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To: Professor Robert L. Jaffe, Chair, Committee on the Undergraduate Program

From: Charles Stewart III, Chair, Subcommittee on P/NR Grading and AP Credit Policy

Date: January 3, 2001

Re: Response to requests for further consideration

Dear Bob,

I am writing on behalf of my subcommittee to provide a response to your memo of November 28, 2000, in which you asked for further clarification and comment on areas related to the subcommittee's business. I will proceed seriatim.

1. Exploratory subjects

We welcome the opportunity to clarify the whole subject of Exploratory Subjects. This was the one major reform recommended by the subcommittee virtually *de novo*, and we have therefore benefitted considerably from the various comments that the proposal has elicited.

Before replying to your specific questions, we want to step back and clarify the origin of the recommendation and the broad goals to which it aspires.

The architects of the original Pass/Fail grading system hoped it would encourage freshmen to explore the academic riches of MIT. Academic exploration is a goal enthusiastically embraced by the subcommittee. After considering thirty years of experience with Pass/No Record grading, the subcommittee came to the unfortunate conclusion that the freshman grading system, on net, *discourages* academic exploration. It does this by encouraging a significant fraction of our students to take a fairly narrow range of subjects, to "get them out of the way" under Pass/No Record grading. However, this conclusion did not lead us to abandon the goal. Rather, it led to consider how the grading system might be better designed to encourage exploration.

Within the confines of the freshman year, we believe A/B/C/No Record in the spring term will encourage freshmen to take a more varied set of subjects, since the current set of subjects that students try to “get out of the way” is limited in number. Yet, our deliberations also led us to consider the sophomore year and how the transition begun in the freshman year could more profitably be extended into the next. That led us, in turn, to consider more directly the sophomore year, when the structure of the curriculum actually thrusts MIT undergraduates onto new terrain.

The practice at MIT is for freshmen to choose majors at the end of the first year, and for students to begin their major programs in the first term of the sophomore year. Many undergraduates designate majors without ever taking a subject in their chosen field. Without any direct experience in a likely major or strong opinions about what academic field they wish to pursue, many undergraduates naturally follow the line of least resistance, picking the largest majors to start off in. Once the sophomore year gets going, the error of this strategy is revealed, leading to a substantial churning of majors, as sophomores move (on net) from the larger majors to the smaller majors.

One consequence of a significant minority of our sophomores choosing the incorrect major is that some of them end up with a significant blot on the transcript—poor performance in the first subject of a major, a major which may be abandoned in light of that poor performance.

There is another perspective on this issue as well: As soon as one begins considering Pass/No Record grading at MIT in the freshman year, one is obliged to take passing notice of the Junior/Senior Pass/Fail grading option. That, in turn, draws attention to the fact that the sophomore year is alone in providing no grading respite for students who wish to take significant academic risks. If we admit to the utility of some form of Pass/Fail grading under certain circumstances, the lack of the option in the sophomore year is glaring and hard to justify.

Therefore, the subcommittee hoped to further the following goals through the Exploratory Subject proposal:

- (1) Encourage academic exploration in the sophomore year, just as the grading system encourages exploration in the freshman, junior, and senior years.
- (2) Encourage sophomores to consider *unconventional* majors at the start of the sophomore year.
- (3) Provide an insurance policy against bad academic choices that are made with the best of intentions.

In pursuing these goals, the subcommittee wanted to avoid the “moral hazard” problems that have developed in the Freshman Pass/No Record system. That is, the subcommittee tried to avoid inappropriate gaming of the Exploratory Subject choice. It did this by raising the cost to the student of

“hiding” the grade at the end of the term. The higher cost, of course, is the fact that the grade can only be hidden by forfeiting academic credit for the subject.

As we have digested responses to our Exploratory Subjects proposal, we continue to be convinced that the faculty should provide some positive inducements to encourage undergraduates to try out new academic directions in the sophomore year—as much as we wish such inducements weren’t necessary.

With this as background, therefore, we can address the questions you posed concerning the Exploratory Subjects:

Dates: When should ES’s be designated? How late could they be dropped? An interesting suggestion was to replace the ES option with a “drop after final option” for a single course in the sophomore year. It was asserted that this would not be likely to be “gamed” because students rarely have more than one “expendable” course on their schedule.

It would be most consistent with our goals for Exploratory Subjects to require that they be designated on Registration Day. We would also not allow students to change their selection of an Exploratory Subject after Registration Day. (If no Exploratory Subject is designated on Registration Day, a subject added before Add Date could be designated Exploratory.)

Designating Exploratory Subjects on Registration Day would encourage a sophomore to discuss the designation with her or his advisor, and to think about Exploratory Subjects in context with the rest of the schedule, which is consistent with our belief that these subjects should be chosen systematically and in light of all other academic choices.

