DOCTORAL PROGRAMS IN COMPUTATIONAL SCIENCE AND ENGINEERING

Programs Offered by CCSE in Conjunction with Select Departments in the Schools of Engineering and Science

Computational Science and Engineering (http://catalog.mit.edu/interdisciplinary/graduate-programs/computational-science-engineering)

The interdisciplinary doctoral program in Computational Science and Engineering (PhD in CSE + Engineering or Science (p. 3)) offers students the opportunity to specialize at the doctoral level in a computation-related field of their choice via computationally-oriented coursework and a doctoral thesis with a disciplinary focus related to one of eight participating host departments, namely, Aeronautics and Astronautics; Chemical Engineering; Civil and Environmental Engineering; Earth, Atmospheric and Planetary Sciences; Materials Science and Engineering; Mathematics; Mechanical Engineering; or Nuclear Science and Engineering.

Doctoral thesis fields associated with each department are as follows:

- **Aeronautics and Astronautics**
  - Aerospace Engineering and Computational Science
- **Chemical Engineering**
  - Chemical Engineering and Computation
- **Civil and Environmental Engineering**
  - Civil Engineering and Computation
  - Environmental Engineering and Computation
- **Materials Science and Engineering**
  - Computational Materials Science and Engineering
- **Mechanical Engineering**
  - Mechanical Engineering and Computation
- **Nuclear Science and Engineering**
  - Computational Nuclear Science and Engineering
  - Nuclear Engineering and Computation
- **Earth, Atmospheric and Planetary Sciences**
  - Computational Earth, Science and Planetary Sciences
- **Mathematics**
  - Mathematics and Computational Science

As with the standalone CSE PhD program, the emphasis of thesis research activities is the development of new computational methods and/or the innovative application of state-of-the-art computational techniques to important problems in engineering and science. In contrast to the standalone PhD program, however, this research is expected to have a strong disciplinary component of interest to the host department.

The interdisciplinary CSE PhD program is administered jointly by CCSE and the host departments. Students must submit an application to the CSE PhD program, indicating the department in which they wish to be hosted. To gain admission, CSE program applicants must receive approval from both the host department graduate admission committee and the CSE graduate admission committee. See the website for more information about the application process, requirements, and relevant deadlines (https://cse.mit.edu/admissions).

Once admitted, doctoral degree candidates are expected to complete the host department's degree requirements (including qualifying exam) with some deviations relating to coursework, thesis committee composition, and thesis submission that are specific to the CSE program and are discussed in more detail on the CSE website (https://cse.mit.edu/programs/phd). The most notable coursework requirement associated with this CSE degree is a course of study comprising five graduate subjects in CSE.