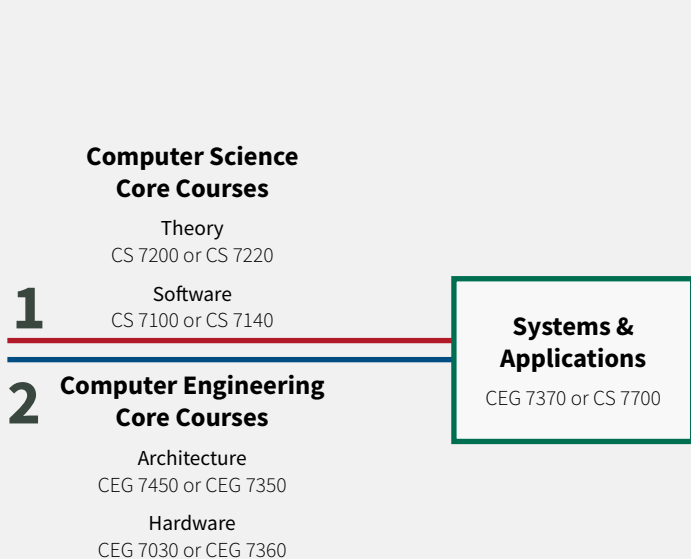


1. Complete the Computer Science or Computer Engineering core courses
2. Complete your formal coursework requirements
3. Complete Residency Research
4. Candidacy Exam/Proposal
5. Complete Dissertation Research
6. Complete Publication requirements
7. Dissertation Defense

### Choose Your Core



### Areas Of Specialty

#### Software:

CS 7100, CS 7120, CS 7140, CS 7200, CS 7220

#### Hardware:

CEG 7020, CEG 7030, CEG 7040, CEG 7080, CEG 7350, CEG 7360, CEG 7370, CEG 7450, CEG 7470

#### Intelligent Systems:

CS 7800, CS 7810, CS 7820, CS 7830, CS 7840, CEG 6870, CEG 7060

#### Data Analysis:

CS 7700, CS 7720, CEG 7570

#### Vision and Graphics:

CEG 7550, CEG 7590

#### Mathematics of Computation:

CS 7060, CS 7070

#### Secure Software/Hardware:

CS 7600, CS 7850, CS 7900, CEG 7050, CEG 7370, CEG 7380, CEG 7420, CEG 7450, CEG 7470, CEG 7560, EE 7400

## Sequence for registering for Ph.D. Graduate Hours

Fill out the Graduate Consent Form with your thesis advisor and sign the form before submitting for approval.

**The CRN (used for registering) will be emailed to you so you can register for the course.**

After completing the core requirements you may complete the following

1. CS or CEG 8920 Independent Study 1-6 credit hours
2. CS or CEG 8940 Residency Research 1-12 credit hours  
*Minimum of 18 credit hours of residency research.*
3. CS or CEG 8690 Candidacy exam 1 credit hour  
*Completion of candidacy examination with satisfactory grade*
4. CS or CEG 8950 Dissertation Research 1-6 credit hours
5. CS or CEG 8990 Dissertation Defense 1 credit hour  
*Submission of an approved dissertation*

