

# CSE Graduate Breadth Requirement

CSE Ph.D. students who commenced CSE graduate studies in Fall, 2010 or thereafter must satisfy the *breadth requirement*. To fulfill the requirement, students must obtain an A or A- in a course from each of the three areas with the extra requirement that if any one area is covered by a course in which the student received an A-, the other two areas must be covered by courses in which the student received an A.

The classification of regularly offered courses into areas is given below:

## **Area I. Theory and Algorithms**

|      |   |      |                                  |
|------|---|------|----------------------------------|
| 5095 | Spec Topics in Comp Sci Engr (by semester, see below) |      |                                  |
| 5500 | Adv Seq & Parallel Algs                               | 6504 | Linear Algebraic Queueing Theory |
| 5502 | Fundamentals of Automata                              | 6510 | Fault-Tolerant Parallel Comput   |
| 5514 | Computational Geometry                                | 6512 | Randomization in Computing       |
| 5852 | Crypto: Foundations                                   | 6514 | Computational Topology           |
| 5095 | Algorithms in Bioinformatics                          | 6800 | Computational Genomics           |
| 5095 | Computational Medical Inform.                         | 5095 | Intro to Quantum Computing       |

## **Area II. Systems (Networks, Distributed, Architecture, and Databases)**

|      |   |      |                                 |
|------|---|------|---------------------------------|
| 5095 | Spec Topics in Comp Sci Engr (by semester, see below) |      |                                 |
| 5095 | Wireless Computing                                    | 5701 | Advanced Database Topics        |
| 5300 | Adv. Computer Netwrks & Distrib                       | 5711 | Distributed Database Systems    |
| 5302 | Computer Architecture                                 | 5715 | Semantic Data Models            |
| 5304 | High-Performance Computing                            | 5504 | Probabilistic Methods           |
| 5306 | Advanced Operating Systems                            | 6300 | Res Topics in Computer Networks |
| 5095 | Ubiquitous Computing                                  | 5095 | Research Topics in Comp Arch    |
| 5095 | Reliability in Distributed Systems                    |      |                                 |

## **Area III. Programming, Software, Applications**

|      |   |      |                              |
|------|---|------|------------------------------|
| 5095 | Spec Topics in Comp Sci Engr (by semester, see below) |      |                              |
| 5095 | Res Topics in Biomedical Info.                        | 5703 | Advanced Computer Graphics   |
| 5095 | Biomedical Informatics                                | 5705 | Adv. Artificial Intelligence |
| 5095 | Adv. Methods in Bio Data Mining                       | 5713 | Data Mining                  |
| 5101 | Advanced Software Engineering                         | 5800 | Bioinformatics               |
| 5102 | Advanced Programming Languages                        | 5850 | Information & Data Security  |
| 5103 | Software Performance Engr                             | 5854 | Crypto: Primitives/Protocols |
| 5105 | Software Reliability Engineering                      | 6705 | Natural Language Processing  |
| 5107 | Distributed Component Systems                         | 5095 | Biological/Biom. Data Mining |
| 5095 | Computing Issues in Soc NWS                           |      |                              |

Classifications for special topics courses taught since Fall, 2010 appear on the following pages.

## Special Topics Courses Since Fall 2010 with Classifications

### Fall 2010

CSE 5095 Res Topics in Biomedical Info. Area III

### Spring 2011

CSE 5095 Biomedical Informatics Area III

CSE 5095 Adv. Methods in Bio Data Mining Area III

### Fall 2011

CSE 5095 Intro to Quantum Computing Area I

CSE 5095 Research Topics in Computer Architecture Area II

CSE 5095 Reliability of Distributed Systems Area II

### Spring 2012

CSE5095 Biological/Biomedical Data Mining Area III

CSE5095 Algorithms in Bioinformatics Area I

CSE5095 Computational Medical Informatics Area I

CSE5095 Computing Issues in Soc Networkin Area III

CSE5095 Ubiquitous Computing Area II

### Fall 2012

CSE5095 Computational Biomedical Informatics Area I

CSE5095 Reliability of Distributed Systems Area II

### Spring 2013

CSE5095 String Algorithms and Apps in BioInformatics Area I

CSE5095 Knot Art Analysis and Algorithms Area I

CSE5095 Machine Learning Biomedical Informatics Area I

CSE5095 Computational Genomics Area I

CSE5095 Sensing and Ubiquitous Computing Area II

CSE5095 Compute Architecture/Organization Area II

CSE5095 Biomedical / Biological Data Mining Area III

### Fall 2013

CSE 5095 Fault Tolerant Distributed Computing Area I

CSE 5095 Intro to Computational Geometry Area I

CSE 5095 Approximation, Randomized, and Fixed Parameter Algorithms Area I

CSE 5095 Network Embedded Systems Area II

CSE 5095 Hardware Security Area II

CSE 5095 Machine Learning Area III

### Spring 2014

CSE 5095 Research Topics in Big Data Analytics Area I

CSE 5095 Research Topics Combinatorial Optimization Area III

### Fall 2014

CSE5095 Data Visualization Area I

CSE5095 Network Embedded Systems Area II

CSE5095 Hardware Security Area I

### Spring 2015

CSE 5095 Big Bata Analytics Area III

CSE 5095 Computer Organization & Architecture Area II

### Fall 2015

CSE 5095 High-Throughput Genomics Data Analytics Area III

CSE 5095 Computational Foundations Systems Biology Area I

CSE 5095 Data Mining in Open Source Software Area II

**Spring 2016**

CSE 5095 Big Bata Analytics

CSE 5095 Discrete Optimization

CSE 5095 Methods for Verification of Cyberphysical Systems

CSE 5095 Troubleshooting Distributed Systems

CSE 5095 Secure Computation and Storage

Area III

Area I or III

Area I

Area II

Area I

# CSE Graduate Breadth Requirement Completion Form

Student: \_\_\_\_\_ PeopleSoftID: \_\_\_\_\_

Major Advisor: \_\_\_\_\_

|          | Course # | Course Title | Term | Grade |
|----------|----------|--------------|------|-------|
| Area I   |          |              |      |       |
| Area II  |          |              |      |       |
| Area III |          |              |      |       |

Student signature: \_\_\_\_\_ Date \_\_\_\_\_

Graduate Program Director \_\_\_\_\_ Date: \_\_\_\_\_

Please submit, with this form:

- An (unofficial) copy of your UConn graduate transcript.
- A copy of the previous pages of this document, where you have circled the relevant courses.