

# Ph.D. DEGREE

## How to Plan Your Program of Study

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

### CHOOSE YOUR CORE

#### Computer Science Core Courses

*Theory*  
CS 7200 or CS 7220  
**and**  
*Software*  
CS 7100 or CS 7140

#### Computer Engineering Core Courses

*Architecture*  
CEG 7450 or CEG 7350  
**and**  
*Hardware*  
CEG 7030 or CEG 7360

**and**  
*Systems & Applications*  
CEG 7370 or CS 7700

### SPECIALIZE

We offer courses that will allow you to specialize in the following areas.

- Software
- Hardware
- Intelligent Systems
- Data Analysis
- Vision and Graphics
- Mathematics of Computation
- Secure Software or Hardware

Completion of 60 (90) hours for students entering the program with a master's (bachelor's) degree, including:

- Completion of the Computer Science or Computer Engineering Core Courses Minimum 9 (B.S. level: 27) hours of formal coursework if admitted at M.S. level
- Minimum 18 hours of residency research
- Minimum 12 hours of dissertation research
- Minimum 1 journal paper or 2 conference papers accepted or published

### 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

- CS or CEG 8920 Independent Study 1-6 credit hours
- CS or CEG 8940 Residency Research 1-12 credit hours Minimum of 18 credit hours of residency research.
- CS or CEG 8960 Candidacy exam 1 credit hour Completion of candidacy examination with satisfactory grade
- CS or CEG 8950 Dissertation Research 1-6 credit hours
- CS or CEG 8990 Dissertation Defense 1 credit hour Submission of an approved dissertation

CEG7020 Low Pwr VLSI Sys Des	CEG8900 Selected Topics in CEG	CS7720 Advanced Data Mining
CEG7030 VLSI Des Synth Optim	CEG8910 PhD Seminar in CEG	CS7800 Information Retrieval
CEG7040 VLSI Testing Design	CEG8920 Independent Study in CEG	CS7810 Meta Represent Languages
CEG7050 Trust Integ Ckt Design	<b>CEG8930 PhD Qualifying Exam</b>	CS7820 Semantic Web
CEG7060 Advanced Robotics	<i>CEG8940 Res Research in Comp Egr</i>	CS7830 Machine Learning
CEG7080 CMOS Mxd Sig IC Des	<i>CEG8950 Dissertation Research</i>	CS7840 Soft Computing
CEG7350 Computer Architecture	<b>CEG8960 PhD Candidacy Exam</b>	CS7850 Privacy Aware Computing
CEG7360 Embedded Systems	CEG8980 Continuing Registration	CS7900 Special Topics in CS
CEG7370 Distributed Computing	<b>CEG8990 Dissertation Defense</b>	CS7910 Advanced Proposal Writing
CEG7380 Cloud Computing	<b>CEG</b>	CS7920 Independent Study in CS
CEG7420 Rev Egr & Prog Analysis	<hr style="border: 1px solid green;"/>	CS7980 Part-time CPT in CS
CEG7450 Adv. Comp. Networks	<b>CS</b>	CS7990 Full-time CPT in CS
CEG7470 Adv. Wireless Networks	CS7060 Numerical Analysis I	CS8900 Special Topics in CS
CEG7550 Computer Vision&Pattern Recogn	CS7070 Numerical Analysis II	CS8910 PhD Seminar in CS
CEG7560 Visual & Image Process	CS7100 Adv. Prog. Languages	CS8920 Independent Study in CS
CEG7570 Pattern Recognition	CS7120 Functional & Logic Prog.	<b>CS8930 PhD Qualifying Exam</b>
CEG7580 Digital Image Processing	CS7140 Adv Software Engineering	<i>CS8940 Res Research in Comp Sci</i>
CEG7590 Medical Image Analysis	CS7200 Alg. Design and Analysis	<i>CS8950 Dissertation Research</i>
CEG7900 Selected Topics in CEG	CS7210 Network Science	<b>CS8960 PhD Candidacy Exam</b>
CEG7920 Independent Study in CEG	CS7220 Computability/Complexity	CS8980 Continuing Registration
CEG7980 Part-time CPT in CEG	CS7230 Information Theory	<b>CS8990 Dissertation Defense</b>
CEG7990 Full-time CPT in CEG	CS7600 Trust Networks	
	CS7700 Adv. Database Systems	

## Graduate Courses 7000 or 8000 level