

Course 9 Subject Offerings

Updated 1/2019
AY 2019-2020

Tier 1 Subjects: all five subjects required; transfer credit will *not* be given for subjects 9.00, 9.01, or 9.40

Term	Subject #	Title	Units/Prerequisites
FA & SP	6.00	Introduction to Computer Science & Programming	12; REST <i>pre-requisites not required</i>
SP	9.00	Introduction to Psychological Science	12; HASS-S <i>pre-requisites not required</i>
FA	9.01	Introduction to Neuroscience	12; REST <i>pre-requisites not required</i>
SP	9.40	Introduction to Neural Computation	12; (Physics II (GIR), 6.00 and 9.01); or permission of instructor
FA	9.07	Statistics for Brain and Cognitive Science	12; 6.00

Tier 2 Subjects: three subjects required

Term	Subject #	Title	Units/Prerequisites
SP	9.09J	Cellular and Molecular Neurobiology	12; 7.05 or 9.01
SP	9.13	The Human Brain	12; 9.00 or 9.01, or permission of instructor
FA	9.16	Cellular and Synaptic Neurophysiology	12; 9.40
SP	9.18J	Developmental Neurobiology	12; 7.03, 7.05, 9.01, or permission of instructor
SP	9.19	Computational Psycholinguistics	12; (6.00 and (6.041B, 9.40, or 24.900)) or permission of instructor
FA	9.21J	Cellular Neurophysiology and Computing	12; Physics II (GIR); 18.03, and (2.005, 6.002, 6.003, 10.301, 20.110, or permission of instructor)
SP	9.35	Perception	12; 9.01 or permission of instructor
SP	9.53 (New)	Emergent Computations Within Distributed Neural Circuits	12; 9.40 or permission of instructor
FA	9.66J	Computational Cognitive Science	12; 6.008, 6.036, 6.041B, 9.40, 18.05, or permission of instructor
FA	9.85	Infant and Early Childhood Cognition	12; CI-M, HASS-S; 9.00

Tier 3: zero subjects required; up to four subjects may be counted as unrestricted electives

Term	Subject #	Title	Units/Prerequisites
SP	9.24	Disorders and Diseases of the Nervous System	12; 7.29, 9.00, and 9.01
SP	9.26J	Principles & Applications of Genetic Engineering for Biotechnology and Neuroscience	12; Biology (GIR)
SP	9.28	Topics in Developmental Neurobiology Current	9; CI-M; <i>co-req</i> 9.18
SP	9.32	Genes, Circuits, and Behavior	12; 7.29, 9.16, 9.18, or permission of instructor
FA	9.46	Neuroscience of Morality	12; HASS-S, CI-M; 9.00, 9.01, and (9.13 or 9.85)

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Laboratory: one subject required

Term	Subject #	Title	Units/Prerequisites
SP	9.12	Experimental Molecular Neurobiology	12; LAB, CI-M; Biology (GIR) and 9.01
FA	9.17	Systems Neuroscience Laboratory	12; LAB, CI-M; 9.01 or permission of instructor
SP	9.59J	Laboratory in Psycholinguistics	12; <i>pre-requisites not required</i>
SP	9.60	Machine Motivated Human Vision	12; LAB, CI-M; 9.00 and 9.07

Research: one subject required; Laboratory subject cannot be double-counted

Term	Subject #	Title	Units/Prerequisites
SP	9.12	Experimental Molecular Neurobiology	12; LAB, CI-M; Biology (GIR) and 9.01
FA	9.17	Systems Neuroscience Laboratory	12; LAB, CI-M; 9.01 or permission of instructor
FA	9.41	Research and Communication in Neuroscience & Cognitive Science	18; CI-M; 9.URG, permission of instructor
FA & SP	9.50	Research in Brain & Cognitive Sciences	12; 9.00 and permission of instructor
SP	9.59J	Laboratory in Psycholinguistics	12; <i>pre-requisites not required</i>
SP	9.60	Machine Motivated Human Vision	12; LAB, CI-M; 9.00 and 9.07
FA&SP	9.URG	Undergraduate Research	12; <i>prerequisites not required</i>

Restricted Electives: Up to four subjects may be counted as unrestricted electives

Subject #	Title
2.003J	Dynamics and Control
2.184	Biomechanics and Neural Control of Movement
5.07J	Biological Chemistry 1 (or 7.05 – NOT both)
5.12	Organic Chemistry I
5.13	Organic Chemistry II
6.003	Signals and Systems
6.034	Artificial Intelligence
6.042	Mathematics for Computer Science
6.045J	Automata, Computability, & Complexity
6.046	Design and Analysis of Algorithms
6.141	Robotics: Science and Systems I
7.03	Genetics
7.05	General Biochemistry (or 5.07 – NOT both)



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9.72 (New)	Vision in Art and Neuroscience
18.03	Differential Equations
18.034	Differential Equations
18.06	Linear Algebra
18.404J	Theory of Computation
18.515	Mathematical Logic
20.309	Instrumentation and Measurement for Biological Systems
24.211	Theory of Knowledge
24.900	Introduction to Linguistics (or 24.9000 – NOT both)
24.901	Language and It's Structure I: Phonology
24.902	Language and It's Structure II: Syntax
24.903	Language and It's Structure III: Semantics and Pragmatics
24.904	Language Acquisition

The following graduate subjects in Course 9 have been approved by the Education Committee and may substitute for a BCS Restricted Elective, with the approved pre-requisite, to count towards the BCS undergraduate program requirements. *Please note: undergraduate and graduate versions of the same subject cannot both be taken, or counted twice.*

Term	Subject #	Title	Units/Prerequisites
SP	9.016J	Acoustics, Production and Perception of Speech	12; (6.003 and 8.03) or permission of instructor
SP	9.073J	Statistics for Neuroscience Research	12; Permission of instructor
SP	9.123J	Neurotechnology in Action	12; Permission of instructor
SP	9.175J	Robotics	12; 2.151 or permission of instructor
SP	9.285J	Neural Coding and Perception of Sound	12; Permission of Instructor
SP	9.301J	Neural Plasticity in Learning and Memory	9; Permission of instructor
FA	9.422J	Principles of Neuroengineering	12; Permission of instructor