# Strategic Plan for Graduate Advising and Mentoring at MIT

Final Report

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A supplemental document for recommended Tactics for each Strategy can be found <a href="here">here</a>.

### **Executive Summary**

This Strategic Plan provides a framework for MIT to achieve its <u>Vision</u> for excellence in graduate advising and mentoring and has three critical priorities:

 Provide to faculty, thesis supervisors, and graduate students professional development resources designed to promote excellence in mentoring and advising. The Center for Excellence in Graduate Advising and Mentoring will be the primary infrastructure and will be advised by an Institute Committee on Graduate Advising and Mentoring.

Center for Excellence in Graduate Advising and Mentoring

Advisory Committee

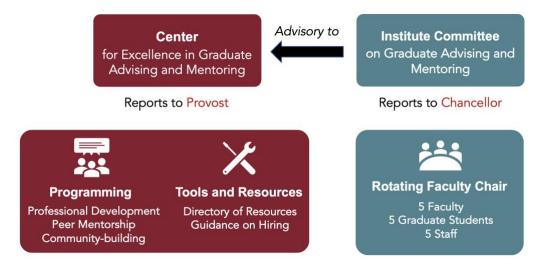
 Develop a structured feedback system of evaluation of advising and mentoring that is constructive, fair, and straightforward to implement; fosters continuous improvement; and has appropriate protections.

Surveys + Feedback (Quantitative + Narrative)

 Prevent negative advising and mentoring experiences as much as possible, and when they occur, address them promptly and appropriately. A centralized <u>Advising and</u> <u>Mentoring Grievance Response Team</u> will serve as an entry point for graduate students to report advising and mentoring grievances.

Advising and Mentoring Grievance Response Team

Upon completion of its ongoing robust stakeholder engagement process, the Committee will deliver a final Strategic Plan on Graduate Advising and Mentoring to the Chair of the Faculty, Provost, Chancellor, Vice Chancellor, Faculty Policy Committee, Committee on Graduate Programs, and other appropriate offices and committees.



#### Introduction

#### A. Background

Graduate students<sup>1</sup> are essential to the MIT Community and are the leaders of tomorrow in their disciplines. One of the important roles of faculty and thesis supervisors is to provide an environment in which graduate students can learn experientially during their research. Typically, graduate students are highly dependent on a faculty member or thesis supervisor for research opportunities, letters of recommendation, authorship credit, and future career support. Moreover, the faculty member or thesis supervisor often has the greatest decision-making authority in whether or not a graduate student is recommended for a degree. For these reasons, graduate students are vulnerable to the power differential between them and their advisor(s). Nevertheless, upon arriving at MIT, our faculty and thesis supervisors often do not have any formal training in or exposure to the principles of excellence in mentorship and advising, and they generally are not provided consistent modes of constructive feedback on their mentoring and advising over the course of their career. Furthermore, the existing processes to mitigate, or enforce accountability for, negative mentoring experiences are opaque and unclear to students.

To address these challenges, the Refinement and Implementation Committee for Graduate Student Advising and Mentoring from the second phase of Task Force 2021 and Beyond, recommended an Ad Hoc Committee on Graduate Advising and Mentoring. This Committee was charged with developing a Strategic Plan for Graduate Advising and Mentoring that would include (a) the creation of a platform for faculty and thesis supervisor professional skill development and lifelong learning in mentorship; (b) mechanisms for graduate student feedback; and (c) normalized, equitable metrics of assessment of mentoring that support professional development and can be readily adopted into performance and promotion reviews.

The resulting Committee was formed in late Spring 2021 and launched its efforts in June 2021. The Committee is co-chaired by Paula Hammond (Institute Professor and Head of the Chemical Engineering Department), and Tim Jamison (Associate Provost and Robert Robinson Taylor Professor of Chemistry), and is composed of a total of 10 graduate students and 11 faculty and staff with representation from the MIT Graduate Student Council (GSC) and each of the Schools and the College. A list of the names and affiliations of each Committee member is found in Appendix A.

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<sup>&</sup>lt;sup>1</sup> For the purpose of this Strategic Plan, graduate students are defined as full-time masters or doctoral program students as well as students in professional programs who are advised/mentored by a faculty member or thesis supervisor. Not included, for example, are students in the Sloan School of Management Executive MBA program.

#### B. Strategic Plan Development and Architecture

The development of the Strategic Plan for Graduate Advising and Mentoring described herein builds upon ongoing initiatives led by the Provost's Office, the Chancellor's Office, the Schools and College, and the GSC. These efforts include the MIT response to the NASEM Report on the Sexual Harassment of Women in Academia including guaranteed transitional support for graduate students who switch advisors; a pilot mentorship training program for faculty in the School of Engineering drawing upon expertise from the Center for the Improvement of Mentored Experiences in Research (CIMER); the MIT Graduate Advising Playbook, a list of advising and mentoring best practices developed in 2019; and the Graduate Student Council's (GSC) Research Advising Survey.

