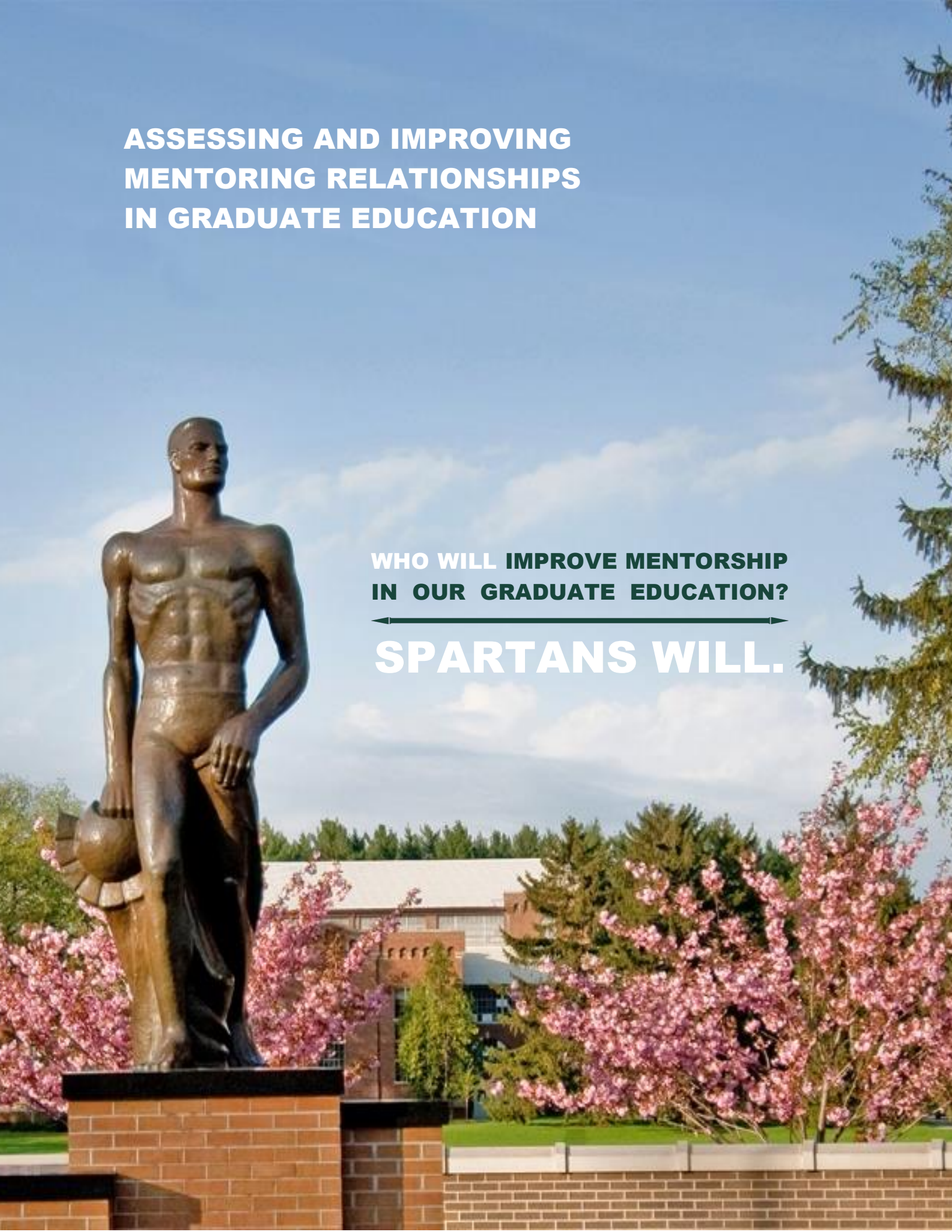


# ASSESSING AND IMPROVING MENTORING RELATIONSHIPS IN GRADUATE EDUCATION

**WHO WILL IMPROVE MENTORSHIP  
IN OUR GRADUATE EDUCATION?**

←—————→  
**SPARTANS WILL.**



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**Purpose:** This resource document describes various assessment techniques available to improve mentoring relationships in graduate education at Michigan State University.

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## Importance of mentorship and continual assessment

### Define mentoring and advising

**Mentorship** is a complex, collaborative partnership in which the mentor and the mentee collectively approach activities such as planning, reflection, and problem-solving to the mutual development and satisfaction of both (Pfund et al. 2016). **Advising**, on the other hand, is primarily a one-way transfer of generalized information about the tasks required to achieve a goal. Mentoring often includes some advising, but overall mentoring is a more holistic and personal activity than advising.

