit and explicit memory processes.

Lecture

A1	Dunne	MWF	2:30p-3:20p
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Discussion

A2	Dunne	W	8:00a-8:50a
A3	Dunne	W	9:05a-9:55a
A4	Dunne	W	10:10a-11:00a
A5	Dunne	W	11:15a-12:05p

NE 327: Experimental Psychology: Perception

4 cr | Prereq: PS 101 & (PS211 or NE 212 or (MA 115 & MA 116)) & PS 222 | Satisfies [Neuro Research Requirement](#)

Introduces psychophysical methods and their use in the study of perceptual processes: Students learn to think critically about the relation between theory and experiment, conduct perception experiments, and write experimental reports. Also offered as CAS PS 327.

Independent

A1	Ling	TR	1:30p-3:15p
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NE 333: Drugs & Behavior

4 cr | Prereq: PS 101 & (PS 231 or NE 101) & Junior/Senior Standing

Comprehensive survey of drug influences on behavior; introduces a neuroscience approach to behavior. Several classes of drugs are discussed, including abused and addictive substances and psychoactive and therapeutic agents. Also offered as CAS PS 333.

Lecture

A1	DiBenedictis	MWF	12:20p-1:10p
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Discussion

A2	DiBenedictis	F	8:00a-8:50a
A3	DiBenedictis	F	9:05a-9:55a
A4	DiBenedictis	F	10:10a-11:00a
A5	DiBenedictis	F	11:15am-12:05p

Lecture

B1	Scott	TR	3:30p-4:45p
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Discussion

B2	Scott	W	9:05a-9:55a
B3	Scott	W	10:10a-11:00a
B4	Scott	W	11:15a-12:05p

Lecture

C1	DiBenedictis	MWF	10:10a-11:00a
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Discussion

C2	DiBenedictis	W	12:20p-1:10p
C3	DiBenedictis	W	1:25p-2:15p
C4	DiBenedictis	W	3:35p-4:25p

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Continue to check Student Link for most up to date scheduling information.

Group 2: Cognitive

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

NE 456: Neurobiology of Sex & Aggression

4 cr | Hub: OSC, HCO, SI2 | Prereq: PS 231 or NE 203 or BI 325 or permission of instructor

Examines neurobiological and genetic factors that influence sex and violence. Students review primary literature from the past century that highlights major scientific discoveries that have reconceptualized our understanding of the origins of sexual-determination, -attraction and -aggression.

Independent

A1 Gobrogge

TR

5:00p-6:15p

NE 531: Imaging and Manipulating Memories

4 cr | Prereq: PS 231 or NE 101 or PS/NE 327 or PS 339/NE 202 or NE 203/BI 325 or permission of instructor

The nature of memory engrams, the physical manifestations of experiences in the brain, will be explored at the systems neuroscience level by surveying primary literature.

Independent

A1 Ramirez

TR

11:00a-12:15p

NE 592: Topics in Cognitive Neuroscience

4 cr | Prereq: NE 101, NE 102, NE 203, NE 202, and NE 212

NeuroPsychiatry: Brain & Mind

Contemporary seminar in neuropsychiatry, with an emphasis on neural representations of brain diseases of the mind. Delve into research and theories on how neural processes contribute to brain diseases that impact the mind, with focus on examining typical versus atypical nervous systems. Through lectures, discussion of literature, case studies, documentary & film, students will gain insight into the neural mechanisms underlying conditions such as schizophrenia, PTSD, bipolar spectrum, autism, anxiety, personality disorders, and addiction. By the end of the semester, students will have a solid foundation in the neural representations of brain diseases of the mind and the emerging role of neuroscience in understanding and treating psychiatric conditions.

Independent

A1 Gobrogge

TR

2:00p-3:15p

Group 3: Computational

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

NE 530: Neural Models of Memory Function

4 cr | Prereq: a course in Neuroscience or physiological psychology, or consent of instructor

Computational models of neurobiological mechanisms for memory function and spatial navigation, with a particular emphasis on cellular and circuit models of the hippocampus and related cortical structures. Also offered as CAS PS 530.

Independent

A1	Hasselmo	R	3:30p-6:15p
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CS 542: Machine Learning

4 cr | Prereq: CS 365 | Satisfies [Neuro Research Requirement](#)

Introduction to modern machine learning concepts, techniques, and algorithms. Topics include regression, kernels, support vector machines, feature selection, boosting, clustering, hidden Markov models, and Bayesian networks. Programming assignments emphasize taking theory into practice, through applications on real-world data sets.

