*Massachusetts Institute of Technology*

# TASK FORCE ON THE UNDERGRADUATE EDUCATIONAL COMMONS

**Balancing the Majors and the GIRs**

*Introduction to the Subcommittee v.2*

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## I. Subcommittee Membership

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## II. Background

Although the Task Force has been asked to review the common educational experience of MIT undergraduates, it has become clear that it would be difficult to recommend improvements to the general educational experience without addressing the relationship between the general educational program and the department program. In the past, efforts by faculty committees to introduce improvements to the general Institute requirements have met with some resistance by departments concerned about compromises to their major programs. (A number of undergraduate programs – particularly in some of the Engineering departments – are professional in nature and therefore subject to accreditation standards.) The tension has been growing between the needs of departments to provide a comprehensive education in four years and the desire to retain the rigorous set of Institute requirements in science, mathematics, and humanities, arts and social sciences. The new paradigm of cross-disciplinarity in many fields, coupled to an expanding base of knowledge, has led to increasing concern about the amount of material that is being required of today's MIT students; the recent introduction of the Communication Requirement has exacerbated this tension.

At present, Faculty rules specify that a departmental major should require at most 11 subjects and 132 units (and, with permission of the CoC, a maximum of 12 and one-half subjects and 150 units). With allowable overlap with GIR subjects, many Engineering programs have reached the allowable limits of 15 and one-half subjects and 198 units. In most cases, the REST and Institute Laboratory Requirements have been co-opted by the departmental programs, resulting in a compromise of the original spirit of these requirements. In addition, it appears that some departmental programs are unable to meet the Faculty rules with respect to students joining the major late and the yearly maximum number of subjects. Finally, some departments may have found it necessary to lower units in individual subjects in order to keep their program size below the upper limits.

Some additional concerns that have risen with respect to the balance between the major program and the GIRs include the following:

- *Many departments have argued that they would like to be able to provide first year students with exposure to the variety of areas they might consider as majors.*

- *Some faculty have suggested that the HASS requirement be reduced* in order to provide students more free choice. Others have suggested that the HASS requirements or other GIRs be reduced in size to provide departments more time for the major program.

- *There is increasing expectation that that the Science and Math GIRs be more instrumental in providing the necessary skills and understanding for particular majors.*

- *There is a marked increase in the number of students taking double degree programs which may be related to the increase in the amount of AP credit being awarded at entrance.* Students attempt to complete these programs in four years, something that may encourage overloading in the earliest years.

- *Many faculty are expressing concern that students do not have enough time to master their learning and become mature learners.* The combination of the Institute requirements and the departmental programs have resulted in too much work, or the sense among students that they never have time to think about what they are learning. At a recent meeting with Engineering faculty, this was described as the problem of "the tyranny of content," where each course instructor feels that what is taught in his/her subject is most important and should take the bulk of a student's time.

- *MIT faculty work significantly more hours than they did a decade ago.* This pressure on faculty to be innovative and productive is what has made MIT great but has resulted in another set of concerns for the Task Force related to MIT's ability to sustain innovation in cross-disciplinary educational activities (not to mention concerns about the burnout of both faculty and students).

## III. Charge

1) Faculty policy specifies that students should be able to take "only one or two of the appropriate departmentally prescribed subjects during their first **two** years [and still] complete their degree requirements in a normal four-year period." Does practice bear this out? Should it?

2) Is it still possible for MIT engineering departments to produce professionally-accredited engineers in four years within our present requirements and the increase in the departmental programs? Should we consider five year programs?

3) What is the value of offering double degrees? Are double majors more manageable?

4) Are the current REST and LAB requirements necessary as parts of the GIRs? In most cases, these requirements are captured by the departmental programs; as they are presently used, what is their value to the common educational experience?

5) Should the current accounting system for units and subjects – as well as for degree programs and Institute requirements -- be revamped?

6) Should MIT continue to award MIT subject credit for Advanced Placement exams? Some peer institutions award subject placement only: is this an option worth considering?

7) The Task Force is committed to the notion of encouraging students to be more reflective, mature learners. It has been suggested that students' semester course loads be capped at some maximum or that there be reductions in the total workload required by the GIRs and the departmental programs. Do these ideas have merit?

8) If the Task Force recommends the development of new sorts of educational initiatives that cut across traditional departmental and School boundaries, how can these be developed and sustained? Faculty are already overloaded with departmental and research commitments, so how can they be motivated to contribute to a revitalized commons education?

9) Finally, should there be an institutional strategy for the freshman year based on a well-defined set of goals for the freshman experience? For example, should the freshman year have an explicit, carefully designed and centrally managed range of curricular offerings that are considered preparatory for the following three years of undergraduate education? How might students be better introduced to disciplines and areas of study available to them before they select a major? What might be the role of departments in the first year experience? How should departments and those with responsibility for the GIRs maintain open and effective communications?

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