Figure 1 summarizes the architectural layout of the Strategic Plan. Included are a <u>Mission Statement</u>, which summarizes the charge of the Committee, and a <u>Vision Statement</u>, which describes the Committee's aspiration for advising and mentoring at MIT. A <u>Values Statement</u> unique to the charge of this Committee was not developed. Rather, the Committee was guided by the current draft of <u>MIT's Values Statement</u>, along with an understanding of the importance of cultural awareness in mentoring.

The Committee set four **Goals**, listed below. These general themes align with MIT's <u>Values</u>, enable the <u>Mission</u>, and delineate the Committee's <u>Vision</u> for graduate student advising and mentoring at MIT.

Goal 1 - Ensure an Institutional Culture of Excellence in Advising and Mentoring

Goal 2 - Enhance Knowledge and Skills in Effective Advising and Mentorship

Goal 3 - Incentivize and Reinforce Individual Excellence in Advising and Mentoring

Goal 4 - Address Negative Advising and Mentoring Experiences

In order to achieve these Goals, the Committee designed 11 specific and measurable **Objectives**. These objectives consider the recommendations from both the <u>NASEM Report on the Science of Effective Mentorship</u> and the 2021 GSC <u>Research Advising Survey</u>. The Committee developed **Strategies** for meeting each objective and has recommended **Tactics** for their implementation.

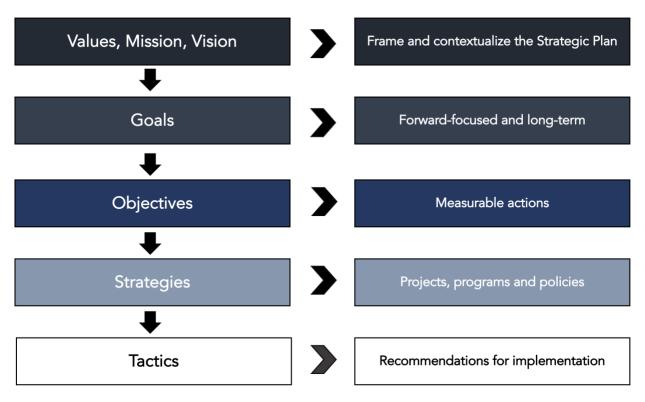


Figure 1. Architectural layout of the Strategic Plan for Graduate Mentoring and Advising.

#### C. Committee Process

The Ad Hoc Committee on Graduate Advising and Mentoring met 15 times as a group. Four subgroups were formed, each with a focus on one of the four Goals of the strategic plan. Each subgroup developed Strategies and Tactics for each of the Objectives associated with their Goal. Each of these subgroups met several times in addition to the all-group meetings. Meetings of the entire Committee were dedicated to learning about best-practices in the field, related initiatives at MIT, and discussing and revising the recommendations of the subgroups. Revisions were solicited from all Committee members and are reflected in this version of the Plan.

#### D. How to Read this Strategic Plan

In this document, the Objectives and Strategies for each of the four Goals are provided starting on page 10. Recommended Tactics are presented in a <u>supplemental document</u>. Community feedback is provided on page 19.

#### **Mission Statement**

The Mission of the Ad Hoc Committee on Graduate Advising and Mentoring is to develop a strategic plan focused on excellence in graduate student mentoring and advising that provides a platform for skill development for faculty, thesis supervisors, and graduate students; lifelong learning in mentorship; mechanisms for graduate student feedback; and normalized, equitable metrics of assessment of mentoring that can be adopted in faculty development and promotion reviews.

#### **Vision Statement**

Our Vision for MIT is a culture of excellence in mentoring and advising, one that fosters the well-being, research, and professional development of *all* graduate students, faculty, and thesis supervisors.

#### **Values Statement**

MIT's Values Statement (currently under development) + culturally aware mentoring.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> <u>CIMER defines</u> culturally aware mentoring as "mentoring practices in which mentors recognize their own culturally shaped beliefs, perceptions, and judgments and are cognizant of cultural differences and similarities between themselves and their mentees."

#### **Essential Infrastructure**

Excellence in advising and mentoring requires that resources and support be available to all faculty, thesis supervisors and graduate students across MIT. The Committee therefore proposes that MIT expand its current infrastructure to include the following:

- Center for Excellence in Graduate Advising and Mentoring
- Institute Committee on Graduate Advising and Mentoring
- Advising and Grievance Response Team

#### 1. MIT's Center for Excellence in Graduate Advising and Mentoring

As illustrated in Figure 2 left, the **primary role** of the **Center** would be to offer an array of **programming** including professional development workshops, as well as to provide **tools and other resources to graduate students, faculty and thesis supervisors** to support excellence in advising and mentoring. Such offerings are detailed in <u>Goal 2</u>, and further elaborated upon in the <u>supplemental document</u>. The Center would also support and provide expertise to stakeholders in the implementation of select Strategies defined within <u>Goal 1</u>, <u>Goal 3</u> and <u>Goal 4</u>.

As one of the primary functions of the Center is to develop and provide professional development resources for faculty and thesis supervisors, the Center would reside within the Office of the Provost and would be led by full-time, PhD-level personnel, as is the case in comparable Centers at other academic institutions.