Lecture

A1	Drori	MW	12:20p-1:35p
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Lab

A2	Drori	F	8:00a-8:50a
A3	Drori	F	9:05a-9:55a
A4	Drori	F	10:10a-11:00a
A5	Drori	F	11:15a-12:05p
A6	Drori	F	12:20p-1:10p

MA 242: Linear Algebra

4 cr | Hub: QR2, CRT | Prereq: (CASMA122 OR CASMA124 OR CASMA127 OR CASMA129)

Cannot be taken for credit in addition to CAS MA 442 or ENG EK 103. Matrix algebra, solution of linear systems, determinants, Gaussian elimination, fundamental theory, row-echelon form. Vector spaces, bases, norms. Computer methods. Eigenvalues and eigenvectors, canonical decomposition. Applications. Effective Fall 2019, this course fulfills a single unit in the following BU Hub area: Quantitative Reasoning II.

Lecture

A1	TBA	TR	9:30a-10:45a
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Discussion

A2	TBA	M	1:25p-2:15p
A3	TBA	M	2:30p-3:20p
A4	TBA	M	3:35p-4:25p
A5	TBA	M	4:40p-5:30p

Lecture

B1	Fried	MWF	9:05a-9:55a
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Discussion

B2	Fried	F	10:10a-11:00a
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Lecture

C1	TBA	TR	2:00p-3:15p
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Discussion

C2	TBA	W	8:00a-8:50a
C3	TBA	W	9:05a-9:55a
C4	TBA	W	10:10a-11:00a

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Group 3: Computational

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

CN 530: Neural and Computational Models of Vision

4 cr | Prereq: CN 510 or consent of instructor

Current models of mammalian visual processes are constrained by experimental and theoretical results from psychology, physiology, computer science, and mathematics. The course evaluates the explanatory adequacy of competing neural and computational models of such processes as edge detection, textural grouping, shape-from-shading, stereopsis, motion detection, and color perception. Students perform computer simulations of some of the examined models.

Lecture

A1	Yazdanbakhsh	MW	10:10a-11:55a
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CDS DS 340: Introduction to Machine Learning and AI

4 cr | Hub: ETR, QR2, CRT | Prereq: CDS DS 320

This course instructs students in key algorithms for classic artificial intelligence (AI) and modern machine learning (ML). Along the way, we seek to explore what kinds of problems these techniques are good and bad at, and build intuition for what makes a good search or machine learning problem. The primary assessment tools will be programming problem sets in Python, using Jupyter notebooks.

Lecture

A1	Gold	TR	2:00p-3:15p
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Discussion

A2	Gold	F	9:30a-10:45a
A3	Gold	F	11:15a-12:05p
A4	Gold	F	12:30p-1:45p

Restricted Electives

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

BI 203: Cell Biology

4 cr | Hub: SI1, QR1, CRT | Prereq: (CASBI108 & CASCH102) or equivalent | Coreq: (CASCH203) or equivalent.

Principles of cellular organization and function: biological molecules, flow of genetic information, membranes and subcellular organelles, and cell regulation. Three hours lecture, one hour discussion. Students may receive credit for CAS BI 203 or 213, but not both courses. Effective Fall 2019, this course fulfills a single unit in each of the following BU Hub areas: Scientific Inquiry I, Quantitative Reasoning I, Critical Thinking.

Lecture

A1	Hartmann	TR	9:30a-10:45a
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Discussion

B1	Hartmann	W	12:20p-1:10p
B2	Hartmann	W	3:35p-4:25p
B3	Hartmann	F	8:00a-8:50a
B4	Hartmann	F	11:15a-12:05p

BI 315: Systems Physiology

4 cr | Hub: SI2, WIN, CRT, TWC | Prereq: (CASBI108 OR ENGBE209), and CASCH101 and CASCH102, or equivalent. First Year Writing Seminar (e.g., WR 100 or WR 120)

An introduction to physiological principles applied across all levels of organization (cell, tissue, organ system). Preparation for more advanced courses in physiology. Topics include homeostasis and neural, muscle, respiratory, cardiovascular, renal, endocrine, gastrointestinal, and metabolic physiology. Three hours lecture, three hours lab. Effective Fall 2019, this course fulfills a single unit in each of the following BU Hub areas: Scientific Inquiry II, Writing-Intensive Course, Critical Thinking, Teamwork/Collaboration.

