

**Graduate Thesis Research Policies and Guidelines**  
Department of Aeronautics and Astronautics  
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**Summary**

Research is an integral part of the graduate curriculum at both the master's and doctoral level in the Department of Aeronautics and Astronautics at MIT. From the beginning of a student's graduate program, all students should be actively engaged in the pursuit of research that eventually will culminate in a thesis. Two requirements that recognize and support the central role of research in our graduate program are:

1. All graduate students must register for 16.THG every semester. The number of credit hours of 16.THG should be appropriate to the student's situation and should be agreed upon by the student and advisor upon registration each semester.
2. For the Fall and Spring semesters, a formal research progress evaluation will be conducted between the student and advisor in the process of assigning a grade for 16.THG. This progress evaluation is administered through a web-based system maintained by the department's academic programs office.

Since the activities involved in the pursuit of thesis research will vary during a student's graduate program, the objectives and as well the credit hours for 16.THG will also vary. This document provides some guidelines for setting 16.THG objectives and credit hours.

**16.THG Objectives**

At the beginning of graduate studies, many students will need to define a research topic. During this time, a student may be discussing potential research topics with various faculty, reading background literature, starting a research project with his/her initial advisor, etc. Often, students funded by a Research Assistantship will have a well-defined research project that may lead to a thesis and begin working on it immediately. This initial research definition phase applies equally to SM and PhD-level students, though PhD-level students are expected to take most of the responsibility for defining a research topic. By the end of the second/third semester for SM/PhD students, the research topic should be well defined and the remainder of a student's graduate program will be directed towards successfully achieving the research goals.

First-term graduate students should meet with their advisors on or near Registration Day to set research (and therefore 16.THG) objectives and agree on the number of 16.THG credit hours (see below). For subsequent terms, objectives will be set as part of the preceding term's research progress evaluation.

**16.THG Credit Hour Guidelines**

The following are guidelines to help students and advisors in determining the number of 16.THG credit hours to register for.

- Credit hours at MIT represent the average number of hours per week the student will spend on a particular subject. 16.THG credit hours should be based upon the number of

hours per week the student expects to spend on research that could contribute to his/her thesis (i.e. thesis research).

- The expectation is that all students at any point in their graduate studies should be spending an hour or more per day in the pursuit of thesis research. Thus, the minimum recommended number of 16.THG credit hours is 6.
- A Research Assistant (RA) is a 20-hour per week employment relationship. In many cases, a portion of the work performed as a RA is relevant to the thesis topic the student is pursuing. Thus, the time spent performing RA duties and time spent on thesis research are often not distinct and the potential overlap should be considered when registering for 16.THG.
- A Teaching Assistant (TA) is also a 20-hour per week employment relationship. However, TA duties are less likely to contribute directly to thesis research.
- For both RA-funded and TA-funded students: 24 units of coursework are considered a full load, and this is the maximum recommended to allow students sufficient time to fulfill their employment duties. In addition, the maximum number of combined units for coursework and 16.THG is recommended to be 36 units (e.g. 24 units of coursework and 12 units of 16.THG).
- For students without RA and TA support, a larger number of units (coursework and 16.THG) can be registered for. A recommended range of credit hours for these students is between 48-60 units (e.g. 24 units of coursework and 24-36 units of 16.THG, or 36 units of coursework and 12-24 units of 16.THG).
- For students who have completed the coursework requirements for their degree it is typical to register for 24 units of 16.THG (for RA- and TA-funded students), and 36 units of 16.THG (for those with fellowships or external support).

### **16.THG Grading and Outcomes**

For all semesters except that in which the student graduates (and therefore submits the thesis), 16.THG grades are either a J or a U. The definitions of these grades from the MIT Bulletin are:

J: Notation assigned for work such as thesis, UROP, Special Topics, or At Plant registration (internship or industrial practice), which has progressed satisfactorily, but has not been completed.

U: Notation for thesis work that has not been completed and in which progress has been unsatisfactory.

If a student receives a U grade, the department Graduate Committee will discuss with the student's advisor, and seek input from other faculty as needed, to determine if the student should also receive a warning from the Dean of Graduate Education. Typically, a student receiving two warnings from the Dean will be asked to withdraw from graduate school.