#### 2. Institute Committee on Graduate Advising and Mentoring

As illustrated in Figure 2 right, the **primary role** of the **Institute Committee on Graduate Advising and Mentoring** would be to serve as an **advisory body to MIT's Center for Excellence in Graduate Advising and Mentoring**. It would also stay apprised on trends in advising and mentoring across MIT, raise awareness of resources and best practices in advising and mentoring, as well as work closely with stakeholders on select Strategies described throughout the Plan.

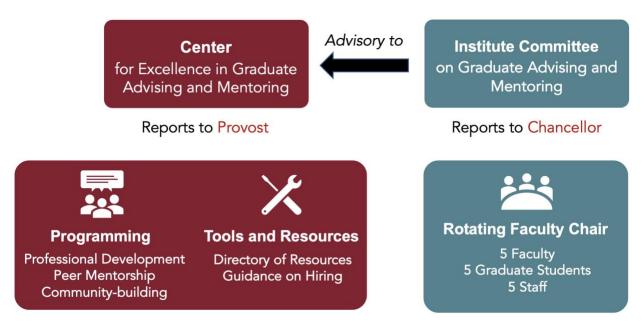
The Committee would be a Standing Institute Committee that reports to the Chancellor. That the Center reports to the Provost and is advised by a Committee that reports to the Chancellor exemplifies the shared responsibility of faculty and graduate students in the professional relationship. The Committee would have a rotating chair with a membership described below.

#### Committee Membership

Rotating Committee Chair + Faculty Members (5 faculty total) - Chair of <u>CGP</u> or designee + Chair of <u>FPC</u> (Chair of the Faculty) or designee + two faculty members who have demonstrated a commitment to mentoring and advising.

Graduate Students (5 total) - GSC President + four appointed graduate students.

Staff (5 total) - Senior Associate Dean of OGE or their designee + Director of TLL or their designee + three Graduate Administrators.



**Figure 2**. Summary of MIT's Center for Excellence in Graduate Advising and Mentoring and the Institute Committee on Graduate Advising and Mentoring.

#### 3. Advising and Mentoring Grievance Response Team

The **primary role** of the **Advising and Mentoring Grievance Response Team** would be to serve as an entry point for graduate students to report a grievance (Strategy 4.2.1). The Team would make DLC Heads aware of potential response options upon a graduate student filing a grievance, and would prepare an annual aggregated report that is shared with the MIT community.

This Team would be a centralized resource chaired by the Vice Chancellor or designee within the Office of the Vice Chancellor. It would be composed of representatives from OGE and/or IDHR and/or HR. Two faculty members experienced with graduate advising and mentoring matters would serve in a consulting capacity. The duration of service in this role for faculty members would be anticipated to be two years.

## Ensure an Institutional Culture of Excellence in Advising and Mentoring

#### **Objective 1.1**

Define excellence and communicate the definitions throughout MIT.

#### Strategy 1.1.1

**Determine** the attributes that define a culture of excellence in graduate advising and mentoring.

#### Strategy 1.1.2

**Communicate** the attributes that define a culture of excellence in graduate advising and mentoring.

#### **Objective 1.2**

Provide Institutional resources designed to foster excellence.

#### Strategy 1.2.1

**Develop a Center** that provides resources to faculty, thesis supervisors and graduate students to support excellence in advising and mentoring.

#### **Objective 1.3**

Incentivize excellence throughout the organization.

#### Strategy 1.3.1

**Incentivize and reward** DLCs that collectively excel in graduate advising and mentoring.

#### Strategy 1.3.2

**Identify and highlight** advising and mentoring best practices that have been demonstrated in the Schools, the College, and the DLCs.

## **Objective 1.4**

Assess MIT's progress in advising and mentoring on an ongoing basis.

### Strategy 1.4.1

**Conduct** assessments to identify Institute, School, College, and DLC trends in graduate advising and mentoring.

### Strategy 1.4.2

Review and discuss with appropriate protections the results of Strategy 1.4.1.

## **Enhance Knowledge and Skills in Effective Advising and Mentoring**

#### **Objective 2.1**

Provide faculty and thesis supervisors with evidence-based resources that support excellence in advising and mentoring.

#### Strategy 2.1.1

Provide professional development workshops for faculty and thesis supervisors.

#### Strategy 2.1.2

**Increase awareness** of resources that support faculty and thesis supervisors in their roles as graduate advisors and mentors.

#### Strategy 2.1.3

**Establish** programs and provide discussion opportunities to share experiences and best practices.

#### **Objective 2.2**

Provide graduate students with evidence-based resources that enable them to establish and maintain effective mentorships.

#### Strategy 2.2.1

**Provide** information to graduate students on how to establish a mentoring network.

#### Strategy 2.2.2

**Provide** workshops and information to graduate students on how to excel as *mentees*.

#### Strategy 2.2.3

**Provide** workshops and information to graduate students on how to excel as *mentors*.

## Strategy 2.2.4

**Increase awareness** of resources for the professional development of graduate students.

## Incentivize and Reinforce Individual Excellence in Advising and Mentoring

#### **Objective 3.1**

Include consideration of advising and mentoring plans in the hiring of faculty.