Mentorship requires that both mentor and mentee are willing to learn, are dedicated to improvement, and engage in active communication throughout the relationship via continual assessment. A mentoring relationship is dynamic and includes the purposeful renegotiation of the expectations of both parties as the mentee progresses and the mentor and mentee work together to reach common goals. The mentorship environment is also one of shared learning, as the mentee attains the research skills and career-related knowledge required for productivity and advancement, the mentor acquires a deepening knowledge of the mentee to effectively guide that individual's academic and professional growth, and both work to prepare the next generation to advance their field (Pfund et al. 2016; Montgomery 2017).

### Importance of mentoring

Successful mentoring at the graduate and postdoctoral level is important to academic success and career advancement (Pfund et al. 2016; Hund et al. 2018). The level and effectiveness of primary advisor support influences student views of their educational experience and is associated with their number of publications, conference presentations, and overall interest in research (Lunsford 2012; Tompkins et al. 2016). Positive mentoring relationships can also reduce student anxiety, stress, and depression (Woolston 2017; Evans et al. 2018), while ineffective mentorship can lead to decreased productivity, added stress, and the loss of talented faculty and students, negatively affecting both departments and the institution (Levecque et al. 2017; Hund et al. 2018).

Mentoring is especially critical in the support and retention of underrepresented student groups.

Effective mentoring disproportionately impacts these students and benefits the recruitment and retention of these underrepresented groups (Thomas et al. 2007; Griffin et al. 2018). Improving faculty mentorship skills is a critical step in addressing issues of underrepresentation in academia (Byars-Winston et al. 2011; Montgomery et al. 2014).

Despite the recognized benefits of effective mentoring, academic faculty generally receive no formal training in mentoring best practices, and supervision and feedback from more senior colleagues or administrators on their mentorship activities is limited. While the effectiveness of a mentor-mentee relationship is pairing-specific, mentorship skills can be learned or improved with formal training and

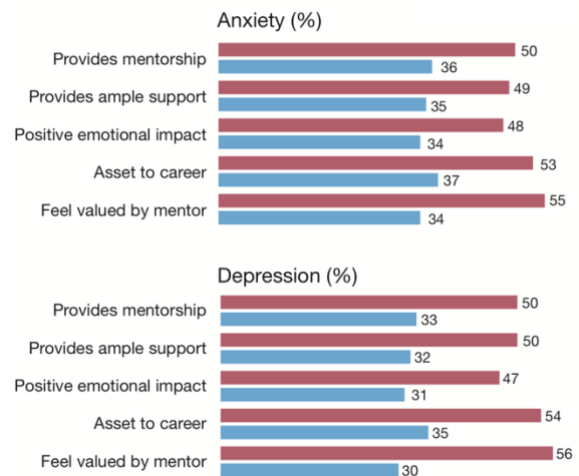


Figure 1d from Evans et al. 2018. Effect of relationship with mentor on the prevalence of anxiety and depression in graduate students. Bar length and numbers indicate the percentage of students with anxiety or depression. Red bars indicate a poor mentoring relationship, while blue bars indicate a strong mentoring relationship.

use of empirically-based methods (Pfund et al. 2016; Hund et al. 2018), providing a clear incentive to invest in these professional development activities at the graduate, postdoctoral, and faculty levels.

### Challenges to effective mentoring

The academic system itself can create challenges to effective mentoring. Faculty members at research universities are often hired and promoted based on their research, publication, and funding successes. However, much of faculty time is spent on teaching, laboratory management, and mentoring, activities that often lack formal accountability and involve few short-term consequences for ineffective behavior (Meyer 2012). At the same time, graduate students and postdoctoral researchers may be reluctant to provide honest mentoring feedback to their faculty advisors, on whom they are dependent for recommendation letters, financial support, and networking opportunities (Anderson et al. 2012).

Lack of formal training in academic mentorship adds an additional challenge for faculty. Currently, new faculty members are expected to learn how to mentor as situations arise, often modeling their responses after the style of their own previous mentors (Amundsen and McAlpine 2009; Griffin et al. 2018). Although this ad-hoc approach can be successful, it can also result in ineffective mentor-mentee relationships that adversely affect both students' future careers and faculty careers, by reducing laboratory productivity prior to tenure, increasing stress, and wasting resources (Lunsford et al. 2013).

### Importance of assessment of mentoring

The assessment of effective mentoring is an important tool in improving academic mentorship across disciplines. Effective mentoring will be more highly valued if a clear and measurable assessment program tangibly rewards effective mentors, provides constructive feedback, and requires advisor improvement where necessary. Mentorship performance and student success should likewise be critical factors considered in hiring, tenure, and promotion decisions and in decisions about faculty opportunities to take on new students (Hund et al. 2018).