Simplicity and the 3rd and 4th year: It would be much simpler to have a single option for each year after the first. Would you consider expanding your proposal to include an ES option in place of the present junior-senior P/F option? On the other hand, what about the option of P/F in the sophomore year in place of the ES option?

The subcommittee agrees with this point about simplicity. Most of us favor dropping the current junior-senior P/F option, replacing it with an Exploratory Subject available *each semester* beyond the first year.

Focusing first on the sophomore year: A number of people have been concerned about our original proposal, which was for one Exploratory Subject in the sophomore year. Students might be reluctant to “waste” an Exploratory Subject in the fall term, in hopes of using it more productively in the Spring. We wish to encourage exploration, not inordinate gaming of a new feature of the grading system.

Therefore, it seems wise to extend the Exploratory Subject idea to one subject in each term of the sophomore year, to encourage exploration and discourage gaming. The entire subcommittee is in agreement on this point.

This brings up the junior and senior years. Here, most of the subcommittee see value in replacing the present junior-senior P/D/F option with the new Exploratory Subject option, allowing the option to be exercised in *each term* of the junior and senior years. This change is supported for two reasons. First, we worry that the current P/D/F option encourages students to devote only enough attention to subjects so that they can receive a C. Most of us are uncomfortable with encouraging minimal academic engagement with subjects. Instead, we would like to propose that the overarching philosophy associated with all “pass/fail” options at the Institute be the same: these options are intended to serve as an insurance policy against failure when an academic choice is made under limited information, rather than an opportunity to expend minimal effort in an academic field. Second, we believe that a single “pass/fail” option should be available beyond the freshman year, and consider the Exploratory Subject option to be generally preferable to the P/D/F system as that single option.

An alternative to the Exploratory Subject proposal would be to extend the junior-senior P/D/F option back into the sophomore year. However, this would not serve the goals we are trying to achieve at all. One goal we are trying to pursue is getting students to take more risks in their initial declaration of a major. Yet, a major deficiency of the junior-senior P/D/F option is that it may not be used in subjects that are required for the major. This leaves the option available only to subjects that fulfill unrestricted electives. In the sophomore year, what students need to explore is not unrestricted electives, but their major academic paths. The proposed Exploratory Subject idea seems perfectly adapted for exploring majors and other new educational directions.

Previously I noted that most of the subcommittee favor an extension of the Exploratory Subject idea into the junior and senior years, but not all. Some members of the subcommittee believe that the junior-senior P/D/F option fulfills a different goal than what we suggest for Exploratory Subjects. They prefer to keep the two separate. So long as students do not game the grading system, the P/D/F option encourages greater risk-taking. These subcommittee members worry that if juniors and seniors are faced with the choice of accepting a C on their transcript or seeing “Listener” entered instead, they may simply forego the opportunity to explore, and play it safe. This would result in the overall loss of academic exploration, in their view.

Seen a slightly different way, some subcommittee members (and many students) view the junior-senior P/D/F option as somewhat of a hard-earned entitlement which allows these students to consider novel intellectual excursions in a low-stress environment. To the degree this is true, then replacing the P/D/F option with the Exploratory Subject idea is taking away an important benefit to upperclass students.

The entire subcommittee is concerned about the role that *any* “pass/fail” option might have in the academic overloading of students. The subcommittee members who oppose extending Exploratory

Subjects into the upperclass years are especially concerned that it would exacerbate this problem. Nonetheless, it is a concern the entire subcommittee shares, in one form or another.

Advising: We are concerned about the role of the advisor in designating and tracking exploratory subjects.

One consequence of our recommendation that Exploratory Subjects be designated on Registration Day (and no later than Add Date) is that they must be designated with the active involvement of the academic advisor. This would facilitate a full discussion between the student and the advisor about the use of the Exploratory Subject option.

How would you react to separating the freshman grading proposal from the exploratory subject proposal, for example as two separate motions? Do you regard them as integral?

The Exploratory Subject proposal is integral to our overall thinking about our charge, and therefore we would be disappointed if the proposal were not presented to the faculty along with the proposal to change the freshman grading system. The primary theme in the subcommittee's work has been providing for a better path of transition from high school to MIT. We believe the Exploratory Subject complements the change in the freshman grading system, reducing some of the stress associated with the sophomore year at the same time some new pressure is added in the spring of the freshman year. Another theme in the subcommittee's work is that the MIT faculty need to encourage students to take risks and to succeed in new ventures. The current Pass/No Record system is a failure with respect to encouraging academic exploration. It would be unfortunate to abandon the goal of encouraging exploration because the *current* instrument is defective. We simply believe the Exploratory Subject idea is a better and more appropriate grading inducement for exploration.

The adoption of either of the two proposals without the other would represent a major lost opportunity. We hope that the motion to the faculty will incorporate both proposals simultaneously. However, prudence dictates that the motion be drafted so that if anyone desired it, the two proposals could stand on their own for separate votes.