#### Strategy 3.1.1

Encourage graduate advising and mentoring statements in applications for faculty positions.

#### Strategy 3.1.2

**Provide** best practices to search committees for evaluating the graduate advising and mentoring potential of faculty candidates.

#### Strategy 3.1.3

**Discuss** graduate advising and mentoring with faculty candidates during their interviews.

#### **Objective 3.2**

Use structured feedback systems both to evaluate the mentorship competencies of faculty and thesis supervisors and foster continuous improvement.

#### Strategy 3.2.1

**Implement** two-way feedback mechanisms for the purpose of continuous improvement.

#### Strategy 3.2.2

**Establish** annual assessments to evaluate the advising and mentoring experiences of all graduate students.

#### Strategy 3.2.3

**Conduct** exit surveys of graduate students.

### Strategy 3.2.4

**Include** graduate student feedback in annual merit performance review and promotion and tenure processes.

#### **Objective 3.3**

Incentivize and recognize faculty and thesis supervisors for exceptional advising and mentoring.

#### Strategy 3.3.1

**Incentivize** faculty and thesis supervisors to be proactive in amplifying their advising and mentoring practices.

#### Strategy 3.3.2

Create an Institute-level award that recognizes excellence in mentoring and advising.

#### Strategy 3.3.3

Highlight demonstrated excellence in advising and mentoring throughout the Institute.

## **Address Negative Advising and Mentoring Experiences**

### **Objective 4.1**

Enhance support for graduate students experiencing negative advising and mentoring situations.

#### Strategy 4.1.1

**Identify** a centralized Advising and Mentoring Grievance Response Team.

#### Strategy 4.1.2

**Raise** awareness of resources whose aims include fostering reconciliation (when possible and appropriate) between graduate students and faculty or thesis supervisors.

#### Strategy 4.1.3

**Raise** awareness of the options available to graduate students for formal and informal reporting of advising and mentoring grievances.

#### Strategy 4.1.4

Increase awareness of Potential Outcomes and Sanctions and MIT's non-retaliation policies.

#### Strategy 4.1.5

**Amplify** awareness of the <u>Guaranteed Transitional Support Program</u> for graduate students who wish to change research advisors or groups.

#### Strategy 4.1.6

**Provide** DLC Heads with information and resources for addressing advising and mentoring grievances.

#### **Objective 4.2**

Enhance existing reporting processes, intervention mechanisms, corrective measures, and protections.

#### Strategy 4.2.1

Establish options for informal and formal reporting of an advising and mentoring grievance.

#### Strategy 4.2.2

**Implement** resolution practices and enforce retaliation policies related to advising and mentoring grievances.

#### Strategy 4.2.3

**Enhance** the EthicsPoint Hotline for graduate students who wish to report an advising and mentoring grievance using this mechanism.

#### **APPENDIX A**

#### **Committee Members**

#### Co-chairs and staff

- Paula Hammond (Co-Chair) Institute Professor of Chemical Engineering and Department Head
- Tim Jamison (Co-Chair) Professor of Chemistry and Associate Provost
- Rachel Beingessner (Staff to the Committee) Director of Special Projects, Office of the Associate Provost
- Lauren Pouchak (Staff to the Committee) Director of Special Projects, Office of the Vice Chancellor

#### Students

- Noam Buckman Mechanical Engineering, School of Engineering, GSC Nominee
- Paula do Vale Pereira Aeronautics and Astronautics, School of Engineering, GSC Nominee
- Alvin Harvey Aeronautics and Astronautics, School of Engineering
- Laurel Kinman Biology, School of Science
- Levi Knippel Chemistry, School of Science
- Luis Kumanduri Mathematics, School of Science
- Zanele Munyikwa Information Technology, Sloan School of Management
- Devora Najjar Media Arts and Sciences, School of Architecture and Planning
- Cynthia Ni Chemical Engineering, School of Engineering
- Gabrielle Robbins History, Anthropology, Science, Technology and Society, School of Humanities, Arts, and Social Sciences

#### Staff and Faculty

- Lourdes Aleman Associate Director for Teaching and Learning, Teaching and Learning Lab
- Suraiya Baluch Associate Dean for Graduate Student Advising, Office of Graduate Education
- Amy Keating Professor of Biology and Biological Engineering, Associate Department Head, Biology
- Leslie Kolodziejski Professor of Electrical Engineering, Electrical Engineering and Computer Science
- Joe Paradiso Professor and Associate Academic Head, Media Arts and Sciences
- Heather Paxson (January 1, 2022 present) Professor and Head, Anthropology
- Ray Reagans Professor of Management and Work and Organization Studies,
   Associate Dean for Diversity, Equity, and Inclusion, Sloan School of Management
- Brad Skow (June 2, 2021 December 31, 2021) Professor of Philosophy, Linguistics and Philosophy

## **APPENDIX B**

## **Community Feedback**

## Strategic Plan for Graduate Advising and Mentoring at MIT

June 16, 2022

#### Overview

On April 27, 2022, the <u>draft Strategic Plan for Graduate Advising and Mentoring</u> was released to the MIT community for review and feedback. Four **Goals**, listed below, were recommended in the Plan that align with <u>MIT's Values</u>, enable the Mission, and delineate the Committee's <u>Vision</u> for graduate student advising and mentoring at MIT.

