

# MIT Faculty Newsletter

<http://web.mit.edu/fnl>

**in this issue** we offer several comments on MIT's policy toward Saudi Arabia (editorial and Letter to Associate Provost Lester below; Response to Professor Lester, page 5); short biographies of the candidates for the upcoming FNL Editorial Board election (page 8); an article by the MIT Office of Communications on the revised MIT website (page 14); and "A Plea for Integrity of the Grievance Process at MIT" (page 16).



Kingdom Centre, Riyadh, Saudi Arabia

## Letter to Associate Provost Richard Lester Regarding MIT Engagements with Saudi Arabia

Christopher Capozzola, Lerna Ekmekçiođlu,  
Malick Ghachem, Anne E. C. McCants,  
Kenda Mutongi, Hiromu Nagahara, Tanalis  
Padilla, Jeffrey S. Ravel, Craig Steven Wilder

15 January 2019

**WE WRITE AS HISTORIANS** and members of the MIT Faculty in response to your report to President Reif on MIT's current engagements with the Kingdom of Saudi Arabia (KSA). While we are not in agreement with your conclusions, we want to acknowledge the Administration's willingness to hold an open conversation with the MIT community about these matters. It is in this spirit of open exchange that we write.

MIT's relations with KSA before and after the March 2018 visit of Prince Mohammed bin Salman (MBS) trouble us deeply. The atrocities of the war in Yemen, and the internal Saudi repression

continued on page 4

## Core Values

Catherine Drennan, Linda Griffith,  
Haynes Miller, Peter Shor

**THE MIT SYSTEM OF** core science General Institute Requirements (GIR) is under threat.

This system was put in place in 1965, following a report of a committee led by Physics Professor Jerrold Zacharias. This system – two Mathematics subjects, two Physics, and one Chemistry, supplemented by the Laboratory Requirement and what became the Restricted Electives in Science and Technology, REST – replaced an earlier one that required four semesters each of Mathematics and Physics and two of Chemistry. Biology was added to the mix in the early 1990s, responding to the observation that more than a third of the research conducted at MIT was in the life sciences.

This system has served our undergraduates well. It provides the whole of the

continued on page 12

## Editorial Saudi/MIT Policy: Thoughtful Consideration, Wrong Conclusions

**WE APPRECIATE THE THOUGHTFUL** consideration of the issues relating to agreements between MIT and the Saudi monarchy and its agencies in the February 6 letters from Associate Provost Richard Lester and President Reif. However, the conclusions that they arrive at – to essentially continue the current relationships – are profoundly distressing, morally unsound, and not in keeping with MIT's mission and culture. We print in this issue two letters from our History colleagues (page 1) and Philosophy colleagues (page 5), both deep and detailed, of the many letters from faculty sent to Associate Provost Lester.

In response to President Reif's decision to continue the current relationships: There is little doubt that the Saudi monarchy is harshly authoritarian, with seemingly unchecked power currently in

continued on page 3

---

**Core Values**

Drennan et al., from page 1

---

MIT undergraduate student body with a set of common languages and experiences. In many cases the training offered by the GIR subjects provides essential and immediately useful prerequisite skills. But in all cases this diversity of modes of thought contributes to the intellectual evolution experienced by each one of our undergraduates.

The core science GIR courses constitute, in the words of Biology Professor Hazel Sive, a great gift to our undergraduates. Departments offering these subjects sacrifice strained resources and assign their best and most creative teachers to lead them. They have been the locus of much educational creativity over the years: think of Physics's TEAL and DMSE's 3.091 Goody Bags, for example. These departments have worked hard to establish links with faculty leading subjects that list the core science GIR subjects as prerequisites, trying to make the hand-off as smooth as possible.

MIT takes pride in the number of students from unusual backgrounds – first generation college students, international students. These students are especially well-served by the GIR system. Any young person arriving on the MIT campus in their first fall is deluged with a true firehose of information and choices. The difficulty of making this transition is proportional to the distance from the student's earlier experience. It is very reassuring, especially to the more vulnerable among them, to know that there is a pretty standard panel of courses designed specifically for first-year students.

In April 2017, the Office of the Dean for Undergraduate Education and that of the Dean for Graduate Education were abolished and their functions consolidated in a newly created Office of the Vice-Chancellor. The charge to the first and current holder of that office, Professor Ian Waitz, included a revision of the “first year experience.” One concern

driving the perceived need for a revision was the recent shifts in enrollments in majors, with significant growth in 6 (Electrical Engineering and Computer Science) and 2 (Mechanical Engineering) at the expense of other majors. The revision process was intended to identify and address possible underlying causes of this shift, including lack of opportunities to explore the full spectrum of majors in a meaningful way, the outsized influence of

time, including the proposed GIR changes. And indeed some of the innovations this year seem worthwhile and with few drawbacks: broadening the range of careers to which students are exposed through alternative career fairs (e.g., the Course 20 Career Expo), and “choosing a major” seminar subjects in spring term of freshman year.