Finally, we briefly reviewed the memo from the Registrar, Mary Callahan. She raises a number of administrative issues that we feel can be resolved routinely. Most generally, we suggest that in administering the Exploratory Subject system, the Registrar begin with the deadlines, etc. that pertain to the current junior-senior P/D/F system, and work from there.

One detail in administering the Exploratory Subject proposal that has no parallel with the current junior-system P/D/F system is allowing the student to change an Exploratory Subject to Listener status "at the

end of the term.” It seems appropriate to set the deadline for exercising the option for this status change on the Registration Day of the next term. For graduating seniors, an appropriate deadline that already exists—perhaps the deadline for submitting theses—should be chosen as the option date. By default, the letter grade would stand if the student took no action.

2. Prerequisites

We have interpreted your proposal as follows: The faculty should have the right (and mechanisms should be provided) to designate strict prerequisites for their subjects and to refuse registration to students who don't meet them. If so, this does not require new wording in Rules and Regulations of the Faculty. Rather a motion approved by the faculty could direct the appropriate faculty committees and administrative offices to make this possible.

Is this consistent with your intentions?

We think it will be necessary to provide this option in all subjects whether they are aimed at freshmen or not, although we do not expect it to be used much in advanced courses. What is your reaction?

The subcommittee agrees with all of these sentiments. We hasten to add that we assume that faculty members will rarely, in practice, refuse registration to students who have not fulfilled a subject's prerequisites. It will rarely be necessary for a faculty member to seek assistance from the Registrar to enforce prerequisites. It is insufficient to target the enforcement of prerequisites at subjects aimed at freshmen because many of the problems that have been identified have been with freshmen taking overly-advanced (i.e., non-freshman) subjects. At the same time, we have not heard many complaints of upperclass students taking classes without the appropriate prerequisites, but we have heard some faculty voice support for their right to decide to exclude such students if they think it appropriate.

In the end, we simply wish to clarify the right of faculty members to enforce the prerequisites that appear in the *Bulletin*, and for them to seek the aid of the Registrar in doing so.

We wish to underline why it is important that the Registrar's Office become officially involved in enforcing prerequisites. By involving in the Registrar's Office, it becomes possible to remove students who have not satisfied prerequisites *before class schedules are established*. Otherwise, faculty members are forced to resort to excluding students without the appropriate prerequisites on the first day of class, or later. This alternative is disruptive to the class, and is sub-optimal from the perspective of establishing individual students' schedules.

The existing administrative structure at MIT is sufficient for dealing with exceptions that will arise from this recommendation—particularly with situations in which it is proper for a student who has not

completed a subject's prerequisites to take the class nonetheless. Students can always petition instructors to disregard posted prerequisites. Nothing in our recommendation would stop a student from seeking the "permission of the instructor" to take any subject. Students who feel aggrieved may always appeal to the department head. In extraordinary circumstances—such as when a faculty member enforces prerequisites arbitrarily or capriciously, or when a faculty member enforces prerequisites that have not been approved by the Committee on Curricula—the student can appeal to the Chair of the Faculty. There is no need to establish a new structure to process the few exceptions that will emerge each year when prerequisites are enforced.

3. No external record

We could use some clarification of the meaning of the phrase "no external record." We recognize that this problem already exists with the present freshman grading system, but believe you may have a clear perspective.

Who can access the "internal record?" Is it still the intent that these are for advising purposes only? Can others within the MIT community (prospective UROP employers, ROTC, scholarship reviews) view internal grades without explicit permission from the student?

The subcommittee feels strongly that the only legitimate purpose for reporting the hidden grades of a student is for advising. The "no record" part of Pass/No Record is a strong statement by the faculty that the letter grade received in the freshman year is entirely between the student, the instructor, and the student's advisor. It is a statement that the Faculty as a whole will guard all students against the negative consequences of a poor freshman grade, whether the negative consequences be revealed to the outside world *or* to third parties at the Institute.

To be clear: It is inappropriate for MIT to share "hidden grades" internally with prospective UROP employers, ROTC, scholarship reviews, internship sponsors, etc.

Finally, it *is* appropriate for the Committee on Academic Performance (CAP) to inquire about hidden grades when it is considering individual cases at the end-of-term, because we regard the work of the CAP as an extension of the advising system in the freshman year. Beyond the semester under immediate review, however, even the CAP should not consider the past hidden grades of students.

We are greatly concerned about the slippery slope that MIT has already approached, in response to the outside world's desire to peer at hidden grades. For many years, at least one major medical school has threatened not to admit MIT graduates unless MIT provides a complete record of hidden grades. MIT has responded by creating a system in which the *Registrar* does not release hidden grades, but in which the student arranges for individual statements from each instructor or department about her or his freshman grades to be released to another office at the Institute, which then forwards the reports along.