Evaluating mentorship poses important challenges, however. Measuring effective mentoring is difficult since it involves measures of both graduate student academic success, such as papers published and progress toward graduation, as well as less tangible emotional factors, such as student mental health, feelings of support, and satisfaction. An objective mentorship evaluation program must also be structured to account for the biases of mentee respondents. For example, evidence from research on teaching evaluations indicates that students can be biased in their opinions when evaluating women and other underrepresented groups (Storage et al. 2016; Mitchell and Martin 2018). Furthermore, the mentee-mentor relationship involves two participants, and a failed mentorship may arise from factors contributed by the mentee as well as, or instead of, the mentor. Finally, feedback mechanisms must be developed that allow honesty but also protect students from retribution for negative reviews.

Despite these challenges, creating a structure for accountability that includes thoughtfully designed and unbiased evaluation of effective mentorship as well as guidance for future improvement are important steps in enhancing the mentorship experience in academia. New metrics and evaluation techniques recently developed for teacher evaluation might serve as a guide (Gormally et al. 2014; Wieman 2015). Evaluations will need to take place regularly within a student-faculty relationship to provide earlier problem resolution and a written record of success and failure. Longer patterns of efficient or ineffective mentoring over several students and cycles should serve as input for tenure or promotion decisions, as these patterns will be more indicative of a faculty mentor's success than the feedback of a single student.

## Assessing mentoring at Michigan State University

A core goal of the [MSU Graduate School 2019-2024 Strategic Plan](#) is to improve student success by “expand(ing) inclusive mentoring practices and catalyz(ing) continuous improvement across units to implement evidence-based practices.” Specifically, the Graduate School plans to “work with academic units to develop a template for evaluating mentorship activities for use as part of faculty development programs, annual review, and RPT” (Objective 1.1.1). Based on these goals, the wide body of evidence supporting the impact of mentoring, and key stakeholder feedback, we recommend implementing a formal feedback mechanism for mentors and mentees. We hope that this guide can serve as a resource to describe the implementation of various assessment techniques to improve mentoring relationships in graduate education.

## BEST PRACTICES FOR THE ASSESSMENT OF MENTORING RELATIONSHIPS

In the previous section, we outlined *why* the assessment of graduate mentoring relationships is critical for the improvement and ultimate success of both students and faculty members.

In the following sections, we outline *how* to assess graduate mentoring relationships to determine areas of needed progress for continual improvement. We cover different techniques, their pros and cons, their application, and existing examples. We discuss three core techniques:

- Individual assessment
- Committee assessment
- Department and/or university assessment



## Individual assessment

One method of assessment is that of individual discussions between faculty member and student. It is in this one-on-one relationship where the most change can be implemented, and where both parties can more closely align their expectations and behavior to benefit everyone. This type of assessment is generally qualitative, with the goal of fostering honest communication between mentors and mentees, and it does not provide a clear, quantifiable metric to be used in promotion or tenure decisions. Furthermore, productive individual discussions require a pre-existing positive working relationship, and the willingness of both parties to give and receive constructive feedback. In cases where a faculty-student relationship is already strained, we recommend one of the organizational assessment options.

### Setting initial expectations

A key feature of mentoring success is the alignment of faculty-student expectations (Anderson et al. 2012; Pfund et al. 2016). At the start of the program, the mentor role should be defined and discussed, and laboratory norms for communication, expectations, and requirements should be established (Huskins et al. 2011; Law et al. 2014). This first conversation should determine 1) the best method for advisor-student communication and its frequency; 2) the advisor's expectations for student performance and the student's expectations for advisor assistance and advice; 3) an understanding of preferred working styles and the desired form of feedback; and 4) the long- and short-term goals of the student and the role the advisor will take in assisting the student in reaching those goals (Hund et al. 2018). These points and expectations should be discussed, agreed upon, and then approved by and filed with the department to allow for transparency and consistency among relationships.

We recognize that faculty and students may have a difficult time having a frank discussion with one another outlining their relationship, particularly at the beginning of the relationship. There are a number of resources available to help guide this initial discussion, including the [Student-Advisor Expectation Scales](#) from Stanford University and University of Oregon, [Developing Shared Expectations](#) from University of Michigan, [Letter of Understanding Template](#) in use at various Canadian universities, and Appendix S1 from [Hund et al. 2018](#). Some faculty and universities also choose to create a lab or university-level mentoring agreement, and [Masters and Kreeger 2017](#) provides general guidelines for faculty developing these lab-level mentoring expectations documents. Other examples of lab or university-level mentoring agreements include the [Advising Agreement](#) in use at Brown University and SUNY and Appendix S2 from [Hund et al. 2018](#).