## Graduate Areas of Specialty

### SOFTWARE

**CS 7100** Advance Programming Languages

**CS 7120** Functional and Logic Programming

**CS 7140** Advanced Software Engineering

**CS 7720** Data Mining

**CS 7200** Algorithm Design and Analysis

### HARDWARE

**CEG 7020** Low Power VLSI System Design

**CEG 7040** VLSI Design Synthesis and Optimization

**CEG 7350** Computer Architecture

**CEG 7450** Advanced Computer Networks

**CEG 7030** VLSI Testing & Design for Testability

**CEG 7080** CMOS Mixed Signal IC Design

**CEG 7360** Embedded Systems

**CEG 7470** Advanced Wireless Networks

**CEG 7370** Distributed Computing

### SECURE SOFTWARE/HARDWARE

**CS 7600** Trust Networks

**CEG 7050** Trust in Integrated Circuit Design

**CEG 7420** Host Computer Security II

**EE 7400** Information Theory

**CS 7850** Privacy Aware Computing

**CEG 7370** Distributed Computing

**CEG 7450** Advanced Computer Networks

**CS 7900** Analysis & Design of Human-Machine Cyber Security Systems

**CEG 7380** Cloud Computing

**CEG 7470** Advanced Wireless Networks

**CEG 7560** Visualization for Cyber Security

### INTELLIGENT SYSTEMS

**CS 7800** Information Retrieval

**CS 7820** Advanced Semantic Web

**CS 7840** Soft Computing

**CS 7810** Knowledge Representation and Reasoning

**CS 7830** Machine Learning

**CEG 7060** Advanced Robotics

### DATA ANALYSIS

**CS 7700** Advanced Data Base Systems

**CS 7720** Data Mining

**CEG 7570** Pattern Recognition

### MATHEMATICS OF COMPUTATION

**CS 7060** Numerical Analysis I

**CS 7070** Numerical Analysis II

**CEG 6260** Matrix Computation

### VISION & GRAPHICS

**CEG 7550** Computer Vision

**CEG 7590** Medical Image Analysis and Visualization

### RESEARCH AND INDEPENDENT STUDY

**CS/CEG 7920** Independent Study in CS/CEG (Thesis)

**CS/CEG 8920** Independent Study in CS/CEG

**CS/CEG 8940** Residency Research

**CS/CEG 8950** Dissertation Research

## Graduate Courses 7000/8000 level

#### CEG Courses:

**CEG 7020** Low Power VLSI System Design

**CEG 7030** VLSI Design Synthesis and Optimization

**CEG 7040** VLSI Design Synthesis and Optimization

**CEG 7060** Advanced Robotics

**CEG 7080** CMOS Mixed Signal IC Design

**CEG 7350** Computer Architecture

**CEG 7360** Embedded Systems

**CEG 7370** Distributed Computing

**CEG 7380** Cloud Computing

**CEG 7420** Host Computer Security II

**CEG 7450** Advanced Computer Networks

**CEG 7470** Advanced Wireless Networks

**CEG 7550** Computer Vision

**CEG 7560** Visualization for Cyber Security

**CEG 7570** Pattern Recognition

**CEG 7590** Medical Image Analysis and Visualization

**CEG 7900** Special Topics in Computer Engineering

**CS/CEG 7920** Independent Study in Computer Engineering

**CEG 8900** Special Topics in Computer Engineering

**CEG 8910** PhD Seminar in Computer Engineering

**CEG 8920** Independent Study in Computer Engineering

**CEG 8940** *Residency Research - Computer Engineering*

**CEG 8950** *Dissertation Research*

**CEG 8960** *Ph.D. Candidacy Exam*

**CEG 8980** *Continuing Registration*

**CEG 8990** *Dissertation Defense*

#### CS Courses:

**CS 7060** Numerical Analysis I

**CS 7070** Numerical Analysis II

**CS 7100** Advance Programming Languages

**CS 7120** Functional and Logic Programming

**CS 7140** Advanced Software Engineering

**CS 7200** Algorithm Design and Analysis

**CS 7220** Compatibility and Complexity

**CS 7600** Trust Networks

**CS 7700** Advanced Data Base Systems

**CS 7720** Data Mining

**CS 7800** Information Retrieval

**CS 7810** Knowledge Representation and Reasoning

**CS 7820** Advanced Semantic Web

**CS 7830** Machine Learning

**CS 7840** Soft Computing

**CS 7850** Privacy Aware Computing

**CS 7900** Special Topics in Computer Science

**CS 7920** Independent Study in Computer Science

**CS 8900** Special Topics in Computer Science

**CS 8910** PhD Seminar in Computer Science

**CS 8920** Independent Study in Computer Science

**CS 8940** *Residency Research - Computer Science*

**CS 8950** *Dissertation Research*

**CS 8960** *Ph.D. Candidacy Exam*

**CS 8980** *Continuing Registration*

**CS 8990** *Dissertation Defense*