

# CSE Ph.D. Breadth Requirements

Ph.D. students must complete three of the courses below—with average grade of at least 3.7—from three different areas:

## Area 1: Biomedical Informatics and Computational Biology

- CSE5800 Bioinformatics
- CSE6800 Computational Genomics
- CSE5810 Introduction to Biomedical Informatics

## Area 2: Algorithms, Complexity, and Theory

- CSE5500 Algorithms
- CSE5503 Theory of Computing

## Area 3: Security, Cryptography, and Privacy

- CSE5402 Network Security
- CSE5850 Introduction to cybersecurity
- CSE5852 Modern Cryptography: Foundations

## Area 4: Networks, Systems, and Performance

- CSE5300 Networking
- CSE5302 Computer Architecture

## Area 5: Machine Learning and Data Science

- CSE5713 Data Mining
- CSE5819 Introduction to Machine Learning
- CSE5820 Machine Learning
- CSE5825 Bayesian Machine Learning

**Credit from previous UConn coursework.** Any course from this list taken as part of undergrad studies in UConn, or an equivalent cross-listed undergrad course, may be counted toward satisfaction of the breadth requirements.

**Credit from coursework at other institutions.** Subject to approval by the Graduate Director, comparable graduate courses taken at other US institutions in which the student received at least an A- may be used to fulfill the requirements. In such cases, the courses taken at UConn taken to fulfill the remaining requirements must average to a 3.7.

**Effective date.** These requirements apply to students commencing graduate studies in the Fall semester, 2023, or later. Students who commenced studies earlier may either fulfill these requirements, or the requirements in effect when they commenced studies. Earlier program requirements are available on the CSE website.