### Checking in annually

It is important for advisors and students to revisit these discussions at least annually, as student needs will evolve over time (Montgomery 2017). Openly discussing possible areas of conflict as they arise, including research expectations, timelines, authorship, stylistic differences, and financial support, will help preserve a positive and effective mentor-mentee relationship (Hund et al. 2018). These discussions also provide an occasion to recognize accomplishments, reset research and career goals, prioritize projects, identify barriers, and allow honest and constructive feedback on the relationship itself.

Once initial faculty-student expectations have been set, these annual discussions can proceed in a structured or an unstructured way. However, these discussions will be most productive if both student and faculty have thought deeply about the student's progress and goals, as well as about constructive feedback for the other party (Vincent et al. 2015; Montgomery 2017). To support this process, both student and faculty should complete a "progress and planning worksheet" prior to meeting with one

another. During the meeting, the faculty and student can discuss the worksheet and agree on a revised road map for the coming year. At the end of the discussion, the edited worksheets should be filed with the department to allow for transparency and accountability. Because the faculty member is in a position of authority, it is important for the student to lead this meeting so that the process is perceived as communication between colleagues rather than an annual performance review by a superior (Vincent et al. 2015). For this process to be successful, however, the faculty and student must have established or be working towards a relationship of trust; without trust, it is impossible for students to feel safe providing faculty with constructive feedback.

There are a number of worksheets available to guide these annual discussions, including the [Yearly Planning Meeting Worksheet](#) available from Vincent et al. 2015, which is in use at Harvard University, University of Michigan, and Michigan State University, or the [Annual Meeting Worksheet](#) from Stanford University.

### Appendix

Our favorite materials for both the initial discussion (Student-Advisor Expectation Scales) and the annual progress meetings (Annual Meeting Worksheet) are available in the Appendix.



## Committee assessment

Traditionally, the role of the thesis/dissertation guidance committee in graduate education has focused strictly on the academic and research side of the graduate student's experience in graduate school. For example, the responsibilities of the guidance committee listed in MSU's [Guidelines for Graduate Student Advising and Mentoring Relationships](#) include:

- Advising graduate students on course work, research, or creative activities
- Providing at least annually feedback and guidance concerning progress toward the degree
- Administering exams in a fair and professional manner
- Reviewing the thesis or dissertation in a timely, constructive, and critical manner

However, there is an opportunity for committee members to have a stronger influence on the quality and improvement of the faculty-student mentoring relationship. By excusing the advisor for a portion of the committee meeting, the committee could:

- Help the student identify the positive and negative aspects of the mentoring relationship, and brainstorm solutions with the student for moving forward. This discussion is critical as graduate students often have no reference point for what a mentor-mentee relationship should look like upon entering graduate school. More importantly, these frank discussions could develop a stronger sense of community for students, which is particularly important for students from underrepresented groups.
- Serve as a conduit to effectively and constructively communicate feedback on mentoring to the faculty advisor.
- Identify serious violations of the mentor-mentee relationship (e.g. sexual or scientific misconduct), and help the student navigate and report these issues through the appropriate university channels. Committee members could intervene in situations in which the mentor-mentee relationship is abusive or unhealthy.
- Relay their evaluation of the faculty's role as a mentor to the department chair for use in the faculty's annual evaluation.

While this technique can help graduate students navigate the mentor-mentee relationship, particularly in extreme situations, it is not a replacement for direct conversation and constructive feedback between mentor and mentee. Assessment via committee is qualitative and does not provide a quantifiable metric for use in promotion or tenure decisions, nor does it deliver a clear avenue for objective and quantitative feedback to the primary faculty member or the department chair. Additionally, committee members may have a personal or professional relationship with the primary faculty member, which could bias or inhibit their feedback. It is therefore not realistic to believe that a committee member can be impartial as the advisor is often a long-term peer, collaborator, friend, or mentor/mentee of the committee member.

### Appendix

A document about updating graduate committees at MSU, created by Dr. Amy Ralston, is available in the Appendix.

## Department and/or university assessment

Mentoring occurs within a wider social setting; to be successful, top-down approaches to improve mentorship should include a focus on training, culture, and social climate at both the departmental and the institutional levels (Keyser et al. 2008; Petridis 2015). Mentoring must be valued by higher administration to provide mentors with an incentive to improve and mentees with the sense that they are being heard. The following are suggestions for administrators seeking to improve mentoring relationships in their department and/or university.

### Establish university and departmental expectations for both faculty and students

Universities should develop mentoring guidelines that describe evidence-based best practices and lay out clear expectations for the graduate mentor–mentee relationship (Keyser et al. 2008). It is best if graduate students, postdoctoral researchers, and faculty participate in the development of these guidelines (Hund et al. 2018). Since graduate training is discipline-specific, further development of department-specific mentoring resources and best practices guidelines is recommended.

