

# 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.

## Artificial Intelligence and Machine Vision

CSC 244: Logical Foundations of AI

CSC 246: Machine Learning

CSC 249: Machine Vision

## 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 212: Human-Computer Interaction

CSC 214: Mobile Application Development

CSC 261: Database Systems

CSC 294: 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  
BIO 266: Tree of Life (last taught Spring 2013)  
PHY 256: Computational Physics  
OPT 211: MATLAB for Optics Majors  
BME 221: Biomedical Computation and Statistics