



MIT Civil and Environmental Engineering
Master of Engineering, *Structural Mechanics and Design*

1.THG / Thesis Guidelines

The MEng thesis is the result of an individual research project conducted by each student in the program in close collaboration with their faculty thesis supervisor. Thesis research begins immediately upon arrival at MIT, and concludes in May with the submission of the signed thesis document. The official MIT deadline for thesis submission is **May 7, 2021**.

Research Requirement and 1.THG

1.THG is a subject associated with a program of research leading to the writing of a graduate thesis. Research plays an integral role in the graduate degree, and research effort is tracked through enrollment in 1.THG. This subject is associated with the laboratory, field, computational, or theoretical research undertaken by each student working with a faculty supervisor in CEE at MIT.

Graduate students are required to register for 1.THG every semester, and as part of this, meet with their supervisors on a regular basis. First-year students are required to register for 24 units of 1.THG and should meet with their supervisors on a weekly basis. Beyond first year, the number of credit hours is determined in consultation with the thesis supervisor. If a student is registered only for 1.THG during a term, the department recommends a load of 48 units. Through enrollment in 1.THG, students are formally graded on research performance each semester, in accordance with MIT Faculty Rules and Regulations 2.62.3.

The general process and timeline for conducting and writing the MEng thesis is as follows:

September-October 2020

Thesis topic exploration, preliminary literature review, meetings with potential supervisors, supervisor and topic selection.

November-December 2020

Thesis literature review completed, research question and methodology established, preliminary research results gathered, thesis outline started.

January-February 2021

Research methodology(ies) carried out, including numerical and computational work, physical experiments, etc. Students are expected to be present on campus during IAP conducting research.

March 2021

Final research results and analysis/interpretation completed, writing on all chapters initiated.

April-May 2021

Thesis writing, revising, editing, and submission.

Students will work closely with their thesis supervisors and CEE faculty throughout all steps of the thesis process. As part of the 24 1.THG units completed in the program, students will have milestones, deadlines, and presentations to ensure steady progress and to share thesis research and results with their peers and supervisors.

Outside of meetings with supervisor(s), most thesis activities related to 1.THG will take place weekly with Professors Mueller and Ochsendorf in Academic Year 2020-2021. A detailed schedule for the 2020-2021 academic year is given below.

Key 1.THG Dates and Assignments, Fall 2020

11 September 2020, 12pm-2pm, Location TBD

Thesis introduction by CEE faculty and MIT Libraries for MEng Students

25 September 2020, 12pm-2pm, Location TBD

Short research presentations by CEE faculty for MEng Students

2 October 2020

Preliminary literature review due on Learning Modules website

Select and annotate three scholarly publications representative of your interests and possible focus of the MEng thesis. A written paragraph devoted to each publication should summarize the completed research and propose future work that could be done toward the thesis. This document should be used in conversations with potential thesis supervisors.

16 October 2020

Thesis proposal signed by supervisor due to APO [cee-apo@mit.edu]

Prepare a one-page abstract proposing research for the MEng thesis. The abstract should introduce the topic, outline research methodology, and summarize the goals of the work. The thesis supervisor must also sign the cover sheet to indicate their agreement in supervising the proposed topic.

Submit signed copy of thesis proposal electronically.

6 November 2020, 12pm-2pm, Location TBD

Thesis progress presentations by each student

Prepare a 6-minute presentation using PowerPoint or similar software to introduce your research topic, review critical existing research in the same area, identify the original research question, outline the proposed methodology, anticipate results, and conclude with the impact of the work. Feedback on both the content and clarity of the presentation will be provided by CEE faculty.

11 December 2020

Thesis outline due to supervisor

Full thesis draft in outline form, including the five standard chapters: 1. Introduction, 2. Literature Review, 3. Methodology, 4. Results, 5. Conclusions. The first three chapters should be more filled out, including text and images, while the later chapters can include placeholders for anticipated content.

Key 1.THG Dates and Assignments, Spring 2021

5 February 2021, 12pm-2pm, Location TBD

Thesis progress presentations by each student

Prepare a 5-minute presentation using Powerpoint or similar software to give updates on your thesis research, following a similar format to the November presentation (with more focus on methodology and results). Feedback on both the content and clarity of the presentation will be provided by CEE faculty.

19 March 2021

Progress thesis draft due to supervisor

Expansion on thesis draft outline from December, including substantial updates to Literature Review, Methodology, and Results. Your supervisor will give comments and feedback in person and/or in writing on your draft.

16 April 2021

Full thesis draft due to supervisor

Near-final thesis draft with all chapters written, and results completed, analyzed, and interpreted. This deadline is critical to receive final feedback from your supervisor.

30 April 2021

Final thesis draft due to supervisor

Finalized thesis that has been copy-edited, formatted according to MIT Guidelines (<https://libraries.mit.edu/archives/thesis-specs/>), and thoroughly reviewed by the student for legibility, clarity of arguments, and overall quality. This is the final version to be approved by the supervisor prior to printing and submission.

7 May 2021

Thesis submission deadline

14 May 2021

Final thesis presentations by each student

Highlights from thesis research are shared by each student in a program symposium celebrating the year's work, followed by a reception.