University of Michigan’s Rackham Graduate School provides a guide to mentoring for both [faculty](#) and [graduate students](#). This guide has been used and modified by many other universities, including the [University of Washington](#) and the [University of Nebraska Lincoln](#). Emory University’s Laney Graduate School likewise provides a guide to mentoring for both [faculty](#) and [graduate students](#). Many universities, including [Michigan State University](#), instead offer general guidelines and expectations for mentoring. Other examples include [Stanford University](#), [Duke University](#), [Brown University](#), and [Virginia Tech](#). The University of Minnesota offers a faculty guide to [worst practices in mentoring](#).

### Encourage mentorship training for both faculty and students

Universities should require training in mentorship for all incoming faculty (Anderson et al. 2012; Hund et al. 2018). Mentorship training held during faculty orientation could both build community between new faculty members and provide new faculty with colleagues and resources outside of their home departments. A number of published mentorship courses and workshops are available as models, including [Feldman et al. 2012](#), [Martina et al. 2014](#), [Pfund et al. 2015](#), [Gandhi and Johnson 2016](#), and Appendix S3 in [Hund et al. 2018](#). Training should also include mentoring self-assessment strategies to encourage continual improvement (available in [Lee et al. 2007](#); [Keyser et al. 2008](#); [Anderson et al. 2012](#)), as well as diversity sensitivity training to aid in mentoring across cultures (Hund et al. 2018). Faculty trained to carefully handle, rather than dismiss, issues related to race, ethnicity, gender, etc. will assist in the retention and support of students from underrepresented groups.

Universities should also require training in mentorship for all incoming graduate students (Anderson et al. 2012; Hund et al. 2018). This is best done for incoming graduate students during their orientation session. Topics covered should include university expectations for both faculty and graduate students, best practices of mentoring, communication strategies, how to align expectations with your mentor, how to build a successful mentoring team or committee, how to run a [peer mentor program](#), and the available resources for graduate students struggling with a mentoring relationship.

### Evaluate mentorship

Mentors and mentees should each fill out a written annual quantitative evaluation survey to assess mentor and mentee performance (Anderson et al. 2012). Survey questions should be directly linked to a

clear set of mentoring objectives, such that the survey reflects both faculty and student performance as related to the specific expectations of the university. Surveys may also be better able to capture and thus resolve smaller relationship issues that would not be substantial enough to bring up in the presence of the mentor, other faculty, or administrators. These written surveys provide a paper trail to protect both faculty and student, as well as generate consistent data that is comparable across colleges and departments. Surveys should be completed by all mentees, including graduate students, postdoctoral researchers, and post-grad research technicians, to increase the sample size of available data and to reduce the risk of a student's evaluation being identified by an advisor, which could lead to repercussions against the student. Examples include the [Mentoring Competency Assessment](#) (University of Wisconsin Madison; Fleming et al. 2013), questions from Table 1 in [Anderson et al. 2012](#), the University of California Davis [Mentor Evaluation Form](#), and the University of Colorado Denver [Mentorship Evaluation Form](#). In the appendix to this document, we have created an example evaluation survey to assess different attributes of both the mentor and mentee based on Pfund et al. 2016.

At the department level, this data should be given to an independent and impartial individual (e.g., department graduate director), who would then provide summary feedback to both the mentor and mentee (Hund et al. 2018). This annual feedback would address both successes and needed improvements and would provide options for related training, allowing greater transparency and earlier resolution of problematic areas. Summarizing this feedback protects student anonymity, and involving an impartial mediator provides a clear channel for conflict resolution if needed. Feedback should be scheduled on a consistent basis (e.g., at the end of every academic year) to remove temporal biases from the evaluation. This assessment should be representative of the ability of the mentor and mentee throughout time, and not just after a stressful event or negative interaction.

After the implementation of these surveys at the department level, universities should begin to aggregate this quantitative data across students and years. This data should then be used to recognize and reward effective faculty mentors (Anderson et al. 2012). Aggregation at specific time intervals (e.g., every 5 years) protects faculty from the negative reviews of a single disgruntled student and protects students by improving their anonymity. It also provides time for struggling mentors and mentees to receive critical feedback, attend trainings, and improve their communication and relationship without negative consequences for the mentor. Furthermore, this long time period allows students to provide honest feedback to their mentors without worrying about the effect of that feedback on their mentor's career.

