BA CS Integration Electives

Four courses selected with the approval of the student’s advisor from the list of computing-related courses approved by the BA CS committee. These courses are offered by departments other than Computer Science, and should either provide fundamental computing depth and background or explore applications of computing to arts and sciences fields.

This is a list of the courses that are generally approved as integration electives. This list is not meant to be exhaustive: if you find a course that is not on the list that appears to satisfy the goals of an integration elective, discuss with your advisor or the BA Program Director if it should count as an integration elective for you.

Some of these courses are not offered regularly, and some courses may have prerequisites. The list of integration electives may change slightly from year to year. You can always check the current list of integration electives on SIS. The list below is according to SIS as of September 2013.

Anthropology

- ANTH 2430: Languages of the World
- ANTH 3480: Language and Prehistory
- ANTH 3490: Language and Thought
- ANTH 5401: Linguistic Field Methods
- ANTH 5410: Phonology
- ANTH 5420: Theories of Language
- ANTH 5440: Morphology

Architecture

- ARCH 3450: Digital Moviemaking & Animation
- ARCH 5420: Digital Animation & Storytelling
- ARCH 5450: Digital Moviemaking & Animation
- ARCH 5470: Information Space
- ARCH 5710: Photography and Digital Media
- ARCH 6410: Advanced CAAD 3D Modeling & Visualization

Studio Art

- ARTS 2220: Introduction to New Media I
- ARTS 2222: Introduction to New Media II
- ARTS 3222: Intermediate New Media II
- ARTS 4220: Advanced New Media I
- ARTS 4222: Advanced New Media II

Biochemistry

- BIOC 5080: Computer Analysis of DNA & Protein

Biology

- BIOL 3170: Introduction to Neurobiology
- BIOL 3240: Introduction to Immunology
- BIOL 4010: Macroevolution
- BIOL 4020: Ecol & Evolutionary Genetics
- BIOL 4030: Evolutionary Biology Lab
- BIOL 4050: Developmental Biology
- BIOL 4080: Neuronal Organization of Behavior
- BIOL 4130: Population Ecology and Conservation Biology
- BIOL 4160: Functional Genomics Lab
- BIOL 4170: Cellular Neurobiology
- BIOL 4250: Human Genetics
- BIOL 4480: Complex Macromolecules
- BIOL 5080: Developmental Mechanisms
- BIOL 5370: Epidemiology and Evolution of Infectious Disease

Biomedical Engineering

- BME 3310: Biomedical Systems Analysis & Design
- BME 3315: Computational BME
- BME 3636: Neural Network Models
- BME 4783: Medical Imaging Modalities
- BME 4784: Medical Image Analysis

Chemistry

- CHEM 4411: Biological Chemistry Lab I

Drama

- DRAM 2110: Lighting Technology
- DRAM 2210: Scenic Technology
- DRAM 2240: Digital Design: Re-making and Re-imagining
- DRAM 2620: Sound Design
- DRAM 2630: Production Laboratory: Sound
- DRAM 3210: Scene Design I
- DRAM 4110: Lighting Design
- DRAM 4410: Acting III

Electrical Engineering

- ECE 2066: Science of Information

Economics

- ECON 4010: Game Theory
- ECON 4020: Auction Theory and Practice
- ECON 4720: Econometric Methods
- ECON 4880: Seminar in Policy Analysis

Environmental Science

- EVSC 3020: GIS Methods
- EVSC 4010: Introduction to Remote Sensing
- EVSC 4040: Climate Change: Science, Markets & Policy
- EVSC 4070: Advanced GIS
- EVSC 5020: GIS Methods
• EVSC 5030: Applied Statistics for Environmental Scientists
• EVSC 5110: Systems Analysis in Environmental Sciences

United States History
• HIUS 3162: Digitizing America

Linguistics
• LING 3400: Structure of English
• LING 5010: Synchronic Linguistics
• LING 5060: Syntax and Semantics
• LING 5070: Syntactic Theory

General Linguistics
• LNGS 3250: Intro to Linguistic Theory

Mathematics
• MATH 1160: Algebra, Number Systems, and Number Theory
• MATH 3000: Transition to Higher Math
• MATH 3100: Intro Mathematical Probability
• MATH 3120: Intro Mathematical Statistics
• MATH 3351: Elementary Linear Algebra
• MATH 3354: Survey of Algebra
• MATH 4080: Operations Research
• MATH 4302: Algebraic Coding Theory
• MATH 4750: Introduction to Knot Theory
• MATH 5110: Intro to Stochastic Processes
• MATH 5651: Advanced Linear Algebra
• MATH 5653: Number Theory

Media Studies
• MDST 2010: Introduction to Digital Media
• MDST 3050: History of Media
• MDST 3702: Computers and Languages
• MDST 3703: Digital Liberal Arts
• MDST 4700: Theory of New Media

Music
• MUSI 2350: Technosonics: Digital Music & Sound Art Composition
• MUSI 3390: Intro to Music & Computers
• MUSI 4535: Interactive Media
• MUSI 4540: Computer Sound Generation
• MUSI 4543: Sound Studio
• MUSI 4545: Computer Applications in Music
• MUSI 7350: Interactive Media

Neruscience
• NESC 5330: Neural Network Models

Philosophy
• PHIL 1410: Forms of Reasoning
• PHIL 2330: Computers, Minds and Brains
• PHIL 2420: Introduction to Symbolic Logic
• PHIL 5420: Advanced Logic
• PHIL 5450: Language and Logic

Physics
• PHYS 2660: Fundamentals Scientific Computing
• PHYS 5630: Computational Physics I
• PHYS 5640: Computational Physics II

Psychology
• PSYC 2150: Introduction to Cognition
• PSYC 2200: Survey of the Neural Basis of Behavior
• PSYC 2300: Introduction to Perception
• PSYC 4110: Psycholinguistics
• PSYC 4111: Language Development & Disorders
• PSYC 4125: Psychology of Language
• PSYC 4150: Cognitive Processes
• PSYC 4200: Neural Mechanisms of Behavior
• PSYC 4290: Memory Distortions
• PSYC 4300: Theories of Perception
• PSYC 4330: Topics in Child Development
• PSYC 4500: Special Topics: Psychology
• PSYC 5150: Advanced Cognition
• PSYC 5210: Developmental Psychobiology
• PSYC 5260: Brain Systems Involved in Learning and Memory

Statistics
• STAT 2120: Intro to Statistical Analysis
• STAT 3010: Statist Computing & Graphics
• STAT 5000: Intro to Applied Statistics
• STAT 5330: Data Mining

Using other courses. If a student would like to use a course not on the above list as an integration elective, they should first contact their academic advisor. Their advisor can work with the student to come up with a good argument as to why the course should qualify, and once the advisor approves it, send it to the BA CS Director at bacsdirector@cs.virginia.edu. Alternatively, if the advisor prefers, s/he can just send the student to BA CS director to get approval for a requirement exception. This will require a SIS exception to be entered for the student; see the full CS undergraduate handbook for the manual SIS exception process.