- Goal 1 Ensure an Institutional Culture of Excellence in Advising and Mentoring
- Goal 2 Enhance Knowledge and Skills in Effective Advising and Mentorship
- Goal 3 Incentivize and Reinforce Individual Excellence in Advising and Mentoring
- Goal 4 Address Negative Advising and Mentoring Experiences

We thank the MIT community for their feedback. We received many constructive recommendations that have been paraphrased and summarized below. Highlights of these comments as it pertains to the respective Goals are the following:

**Dual or multiple mentors:** It was brought up by many in the community that having a second advisor, co-advisor, or mentor who is not as directly or highly vested in the research outcome of the graduate student can provide students with an additional and helpful perspective, and support. We do hope to encourage those Departments that are able to encourage structures such as (i) a secondary or academic advisor who may have a different relationship with the student, (ii) thesis committee structures with a chair other than the thesis supervisor, or (iii) advising approaches that leverage more than one key advisor. It is important to recognize that such structures require significant additional time from faculty, which may not be implementable in every Department. The committee did include the concept of encouraging and providing guidance to students to establish a network of mentors, regardless of the mentoring styles of their Department or program. This concept is one that would be embraced and promoted by the Center, and can also be encouraged by Schools through the provision of support for peer-mentoring programs, encouragement to DLCs to adopt amenable models of shared mentorship, and training for students on building mentoring networks.

**DLC** assessments and accountability: There were several comments regarding the need for DLCs and their Department Heads to be accountable for mentoring and advising issues that are persistent or problematic within a unit. In the proposed plan, regular assessments that range from Institute-wide anonymous surveys to metrics on graduation success rates, rates of advisor transition for advising issues, and other metrics described in Goal 3 would be shared with the Dean and included as part of the overall assessment of Departments. The most critical aspect will be the engagement of Visiting Committees in DLC evaluations on mentoring and advising, which would enable longer term measures of the progress within a Department. Equally important will be the provision of tools and mechanisms for intervention and support of DLC Heads so that they are able to take effective action. Finally, there are currently no metrics that unit Heads have been able to use to determine when early intervention is needed; thus we anticipate that the placement of regular and routine feedback that is shared with the DLC Head will lead to more frequent action. It is the ability to implement multiple modes of feedback, combined with support

and monitoring on the DLC, School and Institute level, that will drive longer term cultural change and help to address persistent issues that may exist in some DLCs.

How to define "outstanding mentoring and advising": From community discussions, there is a clear need to outline what is meant by excellence in mentoring. It is important to acknowledge that there can be many different approaches and styles to mentoring that recognize the unique relationship between individuals; however, there are some defining principles that have been outlined in the NASEM report on mentoring, as referenced in this report. These general principles can be referenced and outlined by the Center and highlighted within Schools and DLCs as a general framework that we use to build mentoring relationships. These concepts would also be key to questions used in surveys and modes of feedback and assessment. The most fundamental expectations of advisors may also be a topic of discussion within DLCs or Schools; however, because the role of the advisor differs across Schools and Centers, these are discussions that may be most effective on the School level.

**Safe and effective reporting processes:** There were a number of comments affirming the need for the proposed reporting system to be safe for graduate students. A great deal of consideration has and will continue to go into its design so that it safeguards students and protects against retaliation. It is also important to ensure a fair process that provides the mentor an opportunity to respond and that fosters resolution in cases in which both parties wish to address issues and concerns.

In closing, the draft Plan and the recommendations from the Community will be provided to an implementation team whose membership is yet to be determined. As they continue to refine the Plan further, we would also recommend that they engage the community for additional feedback. In the meantime, we continue to welcome your input on our <u>website</u>.

## Ensure an Institutional Culture of Excellence in Advising and Mentoring

#### **Objective 1.1**

Define excellence and communicate the definitions throughout MIT.

#### Strategy 1.1.1

**Determine** the attributes that define a culture of excellence in graduate advising and mentoring.

#### Strategy 1.1.2

**Communicate** the attributes that define a culture of excellence in graduate advising and mentoring.

#### **Summary of Responses from the Community**

- Mentoring and advising is a deeply personal, human relationship between two (or more) people and thus "defining excellence and communicating the definitions throughout MIT" may not be useful in terms of improving mentoring.
- Given that many may disagree about the qualities of a good mentor, our definition of a culture of excellence in mentoring and advising should begin with the NASEM definition and the competencies defined by CIMER.
- The Institute (or perhaps School or DLC) should define a set of basic professional expectations of graduate students.
- The table of competencies and expectations in Appendix A could be interpreted as treating
  the mentor and mentee as equals, which could unintentionally overlook the differences in
  power and responsibility in these relationships.
- The use of mentoring compacts and Individual Development Plans should be included in Appendix A.

#### **Objective 1.2**

Provide Institutional resources designed to foster excellence.