#### Provide resources for conflict resolution

Departmental and campus resources for conflict resolution should be distributed to both faculty and students to establish explicit policies and procedures for resolving mentor–mentee conflicts (Keyser et al. 2008; Hund et al. 2018). Minor conflicts could be dealt with in the department, whose chair or graduate director could provide informal and confidential mediation for mentors and mentees seeking to improve their relationship (Hund et al. 2018). Within the university, there should also be structures and processes for hearing and adjudicating serious violations of faculty or student rights. By definition, the mentoring relationship reflects a significant power imbalance, and institutional oversight is necessary to ensure that mentors do not exploit the relationship or their mentees (Keyser et al. 2008). In addition, universities should provide professional counseling and conflict–resolution services for both faculty and students for whom informal mediation was unsuccessful (Hund et al. 2018).

### Recognize and reward good mentoring

Institutional recognition and support of faculty mentors is an important mechanism for ensuring that mentors dedicate the requisite amount of time and energy to the tasks involved (Keyser et al. 2008). Mentors need support, including protected time for mentoring, financial support to offset training costs, and formal academic acknowledgment of their mentoring from their institutions (Fleming et al. 2012). Universities must also reward effective mentorship in retention, tenure, and promotion decisions if universities want to encourage successful mentorship. Patterns of effective or ineffective mentoring across several students, instead of isolated incidents, should be used as the basis for institutional evaluation (Keyser et al. 2008; Hund et al. 2018).

### Appendix

We have created an example evaluation survey to assess different attributes of both the mentor and mentee based on Pfund et al. 2016, which is available in the Appendix.

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## **Appendix**

1. Student-Advisor Expectation Scales (Stanford University)
2. Annual Meeting Worksheet (Stanford University)
3. Updating Graduate Committee Meetings at MSU, by Dr. Amy Ralston
4. Mentor/Mentee Evaluation Survey (based on Pfund et al. 2016)

## Student-Advisor Expectation Scales

The Student-Advisor Expectation Scales worksheet lists 16 pairs of statements describing end points on a continuum. Individuals differ as to the position they take on each scale. These differences reflect variation in educational philosophy, personality, and the norms of the home discipline. Each item is an issue about which most students and advisors need to reach agreement. Often, however, students and faculty members do not directly discuss their perspectives about how this matter should be resolved and why. In fact, in many cases, the situation may change over the student's time in doctoral studies.

Making expectations explicit, and having regular conversations about expectations, helps to minimize misunderstandings. It is important to recognize that most students do not feel comfortable asking their advisor to complete the worksheet. Faculty members may need to be the ones to initiate conversations about expectations.

This document can provide a basis for conversations between students and advisors to align their expectations. The Expectation Scales worksheet can be used in several ways.

### Faculty Advisors

Faculty advisors can complete the worksheet and use it as the basis for a discussion with individual students, among a group of advisees, or with a team in the lab. Students prefer faculty members to initiate discussions.

- For each item, why does the advisor think that this is the best way to proceed?
- Which items are non-negotiable? Which can be discussed and determined together?
- In which ways does the advisor tailor her/his *modus operandi* to the individual student? Why does the faculty member change his/her MO? Does the advisor take into account the student's personality, background experiences, stage in graduate studies, or other factors?
- What other expectations does the advisor have of students? When and how should students ask for clarification of expectations?

### Students

Students can complete the worksheet to explore:

- The student's own needs and desires. What does the student think is the best way to proceed for the student's own development?
- What does the student believe and understand to be the advisor's preferences and *modus operandi*?
- Complete the worksheet identifying both what the student desires and the perception of the faculty advisor's position. If the difference is 2 points or more, this is an item that should probably be discussed directly.
- Do all of the faculty member's advisees share similar understandings of the advisor's preferences and *modus operandi*?
- Develop a personal advising philosophy. How would the student plan to advise graduate students in the future? How does the student mentor and advise undergraduates or newer graduate students?

### Directors of Graduate Studies

The worksheet can be used with a group of faculty members to initiate discussion about:

- What positions do individual faculty members hold? Why do they think that this is the best way to proceed?
- Does the department have some expectations that are shared?
- Do faculty members share the same reasons or rationale for shared positions on scales?
- When and how do faculty members discuss expectations with student advisees?



## Student-Advisor Expectation Scales

Read each of pair of statements describing end points on a continuum. Estimate your position and mark it on the scale. For example, if you believe very strongly that it is the advisor's responsibility to select a research topic for the student, on scale #1 you should circle '1'. If you think that both the advisor and student should be equally involved, circle '3'.

The other side of this document describes ways to use this worksheet.

