

Areas of Concentration

Areas of Concentration can be used as guidelines for B.S. students to build on their core courses and for B.A. students to build their track which must include a series of three courses.

NOTE: Consult B.A. and B.S. degree requirements and policies when reviewing concentration areas. Non-CSC courses may only be used as part of a BA track.

Artificial Intelligence and Machine Vision

CSC 244: Logical Foundations of AI
CSC 246: Machine Learning
CSC 249: Machine Vision
CSC 292: Mobile Visual Computing

Natural Language Understanding

CSC 244: Logical Foundations of AI
CSC 246: Machine Learning
CSC 247: Natural Language Processing
CSC 248: Statistical Speech and Language Processing
BCS 152: Language and Psycholinguistics
BCS 259: Language Development
BCS 261: Language Use and Understanding
LIN 210: Introduction to Language Sound Systems
LIN 220: Introduction to Grammatical Systems

Human-Computer Interaction

CSC 131: Recreational Graphics
CSC 174: Advanced Front End Web Design
CSC 186: Video Game Development
CSC 210: Web Programming
CSC 211: Introduction to HCI
CSC 212: Human-Computer Interaction
CSC 214: Mobile Application Development
CSC 261: Database Systems
CSC 216: AR/VR Interaction Design

Theory of Computation

CSC 281: Cryptography
CSC 283: Topics in Cryptography
CSC 284: Advanced Algorithms
CSC 285: Algorithms and Elections
CSC 286: Computational Complexity
CSC 287: Advanced Modes of Computation
MTH 248: Graph Theory

Computer Systems

CSC 255: Advanced Programming Systems
CSC 256: Operating Systems
CSC 257: Computer Networks
CSC 258: Parallel and Distributed Systems
ECE 201: Advanced Computer Architecture

Computer Security

CSC 257: Computer Networks
CSC 278: Computer Security Foundations
CSC 281: Cryptography
CSC 283: Topics in Cryptography
CSC 299: Social Implications of Computing

Computational Science

CSC 258: Parallel and Distributed Computing
CSC 261: Database Systems
CSC 292: Mobile Visual Computing
PHY 256: Computational Physics
OPT 211: MATLAB for Optics Majors
BME 221: Biomedical Computation and Statistics