#### Strategy 1.2.1

**Develop a Center** that provides resources to faculty, thesis supervisors and graduate students to support excellence in advising and mentoring.

#### **Summary of Responses from the Community**

- The proposed Center should have a faculty director to have some credibility with the faculty.
- The establishment of a resource center and training for faculty and students may not be effective if its use is optional.
- It will be challenging, but critical, to staff the Center with people who deeply understand the graduate mentoring relationship and the MIT promotion and tenure process.
- The resources available from the Center should include practical, concrete, operational support to DLC Heads in creating and sustaining norms and policies.
- It is important to consider how the Centre will interface with external resources like consulting companies that have already been used at MIT such as for 360 reviews.
- The Center should amplify the work of the Teaching and Learning Lab which supports wellbeing in academics.

#### **Objective 1.3**

Incentivize excellence throughout the organization.

#### Strategy 1.3.1

**Incentivize and reward** DLCs that collectively excel in graduate advising and mentoring.

#### Strategy 1.3.2

**Identify and highlight** advising and mentoring best practices that have been demonstrated in the Schools, the College, and the DLCs.

- The awarding of graduate fellowships to DLCs should be tied to outcomes (i.e., retention and graduation with a PhD). Reward those units that show excellence by awarding them resources that faculty value.
- It would be beneficial to have more robust incentives, not simply funding for further recruitment efforts.
- Strategy 1.3.2 could be tied to C2C efforts and recipients.
- Incentivizing and rewarding DLCs that collectively excel in graduate advising and mentoring may present an inequity for units like the Center for Computational Science and Engineering (CCSE) which does not have faculty appointments. CCSE can set policies, procedures and requirements for graduate students but not so much for their advisors, faculty / researchers who all have appointments elsewhere.

#### **Objective 1.4**

Assess MIT's progress in advising and mentoring on an ongoing basis.

#### Strategy 1.4.1

**Conduct** assessments to identify Institute, School, College, and DLC trends in graduate advising and mentoring.

#### Strategy 1.4.2

**Review and discuss** with appropriate protections the results of Strategy 1.4.1.

- Surveys do not reveal many problems and put the onus on the target population. Interviews conducted by outside consultants (not MIT) are an alternative option.
- Assessment data could include PhD completion curves (the fraction of each cohort that
  completes the PhD after N years) and changes of advisors and departures. These should
  be monitored by some central office with disaggregation by department, gender,
  race/ethnicity (including international as a category), and possibly other identity markers.
- Departmental self-assessment should be included. This should be part of the Visiting
  Committee cycle, with departments encouraged or even required to complete and submit a
  self-assessment rubric such as Appendix X of the 2018 national report on <u>Diversity and
  Inclusion in Astronomy Graduate Education</u>. The department's self-assessment should be
  reviewed by graduate students who may present an alternative scoring as they may
  disagree with the department leadership.
- Visiting Committees should be provided degree completion curves, trends on frequency of complaints, etc.

## **Enhance Knowledge and Skills in Effective Advising and Mentoring**

#### **Objective 2.1**

Provide faculty and thesis supervisors with evidence-based resources that support excellence in advising and mentoring.

#### Strategy 2.1.1

**Provide** professional development workshops for faculty and thesis supervisors.

#### Strategy 2.1.2

**Increase awareness** of resources that support faculty and thesis supervisors in their roles as graduate advisors and mentors.

#### Strategy 2.1.3

**Establish** programs and provide discussion opportunities to share experiences and best practices.

- There is a particular need for helping faculty foster a sense of belonging for students with historically and currently marginalized identities, especially when faculty don't share these identities.
- Mental health of graduate students is an important consideration. For example, faculty
  need resources and support so that they may know how to best help and communicate
  with students who may be facing mental health challenges.
- Information on bullying and abuse should be included in workshops for faculty, framed around their own past personal experiences of graduate school.
- Even well-intentioned faculty members and thesis supervisors don't necessarily remember what it is like to be a graduate student. Scenarios and case studies for them to review common issues would be helpful.
- It is crucial that faculty understand the specific challenges of non-native English speaking graduate students and help them get the support they need.

#### **Objective 2.2**

Provide graduate students with evidence-based resources that enable them to establish and maintain effective mentorships.

#### Strategy 2.2.1

**Provide** information to graduate students on how to establish a mentoring network.

#### Strategy 2.2.2

**Provide** workshops and information to graduate students on how to excel as *mentees*.

#### Strategy 2.2.3

**Provide** workshops and information to graduate students on how to excel as *mentors*.

#### Strategy 2.2.4

**Increase awareness** of resources for the professional development of graduate students.

- For graduate students who are marginalized group members, having access to a network of mentors and to group mentoring (including peer- and near-peer mentoring) is important.
- Graduate students (and also advisors) would benefit from strategies that involve explicit
  executive function skill building as well as <u>metacognitive skill development</u>. These skills can
  help students and advisors communicate better, plan for and prioritize goals, regulate
  emotions, increase working memory capacity (or conversely, acknowledge its limitations),
  process complex information, be aware of one's strengths and challenges and so much
  more, while also normalizing receiving training in these topics and scaffolding weaker
  areas in all individuals, regardless of gender, cultural upbringing or neurotype.
- It may be worth exploring the ideology and methodology of <u>Collaborative Problem Solving</u>, which builds relationships and executive function skills in the context of real-life situations, as applicable to advisee/advisor relationships.