Course of Study & Dissertation Planning		
1. The advisor should suggest and approve which courses the student takes.	1 2 3 4 5	Students should solely determine which courses they take.
2. It is the advisor's responsibility to select a promising dissertation research topic.	1 2 3 4 5	The student is solely responsible for selecting the dissertation topic.
3. The advisor should select the other members of the dissertation reading committee.	1 2 3 4 5	The student should select the members of the dissertation reading committee.
Contact & Involvement		
4. The advisor should determine how often and when to meet with the student.	1 2 3 4 5	The student should decide how often and when to meet with the advisor.
5. Faculty-student relationships are purely professional and personal matters are not appropriate.	1 2 3 4 5	Close personal relationships are essential for successful advising.
6. The advisor should check regularly that the student is working consistently and on task.	1 2 3 4 5	Students should work independently without having to account for how they spend their time.
7. The advisor should be the first place to turn when the student has problems with the research project.	1 2 3 4 5	Students should try to resolve problems on their own, including seeking input from others, before bringing a research problem to the advisor.
8. The advisor is responsible for providing emotional support and encouragement to the student.	1 2 3 4 5	Emotional support and encouragement are not the responsibility of the advisor – students should look elsewhere.
The Dissertation		
9. The advisor should insist on seeing all drafts of work to ensure that the student is on the right track.	1 2 3 4 5	Students should submit drafts of work only when they want input and feedback from the advisor.
10. The advisor should assist in the writing of the dissertation if necessary.	1 2 3 4 5	The writing of the dissertation should only ever be the student's own work.
11. The advisor should determine when and where to present or publish the research.	1 2 3 4 5	The student should decide when and where to present or publish the research.
12. The advisor should decide when the dissertation is ready to be defended and submitted.	1 2 3 4 5	The student should decide when the dissertation is ready to be defended and submitted.
13. The advisor has direct responsibility for the quality of the dissertation.	1 2 3 4 5	The student bears sole responsibility for the quality of the dissertation.
Support		
14. The advisor is responsible for finding funding for the student until the student graduates.	1 2 3 4 5	Students are responsible for finding their own sources of funding.
15. The advisor is responsible for introducing the student to others in the field, especially at conferences.	1 2 3 4 5	Students are responsible for building their networks in the field.
16. The advisor is responsible for providing career advice and preparation to the student.	1 2 3 4 5	Career advice and preparation are not the responsibility of the advisor – students should look elsewhere.

## Annual Doctoral Student Degree- and Career-Progress Meeting Worksheet

*This worksheet is intended to facilitate an annual conversation between a faculty advisor and doctoral advisee, focusing on the student's progress to degree and career plans. This conversation is intended to supplement other regular meetings where the faculty advisor and student talk about the student's research and dissertation. The worksheet is intended to structure a conversation, in order to elicit a picture of the student's goals and the context in which those aspirations exist. It can be used to help the student and the faculty advisor:*

- 1) *take stock of the student's accomplishments in the past year,*
- 2) *discuss near- and long-term plans, and*
- 3) *develop a strategy for realizing those plans.*

*A conversation based on each section of this worksheet would allow the faculty advisor to give advice and the student to develop specific, achievable goals for the next year.*

**To the Faculty Member:** *Please send this worksheet to the student well in advance of the meeting (past experience indicates a two-week lead-time works well). Since the goal is to facilitate an open conversation that is focused on the student's future, rather than a "performance review," it is recommended that the completed document not be retained after the meeting. Additional suggestions for structuring the meeting and conversation are on page 4.*

**To the Student:** *Please complete Parts 1-4 and return it along with your current CV to your faculty advisor at least two days prior to the scheduled meeting. You can type as much as needed in each section, but please respond in brief, bulleted format. This is not to be a complete report, but a summary to guide discussion. It is not intended that this become part of your permanent record.*

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Student Name:

Meeting Date:

Date began doctoral studies at Stanford:

Anticipated date of degree completion:

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### Part 1. Progress in the Last Twelve Months

**Please attach a copy of your current Curriculum Vitae (CV).**

List any program requirements that you completed this year. For example, coursework, requirements for advancement to candidacy, examinations, and teaching:

List members of your Dissertation Reading/Thesis Committee:

Give a **brief** overview of your overall progress on your research project(s) and dissertation in the past year.

Describe any research activities in which you have experienced or are experiencing difficulties. What factors caused or contributed to these difficulties? What assistance, resources, or mentoring might help you accomplish your research goals?

Give a brief overview of your teaching and mentoring activities in the past year. Describe any such activities in which you have experienced or are experiencing difficulties. What assistance, resources, or mentoring might help you accomplish your teaching goals?

