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
- 5502 Fundamentals of Automata
- 5514 Computational Geometry
- 5852 Crypto: Foundations
- 5095 Algorithms in Bioinformatics
- 5095 Computational Medical Inform.

**Area II. Systems (Networks, Distributed, Architecture, and Databases)**
- 5095 Spec Topics in Comp Sci Engr (by semester, see below)
- 5095 Wireless Computing
- 5300 Adv. Computer Networks & Distrib
- 5302 Computer Architecture
- 5304 High-Performance Computing
- 5306 Advanced Operating Systems
- 5095 Ubiquitous Computing
- 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.
- 5095 Biomedical Informatics
- 5095 Adv. Methods in Bio Data Mining
- 5101 Advanced Software Engineering
- 5102 Advanced Programming Languages
- 5103 Software Performance Engr
- 5105 Software Reliability Engineering
- 5107 Distributed Component Systems
- 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 Data 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
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Area</th>
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<tbody>
<tr>
<td>CSE 5095</td>
<td>Big Data Analytics</td>
<td>Area III</td>
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<tr>
<td>CSE 5095</td>
<td>Discrete Optimization</td>
<td>Area I or III</td>
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<tr>
<td>CSE 5095</td>
<td>Methods for Verification of Cyberphysical Systems</td>
<td>Area I</td>
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<tr>
<td>CSE 5095</td>
<td>Troubleshooting Distributed Systems</td>
<td>Area II</td>
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<tr>
<td>CSE 5095</td>
<td>Secure Computation and Storage</td>
<td>Area I</td>
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CSE Graduate Breadth Requirement Completion Form

Student: ________________________________  PeopleSoftID: __________________________
Major Advisor: __________________________

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Term</th>
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<tbody>
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<td>Area I</td>
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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.