## Incentivize and Reinforce Individual Excellence in Advising and Mentoring

#### **Objective 3.1**

Include consideration of advising and mentoring plans in the hiring of faculty.

#### Strategy 3.1.1

**Encourage** graduate advising and mentoring statements in applications for faculty positions.

#### Strategy 3.1.2

**Provide** best practices to search committees for evaluating the graduate advising and mentoring potential of faculty candidates.

#### Strategy 3.1.3

Discuss graduate advising and mentoring with faculty candidates during their interviews.

#### **Summary of Responses from the Community**

- The encouragement of graduate advising and mentoring statements in applications for faculty positions needs to be thought through carefully. We already ask for a research statement, a teaching statement and a DEI statement. It adds extra work to the applicant, extra work for the committee, but won't actually materially affect hiring.
- An alternative to the request for the advising and mentoring statement would be to have somebody focused on advising & DEI issues to interview candidates in person (e.g., one representative for each School) and to advise the hiring committees.

#### **Objective 3.2**

Use structured feedback systems both to evaluate the mentorship competencies of faculty and thesis supervisors and foster continuous improvement.

#### Strategy 3.2.1

**Implement** two-way feedback mechanisms for the purpose of continuous improvement.

#### Strategy 3.2.2

**Establish** annual assessments to evaluate the advising and mentoring experiences of all graduate students.

#### Strategy 3.2.3

**Conduct** exit surveys of graduate students.

#### Strategy 3.2.4

**Include** graduate student feedback in annual merit performance review and promotion and tenure processes.

- An issue with the two-way feedback for continuous improvement is how to ensure honest feedback is obtained from graduate students. If the average group size is small then anonymity cannot be certain. One possible solution would be to include feedback from former graduate students, current and former postdocs, and undergraduate group members.
- Graduate students need additional ways to give feedback to PIs that is normalized and in a less high-stakes situation.
- Students who transfer labs should be captured in the surveys.
- Implementing graduate student feedback in the context of unionization is wrong. More
  specifically, it is important to evaluate the practicality and reality of the proposed measures
  in the new context of a unionized graduate worker as opposed to a student. This would put
  young faculty in a particular disadvantage since they do not have an easy and quick
  mechanism to evaluate and verify the quality and amount of work delivered by a graduate
  student.
- Graduate student feedback in promotion and tenure should be curated by the Department Head and care must be taken to get representative voices.
- The things that MIT can/should do to hold senior faculty accountable for mentorship needs to be considered.
- The use of genuine 360 reviews should be considered. It would be beneficial to create
  institutional avenues for feedback and review of faculty for their students as well as for
  students of their faculty.
- Surveys do not reveal many problems and put the onus on the target population. Interviews conducted by outside consultants (not MIT) are an alternative option.
- There is quantitative data that is quite valuable that should be monitored at the Department Level for individual faculty (using their complete history of graduate supervision). This includes PhD completion curves (the fraction of each cohort that completes the PhD after N years) and changes of advisor and departures. It's straightforward to identify statistically significant outliers, and this would provide important background for qualitative interviews.

- Exit interviews are too late, and often departing students will not grant them, sometimes because of a lack of trust. An alternative would be for external consultants to conduct interviews and work with the DLC head to respond to findings.
- More clarity is needed on how to address long term persistent issues in a number of DLCs.
- What are the metrics for "outstanding mentoring and advising" in MIT P&P 3.2 (Tenure Process")? If they don't exist and are not created, then accountability for 3.2.4 seems impossible.
- It is important to explicitly state how graduate advising and mentoring are weighted/factored into promotion and tenure reviews.
- The content of the assessments should be strongly aligned with the competencies defined in Goal 1 and the workshops provided as part of Goal 2. Those involved in defining those competencies and workshops should participate in the development of the assessment frameworks.

#### **Objective 3.3**

Incentivize and recognize faculty and thesis supervisors for exceptional advising and mentoring.

#### Strategy 3.3.1

**Incentivize** faculty and thesis supervisors to be proactive in amplifying their advising and mentoring practices.

#### Strategy 3.3.2

Create an Institute-level award that recognizes excellence in mentoring and advising.

#### Strategy 3.3.3

Highlight demonstrated excellence in advising and mentoring throughout the Institute.

#### **Summary of Responses from the Community**

• Consider expanding the MacVicar Faculty Fellowships or instituting a parallel program.

### **Address Negative Advising and Mentoring Experiences**

#### **Objective 4.1**

Enhance support for graduate students experiencing negative advising and mentoring situations.

#### Strategy 4.1.1

**Identify** a centralized Advising and Mentoring Grievance Response Team.

#### Strategy 4.1.2

**Raise** awareness of resources whose aims include fostering reconciliation (when possible and appropriate) between graduate students and faculty or thesis supervisors.