(Students who want to provide the hidden grades for other purposes can employ this process, as well.) The subcommittee is uncomfortable even with this arrangement. With roughly one-quarter of our undergraduates considering themselves pre-med, pressures from medical schools could easily undermine what the Faculty are trying to achieve through the use of Pass/No Record grading in the freshman year.

We dislike students being encouraged, if not coerced, to share their hidden grades with outsiders. If allowed to work to its logical conclusion, this practice threatens to undermine the integrity of the system. We wish to avoid getting to the position in which it is assumed that if an MIT undergraduate exercises his or her rights to shield hidden grades from outsiders, that student must have done poorly as a freshman. The integrity of the Pass/No Record system involves the cooperation of both faculty *and* students in guarding against this eventuality.

We recognize that there may be cases where maintaining an absolutist stance about the release of hidden grades to parties other than the student and advisor could harm our students, such as in the medical school case. Authority for deciding when and how hidden grades will be shared with third parties should be jealously guarded by the Dean for Undergraduate Education, who should carefully scrutinize all proposals to get around the strictest confidentiality of hidden grades. Exceptions to a narrow reading of this hidden grade policy should rarely be made.

Who holds the official record of hidden grades? It would help to have some clarification in this area, particularly with respect to the role of the Registrar's office and the academic departments. Should a new, more uniform standard exist for assigning, recording, and tracking hidden grades for (first semester) freshmen? Once there is clarification on this point, an implementation team can draft the new guidelines for the use of hidden grades.

Individual academic departments should continue to hold the official record of hidden grades. In addition, the Registrar should maintain hidden grades in perpetuity so that they may be used for aggregate analysis and planning. The CUP should redraft the current guidelines concerning the use of hidden grades and, once approved, the Dean for Undergraduate Education should ensure that these grades are made available for institutional research while being guarded against inappropriate uses.

4. GPA

We understand that you intend that the student's GPA would begin to be computed in the second term of the freshman year. Students seem to be particularly uneasy with this recommendation and ask that you clarify for us the benefits of this change.

Our recommendation that the GPA begin to be computed in the second term of the freshman year was made after several discussions of the matter, in which we alternately found ourselves taking both sides of the question. In weighing both sides of the question, we eventually came down on the side of calculating the GPA starting in the spring of the freshman year.

There are two major problems that have been identified with beginning the GPA calculation in the freshman year. First, because the calculation would omit any D's and F's received by a student, it is a biased summary statistic of the academic performance of any student with these grades in the spring term. Second, our report indicates that the average GPA for all freshmen is about 1/3 of a letter grade below that of upperclassmen, and thus students worry that including spring term grades would bring down cumulative GPAs.

On the other hand, there are two advantages to beginning the GPA calculation in the spring term. First, outsiders using the transcript will undoubtedly calculate it themselves using the freshman grades. Confusion is likely to reign if potential employers or graduate schools calculate a GPA for a student and then discover that the transcript reports another quantity. This, in turn, is likely to draw inordinate attention to the special freshman grading system at MIT among graduate schools and employers. Therefore, calculating it ourselves reduces confusion. Second, the *complaint* that including spring term freshman years grades in the GPA calculation biases the GPA upward can be used as an argument to allay the fears of undergraduates, at least somewhat. Roughly 6% of letter grades currently given to spring term freshmen are D's and F's. When these grades are excluded from the GPA calculation of freshmen, the aggregate GPA of freshmen rises to a level that is almost that of sophomores. Of course, we suspect that the number of D's and F's will diminish under the new grading system, and therefore this "bonus" will be smaller in practice. However, we also suspect that grades overall will shift upward in the freshman year spring term, and therefore do not believe this change will saddle our students with extremely poor freshman year GPAs.

5. AP credit

We have interpreted your report as a validation of the current system with some important qualifications and recommendations regarding faculty oversight and standards. Is this correct? Can you summarize your overview of the AP credit system in a brief form that could be communicated at a Faculty Meeting?

Your understanding of our overall conclusion concerning AP credit is correct. Granting advanced placement credit at MIT is a complicated thing; although the subcommittee had serious reservations about certain practices, we believed it unwise to recommend sweeping changes to advanced placement policy at the current time. Making it all the easier not to recommend sweeping changes at the current time is the fact that all of the departments involved in the Science Requirement have recently raised their standards for granting advanced placement credit. We recommend diligence in the oversight of granting advanced placement credit, and these departments are now doing that.

Yet a number of issues related to advanced placement policy still need to be addressed. We trust that by assigning responsibility for this policy explicitly to various faculty committees, these more thorny issues *will* be addressed in the near future.

We will certainly prepare a brief summary of the advanced placement credit system, including a list of unresolved issues, for presentation at an Institute Faculty Meeting.