

POLICIES AND PROCEDURES FOR GRADUATE ADVISING

Department of Aeronautics and Astronautics

Approved (7-January-2005)

Summary

Policies and procedures relating to the advising of graduate students in the Department of Aeronautics and Astronautics are described below. These have been developed by the Graduate Committee in response to gaps in our present processes which have led to uncertainty, for both students and faculty, concerning the appropriate actions to take. Further, this uncertainty occurred often in instances associated with deadlines (such those for graduation) that put additional pressure on those affected. The new policies and procedures define the advising guidelines in a more specific manner. They are aimed at directly addressing the circumstances that have caused difficulty as well as at increasing the consistency of the advising process for the students in the department.

The rationale for these new policies and procedures is as follows:

- 1) There have been examples in the past where graduate program policies and procedures have not been followed by students, thesis committees, and thesis advisers.
- 2) Although a strong research component is a major highlight of our graduate program, the program is at heart an educational experience, albeit a very different one from the undergraduate experience.
- 3) MIT *Policies and Procedures* explicitly highlights the role of faculty members, Professors of the Practice and Senior Research staff in the educational mission of the Institute¹.
- 4) We therefore seek to align department practices with the policies and procedures of the Institute and place the primary responsibility for graduate education with faculty members, Professors of the Practice and Senior Research Engineers, and to extend this responsibility to others only under the approval of the department headquarters.

The document sets out different roles in the advising of doctoral and master's level students, describes the attributes of these roles, and then defines those individuals who are eligible to fulfill the roles. The policies and procedures described are in effect for *all* incoming students who enter in the Fall Term of calendar year 2005 or later, and for those students currently enrolled in the SM program who will be starting their doctoral program anytime in the Fall Term of calendar year 2005 or later.

Advising of Doctoral (PhD and ScD)² Students

There are several different roles connected with the advising of, and the thesis committee participation with, doctoral students.

PhD Committee Chair

The PhD thesis committee chair plays a role as department academic representative on the committee. The role is a management function in addition to an intellectual one. The PhD thesis

¹ The fundamental linkage between education and faculty is expressed succinctly in MIT's *Policies and Procedures*: "Educational policy for the Institute is determined by the Faculty."

² The term PhD will be used throughout for simplicity, but it should be understood that the relevant comments also apply to the ScD degree

committee chair *must* be a faculty member³, emeritus faculty member, Professor of the Practice⁴, or Senior Research Scientist/Engineer/Associate⁵ in the department. Note: The Thesis Committee Chair will frequently also be the Thesis Advisor. These two roles are not exclusive.

PhD Thesis Advisor

The PhD Thesis Advisor is the main intellectual advisor for the thesis research. Faculty members, emeriti faculty, Professors of the Practice, and Senior Research Scientist/Engineer/Associates are eligible to be PhD thesis advisors. Principal Research Scientist/Engineer/Associates are also eligible *providing they have the written permission of the Department Head or Deputy Department Head*⁶. The approval needs to be done only once for a given Principal Researcher, but it is subject to review on a periodic (yearly at the least) basis, under advice from the Graduate Committee. The request to be a PhD thesis advisor should come from the Principal Researcher and, if appropriate, from faculty members with whom he or she interacts. The qualification for a Principal Researcher to be a PhD thesis advisor is extensive successful experience in advising at the MS level and demonstrated commitment to, and understanding of, the graduate educational process.

Current Principal Researchers who are PhD thesis advisors of students at the time this policy is put into effect (February 2005) are grandfathered for those specific students only. For any additional doctoral students the written permission must be in place.

PhD Thesis Committee Member

The thesis committee must have at least three members. *Two of these must be MIT faculty members, including emeriti faculty, or Professors of the Practice in the major field*, i.e., two faculty who are familiar with the field and are expected to contribute to the research. The other committee members may be MIT faculty, MIT research staff, or individuals who are familiar with the field from industry, government, or another university. The advisor for the minor field (the so-called "minor advisor" as formerly denoted) does not count as one of the two faculty members needed for the committee.

Advisor for the Minor Field

The Graduate Committee does not see a strong need for having a minor advisor who is attached to each thesis committee. The purpose of the minor advisor is to ensure that the minor courses form a coherent whole. The Minor Advisor can be any active MIT faculty member. The Minor Advisor will review and formally sign-off on the *Minor Proposal Form* the subjects proposed by the student. Only G or H-level courses are acceptable for this requirement and there must be agreement by the Thesis Committee that the minor field is sufficiently different from the major

³ Faculty members, as defined in *Policies and Procedures*, include only Professors, Associate Professors, and Assistant Professors

⁴ *Policies and Procedures* emphasizes the connection of Professors of the Practice with education in the statement that they "demonstrate a deep commitment to teaching and research".

⁵ Senior S/E/A are academic staff, a different category from other research appointments. Specifically, as stated in *Policies and Procedures*, "Senior Research Scientist, Senior Research Engineer, and Senior Research Associate are the senior positions in the campus research staff structure and for that reason have been designated academic staff positions with special status and prerogatives."

⁶ An Associate or Assistant Head, as has been the case in the past, would also be able to sign off for this.

field. The minor advisor will typically not be a member of the Thesis Committee unless he/she can also advise in the major field of study.

Advising of Master's Degree (SM) Students

SM Thesis Advisors

Faculty (including emeriti), Professors of the Practice, Senior Researchers, and Principal Researchers are eligible to be SM thesis advisors.

Senior Lecturers can be SM thesis advisors, but there needs to be a faculty member in the department who will read and co-sign the thesis. The appropriate individual in the department should be identified, and confirmed in writing, by the end of the first month of the term in which the thesis is to be completed. If a student has not identified an individual in the department who has agreed to co-sign the thesis they are not eligible to be put on the degree list. Non-compliance with the above deadline thus carries with it the risk that no departmental faculty will be able to co-sign. This rule cannot be waived or petitioned and it is the student's responsibility to see that the arrangements are made.

With the objective of increasing the consistency of the SM advising (and as has been done for the PhD), all SM theses with supervisors outside the department who are not MIT faculty members must be read and signed-off by an individual in our department who is eligible to be a PhD committee chair. The appropriate individual in the department should be identified, and confirmed in writing, by the end of the first month of the term in which the thesis is to be completed. If a student has not identified an individual in the department who has agreed to co-sign the thesis they are not eligible to be put on the degree list. Non-compliance with the above deadline thus carries with it the risk that no departmental faculty will be able to sign. This rule cannot be waived or petitioned and it is the student's responsibility to see that the arrangements are made.

SM Students working at Draper⁷

Theses for SM students at Draper are generally signed by the technical supervisor plus a faculty member in the Department of Aeronautics and Astronautics. If the student does not have a department faculty member to read and co-sign, the thesis must be signed by the technical supervisor and one of the specified department affiliates at Draper. As of this writing, there are only three individuals who are eligible: Milton Adams, George Schmidt, and Brent Appleby.

To minimize surprises in the process, the participating department faculty member should be engaged early in the definition of the thesis, in collaboration with the Draper technical supervisor and the student. At the least the department faculty member should be identified and confirmed in writing by the end of the first month of the term in which the thesis is to be completed. If a student does not have a department faculty who will co-sign the thesis they are not eligible to be put on the degree list. Non-compliance with the above deadline thus carries with it the risk that no departmental faculty will be able to sign. This rule cannot be waived or petitioned and it is the student's responsibility to see that the arrangements are made.

⁷ PhD students working at Draper are subject to the same thesis committee requirements as those for other students in the department.