COMPUTATIONAL SCIENCE AND ENGINEERING

Computational Science and Engineering (CSE) (https://computationalengineering.mit.edu/cse) allows students to specialize at the doctoral level in a computation-related field of their choice via focused coursework and a doctoral thesis through a number of participating host departments, including Civil and Environmental Engineering, Mechanical Engineering, Chemical Engineering, Aeronautics and Astronautics, and Nuclear Science and Engineering. The emphasis of thesis research activities is the development of new computational methods and/or the innovative application of computational techniques to important problems in engineering and science.

The CSE program is administered jointly by the Center for Computational Engineering (CCE) and the host departments. Students must submit an online application (https://gradapply.mit.edu/cse/apply/login/?next=/cse) to the CSE PhD program, indicating the department they wish to be hosted in. To gain admission, CSE program applicants must receive approval from both the host department graduate admission committee and the CCE graduate admission committee. See the website (http://computationalengineering.mit.edu/cseadmission) for more information about the application process, requirements, and relevant deadlines.

CSE students are expected to complete the host department’s degree requirements (including qualifying exam), except those relating to coursework in the major field of study, thesis committee composition, and thesis submission, which are specific to the CSE program and are discussed in more detail below.

Major Field of Study

The major program of study consists of at least five graduate subjects in computational science and engineering. A list of suitable subjects is available online (http://computationalengineering.mit.edu/sites/default/files/documents/CSE%20Approved%20Subject%20List.pdf). Subjects taken as part of an MIT SM degree can be counted toward this requirement. Doctoral candidates are normally expected to take their major subjects at the Institute. The specific subjects will depend on the student’s thesis topic and background, and will be approved by their thesis committee.

Thesis Requirements

The rules on the composition of the student’s thesis committee vary depending on the student’s host department. See the website (http://computationalengineering.mit.edu/cse) for more information.

In addition to the thesis approval required by the student’s host department, the complete thesis must be approved (signed) by the CSE program director. Original copies must be filed both with the host department and the CCE administration.

The title of the PhD degree awarded will vary depending on the student’s host department. See the website (http://computationalengineering.mit.edu/cse) for more information.

Inquiries

For more information about the CSE program, contact Kate Nelson (cse_info@mit.edu), Room 35-329, 617-253-3725, or visit the program website (http://computationalengineering.mit.edu/education).