Lecture

A1	Muscedere	MWF	12:20p-1:10p
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Lab

Please see Student Link for available lab times

Restricted Electives

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

CS 111: Introduction to Computer Science I

4 cr | Hub: QR2, CRI, CRT

The first course for computer science majors and anyone seeking a rigorous introduction. Develops computational problem-solving skills by programming in the Python language, and exposes students to a variety of other topics from computer science and its applications. Carries MCS divisional credit in CAS. Effective Fall 2018, this course fulfills a single unit in each of the following BU Hub areas: Quantitative Reasoning II, Creativity/Innovation, Critical Thinking.

Lecture

A1	Sullivan	MWF	10:10a-11:00a
B1	Mull	MWF	11:15a-12:05p
C1	Sullivan	MWF	12:20p-1:10p
D1	Stevens	MWF	1:25p-2:15p

Lab

Please see Student Link for available lab times.

A3-A6	Sullivan
B2-B5	Mull
C2-C5	Sullivan
D2-D5	Stevens

CS 112: Introduction to Computer Science II

4 cr | Hub: QR2, CRI, CRT | Prereq: (CASC5111) or equivalent.

Covers advanced programming techniques and data structures. Topics include recursion, algorithm analysis, linked lists, stacks, queues, trees, graphs, tables, searching, and sorting. Carries MCS divisional credit in CAS. Effective Fall 2018, this course fulfills a single unit in the following BU Hub area: Quantitative Reasoning II, Creativity and Innovation, Critical Thinking.

Lecture

A1	De Oliveira	TR	12:30p-1:45p
B1	Papadakis-Ka	TR	2:00p-3:15p
C1	De Oliveira	TR	11:00a-12:15p

Lab

Please see Student Link for available lab times.

A2-A7	De Oliveira
B2-B7	Papadakis-Ka
C2-C7	De Oliveira

MA 226: Differential Equations

4 cr | Hub: CRT | Prereq: (CASMA225 OR CASMA230)

First-order linear and separable equations. Second-order equations and first-order systems. Linear equations and linearization. Numerical and qualitative analysis. Laplace transforms. Applications and modeling of real phenomena throughout. (Cannot be taken for credit in addition to CAS MA 231.)

Lecture

A1	Chung	MWF	10:10a-11:00a
B1	Lin	TR	9:30a-10:45a
C1	Goh	MWF	9:05a-9:55a

Discussion

Please see Student Link for discussion times.

A2-A6	Chung
B2-B6	Lin
C2-C6	Goh

Restricted Electives

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

MA 416: Analysis of Variance

4 cr | Hub: CRT | Prereq: (CASMA116 OR CASMA214) or equivalent.

Fundamental concepts and analytical skills in analysis of variance, including crossed and nested designs, as well as fixed- and random- effect models. Trend analysis for repeated measures, expected mean squares, and non-parametric techniques. SAS is used throughout the course.

Lecture

A1	Moore	TR	5:00p-6:15p
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Discussion

A2	Moore	W	1:25p-2:15p
A3	Moore	W	3:35p-4:25p
A4	Moore	R	12:30p-1:20p

CDS DS 110: Introduction to Data Science with Python

4 cr

CDS DS 110 is the first in a two-course sequence (leading to CDS DS 210) that builds students' competence in computing techniques central to data science. Students will use Python to explore fundamental CS concepts and processes used in data science with a focus on descriptive data analysis, including data structures, development of functions and more advanced recursion, object-oriented programming, data processing and data visualization. Numpy, pandas, and matplotlib will be used to analyze real-world data. Prior experience with Python is not required.

Lecture

A1	Gold	MWF	12:20p-1:10p
B1	Gold	MWF	1:25p-2:15p

Discussion

Please see Student Link for Discussion times.

A2-A5	Gold
B2-B5	Gold

CDS DS 210: Programming for Data Science

4 cr | Hub: QR2, DME, CRI | Prereq: DS 110 or equivalent

Second course in the CDS DS-110-210 sequence. The first half of DS 210 continues the Python programming experience begun in DS-110, with enhanced focus on machine learning applications. The second half of the course introduces students to compiled programming languages, such as Rust, Go and Java, suitable for building large projects. Basic data structures (stacks, queues, priority queues, binary search trees), techniques for representing graphs, and basic graph algorithms will be explored. Concepts are developed and reinforced through consideration of data-driven inquiries in real-world settings.