But the major component of this experiment was a change in the use of the

The CUP rejected the more radical proposals related to the core science GIRs – which involved making the student's choice of one of the six core science GIRs optional – but authorized the “experiment” we have all witnessed this past fall. . . . The first thing to realize about this is that it represents a radical redefinition of the meaning of P/NR. In its original form, P/NR applies to a specific semester. It is designed to allow incoming students to find their feet and calibrate their efforts. It is widely appreciated by students and faculty alike.

the fall Career Fair, and others. The Vice-Chancellor commandeered much of the educational research capacity during the fall of 2017 to gather information about first-year programs elsewhere, and in the spring of 2018 led a course purporting to provide design proposals for a new MIT first year. This small and self-selected group of students, not necessarily representative of the MIT student body as a whole, was subsequently held up by the Vice-Chancellor as a kind of voice of the students, and its recommendations were used as foundation for several distinct proposals rushed through the Committee on the Undergraduate Program (CUP) over the summer of 2018.

The CUP rejected the more radical proposals related to the core science GIRs – which involved making the student's choice of one of the six core science GIRs optional – but authorized the “experiment” we have all witnessed this past fall. Faculty were polled about the experiment, and one of the signatories of the letter (LGG) supported the experiment at the

Pass/No Record grading option. This system, applying for the moment to the class of 2022 only, allows these students to elect to take any of the core science GIRs under the standard first-semester freshman Pass/No Record grading system at any time in their undergraduate career.

The first thing to realize about this is that it represents a radical redefinition of the meaning of P/NR. In its original form, P/NR applies to a specific semester. It is designed to allow incoming students to find their feet and calibrate their efforts. It is widely appreciated by students and faculty alike. Not so long ago, both semesters of freshman year operated under this grading system. This created serious problems of motivation in second semester freshmen. It was resented by many students because of the implicit lack of faith and because it failed to reflect the hard work most of them devoted to their subjects. Morale and performance in second semester of freshman year both improved dramatically when P/NR was restricted to the first semester.

But under this experiment, P/NR adheres to a specific set of subjects: the core science GIR subjects. The message is clear: The content of these subjects is not worth learning at better than a C level.

This designation reduces these courses, so central to the undergraduate MIT experience, to a set of annoying graduation requirements that one is expected to pay little attention to and delay taking until absolutely necessary. It's hard to see this as anything more than the first step in a campaign to discredit them and ultimately eliminate as many of them as possible.

And why? The ostensible reason is to allow freshmen to "explore," in order to make more well-informed decisions in their choice of major. This is an important objective, to be sure, but the cure provided by this experiment is poorly designed to meet this objective. There is evidence that the current freshman class has not been deferring these fundamental subjects in order to explore, but rather to simply get a head start in their preconceived major. And, after all, as many students seeing biology or chemistry as it is done at MIT may change their ideas about what they want to pursue: the core science course themselves are exploratory for them!

This new meaning of P/NR also has substantial problematic side effects. Here are a couple.

One: Instructors in subjects with large freshman enrollment have observed a marked increase in the number of students choosing to simply blow off the end of the course, including the final examination. They had their C, and that was that. The confidence that the course actually had some long-term educational value had been eroded by the persistent drumbeat that one should trim one's sails to the P/NR option.

Two: Many freshmen enrolled in subjects for which they were not quite prepared, feeling almost obligated to do so by

But under this experiment, P/NR adheres to a specific set of subjects: the core science GIR subjects. The message is clear: The content of subjects is not worth learning at better than a C level.

the persistent messaging emanating from the administration. They did OK, for the most part – they passed the course. But did they learn the material as well as they would have if they had taken things in the sequence that the course was designed for? Probably not. Will this decrease their confidence going forward in that major, or some other? Probably.

There has never been a requirement to take core science GIR subjects as freshmen. The messaging has been: do it as

early as possible, for many good reasons. The reversal of that message has a demoralizing and destructive effect. But the truth is that we do not know the long-term effect of this "experiment," and won't for quite a while.

We would urge the MIT committee structure to reject proposals to re-authorize attaching P/NR grading to core science GIR subjects. There are plenty of other ways to encourage students to think carefully about their choice of majors, ways without the deleterious effects of this one. We are glad to see some of the other

first-year experience experiments to help with major selection are now off the ground, and we look forward to positive outcomes from these efforts. ■

**Catherine Drennan** is a Professor of Chemistry and Biology ([cdrennan@mit.edu](mailto:cdrennan@mit.edu)); **Linda Griffith** is S.E.T.I. Professor of Biological and Mechanical Engineering ([griff@mit.edu](mailto:griff@mit.edu)); **Haynes Miller** is a Professor of Mathematics ([hmm@math.mit.edu](mailto:hmm@math.mit.edu)); **Peter Shor** is Morss Professor of Applied Mathematics ([shor@math.mit.edu](mailto:shor@math.mit.edu)).

---

## Commemoration of March 4, 1969: Scientists Strike For Peace

**FIFTY YEARS AGO**, on March 4, 1969, most research and teaching at MIT came to a halt, as students, faculty, and staff at MIT held a "Scientists Strike for Peace." The strike protested the continuing U.S. war against the Vietnamese people, and

university complicity in those policies.

These events will be commemorated this March 4th, with the showing of excerpts from the film "November Actions: Defiance at MIT, 1969." The film will be followed by a panel discussion

addressing ethics of artificial intelligence, MIT-Saudi relations, and impacts of MIT on local housing and life.

The event will be held at 4:00 pm in the Bartos Theatre, Building E15, 20 Ames Street. ■