#### Strategy 4.1.3

**Raise** awareness of the options available to graduate students for formal and informal reporting of advising and mentoring grievances.

#### Strategy 4.1.4

**Increase** awareness of <u>Potential Outcomes and Sanctions</u> and <u>MIT's non-retaliation policies</u>.

#### Strategy 4.1.5

**Amplify** awareness of the <u>Guaranteed Transitional Support Program</u> for graduate students who wish to change research advisors or groups.

#### Strategy 4.1.6

**Provide** DLC Heads with information and resources for addressing advising and mentoring grievances.

#### **Summary of Responses from the Community**

- The use of facilitators for student-advisor conversations could be helpful to take meeting
  notes and facilitate follow-ups and action items, pre-empt manipulation or even
  unintentional coercion, help a student advocate for themselves in terms of workload, and
  provide access to resources, or work environment etc.
- Clearer intervention mechanisms would be helpful and should be normalized. For example, the Ombuds Office could offer office hours for mediation.
- The privacy policies under which the Advising and Mentoring Grievance Response Team operate will have to be very clear to all.
- The administration should encourage faculty to seek out support when they aren't sure how to handle a situation.
- It isn't clear how the Advising and Mentoring Grievance Response Team differs from the GradSupport team.

#### **Objective 4.2**

Enhance existing reporting processes, intervention mechanisms, corrective measures, and protections.

#### Strategy 4.2.1

Establish options for informal and formal reporting of an advising and mentoring grievance.

#### Strategy 4.2.2

**Implement** resolution practices and enforce retaliation policies related to advising and mentoring grievances.

#### Strategy 4.2.3

**Enhance** the EthicsPoint Hotline for graduate students who wish to report an advising and mentoring grievance using this mechanism.

- Grievance procedures should be explicit about ways that students can report issues in a research group that is not their own.
- The notion of support should be separated from the notion of grievance. We need a different group of people who are here just to support the students and who are clearly separated from the group of people who review and prosecute formal grievances. This could dramatically increase the willingness of students to talk to someone.
- There should be a mechanism for faculty who might have reports against them to be able to refute unsubstantiated claims.

- Addressing of advising and mentoring grievances should be part of job description of DLC Heads and should be evaluated for their success in this via their own annual performance review by their Dean.
- DLC Heads should be offered training on how to give feedback in cases of poor mentoring or other concerns.
- An explicit process for removing abusive advisors is needed.
- Current sanctions are not effective or consistently used. This Plan does not currently solve that problem. Stronger sanctions are needed for those who are 'bad mentors'.
- It will be important to manage information regarding grievances involving junior faculty with respect to the promotion and tenure process more specifically how to appropriately share information between the promotion process and the remedial process, etc.
- There needs to be a mechanism for students to appeal to a Deans Office if the DLC Head does not respond appropriately to the grievance.
- The exact pathway, timeline and resolution options need to be presented to students prior to the formal reporting of a grievance.
- The confidentiality of the reporting mechanisms should be made clear to students.
- It is very important to communicate that retaliation is not allowed. If students knew that DLCs took this very seriously, then this would lower the fear among students.
- Whistleblower protections are needed for students and those protections should be communicated.
- We need to ensure the well-being of students by helping them get settled and feel safe.

#### **Other Comments**

- How this plan can be extended to other groups such as postdocs and staff should be addressed.
- It is necessary to consider how mentoring is different across different programs and how the Strategies and Tactics would be tailored accordingly.
- Culturally responsive advising should be addressed in this plan to account for experiences of graduate students who are URM or first-generation college students.
- DEI should be addressed in the Plan.
- The report does not indicate a commitment from MIT leaders to addressing issues, etc.
- The report should better describe the role of DLC Heads.
- There needs to be a much stronger role played by the senior administration and MIT's visiting committees, who provide accountability for DLCs.
- Leadership (President, Provost, Chancellor, Vice Chancellor, Deans, and DLC Heads) are part of the essential infrastructure and should be actively engaged in communicating values, norms, and practices.
- Decentralization of accountability seems like a potential impediment to this Plan (i.e., up to each DLC if/what to do/implement).
- How advisor/student relationships are established should be addressed so that students have time to understand the process, MIT's culture, and the difference between advisors and research laboratories before having to make a multi-year commitment. Options could include:
  - Rotations in the first year of the PhD.
  - o Provide funding to the student for the first year (i.e., funding that is not tied to a certain faculty member).
- We should consider changing the nature of the advising and mentoring relationships at MIT such as:
  - Limiting the size of a group to ensure the advisor has sufficient time to mentor his/her graduate students.
  - o Including an unaffiliated staff/faculty member on every graduate committee.
  - Assigning each doctoral student a secondary research advisor/mentor.
- There needs to be a discussion of the criteria for obtaining a PhD. The vagueness of our
  criteria leads to many undesirable things, including unnecessary graduate student stress,
  suppressed student ambition and motivation, and inaccurate career expectations.
   Discussing PhD criteria should probably be undertaken at the department level, not higher.
- There needs to be a clear process or policy regarding graduate students being 'fired' from labs.