Lecture

A1	Kontothanass	MWF	12:20p-1:10p
B1	Chator	MWF	9:05a-9:55a

Discussion

Please see Student Link for Discussion times.

A2-A5	Kontothanass
B2-B5	Chator

Remaining on track to complete your Hub requirements requires thoughtful planning, including knowing what Hub units you will satisfy by courses needed for your major.

Students majoring in Neuroscience who complete the core neuroscience courses and foundational requirements in writing, chemistry, physics, calculus, and statistics *generally* have **11 Hub units** left to satisfy:

Philosophical Inquiry and Life's Meaning (PLM)	1 unit
Aesthetic Exploration (AEX)	1 unit
Historical Consciousness (HCO)	1 unit
Social Inquiry (SO1)	1 unit
Individual in Community (IIC)	1 unit
Global Citizenship and Intercultural Literacy (GCI)	2 units
Creativity/Innovation (CRI)	2 units
Oral/Signed Communication (OSC)	1 unit
Digital Multimedia Expression (DME)	1 unit

You may satisfy some of the above units with your 5 neuroscience electives, writing courses, 2nd language requirement, and additional academic tracks (minors, pre-health, KHC, etc.), but you will likely need to search outside your normal scheduling path to satisfy at least some Hub units.

It is encouraged to spread your Hub courses throughout your time at Boston University, so that you are not scrambling to take all your Hub courses or find seats in courses that meet a specific permutation of 3 Hub units your final year.

You can also leverage the [Course Description Search](#) tool to identify other courses that meet specific Hub units.

We've included a list of courses on the next page running in Spring 2024 that are helpful in satisfying some of your Hub Units that are not met by Neuroscience. **This list is by no means exhaustive and you should continue to do your own research, including looking at classes outside of CAS.**

Select Hub Courses

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

AH 112: Introduction to Art History II: Renaissance to Today

4 cr | Hub: AEX, HCO, TWC | Div Studies: HU

Major monuments and artists. Sequential development, from the Renaissance to the modern period, of major styles in architecture, sculpture, painting, graphic arts, and photography. Relationship of visual art to social and cultural trends.

AH 113: Arts and Monuments of Asia

4 cr | Hub: OSC, AEX | Div Studies: HU

An introduction to the art and architecture of Asia from the earliest times to the present. Course addresses not only important cultural monuments but also portable art objects within museum collections. Course examines a wide range of media, including ink painting, ceramics, textiles, photography, as well as major architectural projects, monuments, and built environments. It aims to challenge and rethink monolithic definitions of "Asian art" by allowing students to understand the complex and sophisticated processes of interregional and global cultural exchange.

AH 392: Twentieth Century Art from 1940 to 1980

4 cr | Hub: AEX, HCO

Explores major currents in art produced around the world during the tumultuous middle decades of the 20th century. The following topics, among others, are examined in relation to postwar culture and Cold War politics: realism vs. abstraction, global pop art and conceptual art, new materials and technologies, international artists' networks, and performative art practices.

AH 395: History of Photography

4 cr | Hub: AEX, HCO, CRT

An introduction to the study of photographs. The history of the medium in Europe and America from its invention in 1839 to the present. After lectures on photographic theory and methodology, photographs are studied both as art objects and as historical artifacts.

AR 100: Great Discoveries in Archaeology

4 cr | Hub: SO1, DME, HCO | Div Studies: HU

Illustrated lectures focus on the important discoveries of the discipline in archaeology. Course covers the whole of human prehistory around the world. Archaeological methods are described, along with the great ancient sites: Olduvai, Lascaux, Stonehenge, Egyptian pyramids, Machu Picchu.

BI 210: Human Anatomy

4 cr | Hub: SI1, DME, CRI | Div Studies: NS

Intensive preprofessional course for students whose programs require anatomy. Not for biology major or minor credit. Gross structure of the human body; skeletal, muscular, nervous, respiratory, circulatory, digestive, urinary, and reproductive systems. Three hours lecture, two hours lab (lab requires dissection). Cannot be taken for credit in addition to the course with the same title formerly numbered CAS BI 106.

Select Hub Courses

Boston University College of Arts and Sciences
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CL 101: The World of Greece

4 cr | Hub: HCO, PLM, CRT | Div Studies: HU

The literature, philosophy, art, and culture of ancient Greece and their impact on the Western tradition. Topics covered include the emergence of epic poetry; art and lyric in the Archaic Age; drama, architecture, philosophy, and political developments of classical Athens and Greece.

EN 150: Children's Literature: Fairy Tales, Fantasy, and Imaginary Spaces

4 cr | Hub: AEX, CRI | Div Studies: HU

What stories do we tell about children? What guidance do we imagine them needing? Examines fairy tales; the Golden Age of Children's Literature (1860- -1920); fantasy; genre and adaptation. Authors include Grimms, Bronte, Lewis Carroll, Tolkien, Le Guin, Pullman, Sendak.

EN 127: Reading American Literature

4 cr | Hub: AEX, IIC | Div Studies: HU

Readings may include works of fiction, poetry, or drama composed in America from the colonial period to the present. Attention to a wide range of literary works and historical and cultural contexts

EN 170: The Graphic Novel

4 cr | Hub: AEX, DME, CRI | Div Studies: HU

Examination of the rise, nature, and status of the contemporary book-length graphic novel. Topics include graphic vs. traditional novel, word and image, style and space, representations of subjectivity, trauma, and history.

EN 129: Introduction to African American Literature

4 cr | Hub: WIN, GCI, CRT | Div Studies: HU

What is the African American literary tradition? How does it change over time? This course is to introduce you to the cultural, political, and historical contexts of the African American experience through readings of literature. We will read poetry, slave narratives, essays and speeches, tales, short stories, and novels, and as we examine these texts, we will consider how culture, politics, and history shape African American literature. Effective Fall 2022, this course fulfills a single unit in each of the following: Writing-Intensive, Global Citizenship and Intercultural Literacy, Critical Thinking.

HI 190: History of Boston: Community and Conflict

4 cr | Hub: HCO, IIC, TWC |

Explores the history of Boston and the city's changes over time. Students work with archival objects, maps, and manuscripts. Topics include Native American history, colonial settlement, revolution, immigration, urban development, and race. Students visit nearby historical sites and museums.

Select Hub Courses

Boston University College of Arts and Sciences
Undergraduate Program in Neuroscience

HI 191: What is Europe?

4 cr | Hub: DME, GCI, TWC

Explores key moments in history when cultural contact prompted Europeans to reconsider how they defined themselves culturally and geographically. Lectures and discussions are combined with trips to local museums/archives to analyze the material remains of this process of self-definition.

PH 100: Introduction to Philosophy

4 cr | Hub: PLM, ETR, CRT |

Introduces the nature of philosophical activity through careful study of major philosophical topics. Topics may include the nature of reality, knowledge, God's existence, and the significance of human life. Carries humanities divisional credit in CAS.

PH 159: Philosophy and Film

4 cr | Hub: AEX, PLM, CRT | Div Studies: HU

This class provides an introduction to philosophical and aesthetic issues connected with film.

SO 207: Sociology of Race and Ethnicity

4 cr | Hub: HCO, IIC, RIL | Div Studies: SS

This course examines the fundamental theoretical and empirical approaches regarding race/ethnicity and the current state of race relations in the U.S. that explore both contemporary social problems.

RN 100: Introduction to Religion

4 cr | Hub: PLM, GCI, CRI

Religion matters. It makes meaning and provides structure to life, addressing fundamental questions about body, spirit, community, and time. But what is it? How does it work in our world? This course explores religion in ritual, philosophical, experiential, and ethical dimensions.

RN 104: Judaism, Christianity, and Islam

4 cr | Hub: AEX, GCI, CRI

Islam, Christianity, and Judaism in historical and cultural context, origins to the present. Examines diversity of practices, belief systems, and social structures within these religions. Also addresses debates within and between communities as well as contemporary controversies and concerns.

RN 105: Introduction to the World's Religions

4 cr | Hub: DME, GCI, CRI

Explores the symbols, beliefs, stories, and practices of the world's religions with attention to both ancient history and contemporary practices, including spiritual autobiographies and online communities. Possible traditions include: Hinduism, Buddhism, Judaism, Christianity, Islam, and African/African diaspora religions.

RN 106: Death and Immortality

4 cr | Hub: PLM, GCI, CRI

Examines death as religious traditions have attempted to accept, defeat, deny, or transcend it. Do we have souls? Do they reincarnate? What to do with a corpse? Other topics include mourning, burial, cremation, martyrdom, resurrection, near-death experiences.