Give a brief overview of your other professional activities, recognition and accomplishments in the past year (e.g., publications, patents, honors or awards, presentations at professional meetings, grants or fellowships):

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## **Part 2. Plans for the Coming Twelve Months**

List any program requirements yet to be completed, along with anticipated dates of completion. For example, coursework, requirements for advancement to candidacy, examinations, teaching, and plans to reach TGR tuition status (i.e., completion of all degree requirements except dissertation, including 135 units of residency):

Briefly describe the goals for your research project(s) and dissertation:

List publications you plan to submit (include proposed publication title, journal, and submission date):

List professional conferences, meetings and workshops you would like to attend (include proposed title and submission date for proposed presentations):

How will your doctoral studies be funded next year (e.g., research grant, Fellowship, Teaching Assistantship)? List fellowship, grants, and other funding applications you plan to submit (include name of award and due date):

What areas of expertise/understanding and skills would you like to develop in the next year? Think broadly of what you need to be able to know and do: new areas of knowledge, new research techniques, public speaking, writing, managing teams, classroom teaching, negotiation, etc. List your plans for learning these.

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### Part 3. Career Goals and Progress

List your long-term career goals. You are encouraged to include at least two:

- 1)
- 2)

What position/job do you see as the next step toward your career goals after graduating? When do you anticipate beginning the process of obtaining that next position?

What factors are driving your career goals, plans, and decisions (e.g., interests in research, teaching, business, government, writing; geographic priorities; family commitments; financial objectives)?

What steps are you taking to enhance your ability to attain these goals? What additional training or skills would most benefit you in preparing for your desired career?

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### Part 4. Final Discussion Points

*This final section is an opportunity for the student and advisor to develop action plans for the coming year and to reflect on specific actions that will help the student to be successful. It is useful to consider what is working and should continue, and what might change. This is an opportunity to come to closure on key issues, as well as to discuss any matters not already covered. Advisor: Please offer your opinions on each of these topics, especially the last two.*

What assistance, resources, and mentoring would help you meet your goals? What are your plans for identifying and using these resources?

What can *your advisor* continue to do to support you in reaching your specific research and professional development goals for the coming year?

What can *your advisor* do differently to best support you in reaching your specific research and professional development goals for the coming year?

What can *you* continue to do to achieve your immediate and long term goals?

What can *you* do differently to achieve your immediate and long term goals?

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*Adapted for doctoral students by the Office of the Vice Provost for Graduate Education, Stanford University, 2011, from the "Career Progress Document" developed by the Provost's Post-doctoral Advisory Committee, Stanford University, 2005. The latter group modeled their document on the "Individual Development Plan for Postdoctoral Fellows" of the Federation of American Societies of Experimental Biology. Current revision, October 19, 2011. Endorsed by the Stanford Committee on Graduate Studies, October, 2011.*

## **Suggestions for Using the Doctoral Student Annual Degree- and Career-Progress Meeting Worksheet**

### Suggestions for setting up the meeting:

Experience has shown that it is a good practice for the faculty member to meet with all advisees within a two- to three-week time-span. This indicates that all students are being treated the same, and that the request to meet does not imply that there is a problem. This is easily accomplished if the meetings occur at a pre-determined time each year. For situations where students have regularly scheduled meetings with their advisor, simply allocating the first meeting of the academic (September) or calendar year (January) for this purpose is an easy way to schedule the meeting. For those who meet with advisees *ad hoc*, a request to all advisees to set a meeting for “early in the month of xxx” is simple. Early January may work particularly well because the New Year is a time when people are often in a reflective or “change” mindset.

Setting aside an hour for the meeting has worked well. This is sufficient time to fully discuss the student’s progress and plans, without feeling rushed. It also signals to students that their development is important, and that advisors place value on their role as mentor.

The worksheet should be sent to the student as an email attachment well ahead (e.g., two weeks) of when the meetings are to occur. In the body of the email, the advisor can explain that this is being sent to all advisees, that it is intended: 1) to help the student and her/his advisor take stock of the past year’s accomplishments and progress; 2) to discuss near- and long-term plans, and; 3) to develop a strategy for realizing those plans. The student completes the form and returns it to the advisor as an email attachment at least two days in advance of the meeting. The advisor reviews the form before the meeting and considers what things s/he would like to focus on in the conversation.

At the end of the meeting, the form is destroyed or returned to the advisee. It is not intended that a copy of the form be put into a student’s “file” or become a permanent part of their academic record. If the form becomes documentation, rather than a way to structure a conversation, the tone of the meeting moves away from being supportive and “all about the advisee.” It risks becoming a bureaucratic or, worse, an antagonistic exercise.

### Suggestions for having a productive conversation:

At the meeting, the C.V. is reviewed (Part One of the form requests it to be attached) and then each item of the worksheet is discussed. The bulk of the time should be devoted to conversation about the advisee’s future goals and how to realize those goals, especially what the advisee needs to do and how the advisor can most help (Parts Two through Four).

The student’s responses on the worksheet allow the advisor to probe for more information, in order to more fully understand what the student is thinking. This, in turn, provides an opportunity for the advisor to provide advice.

Students’ anxieties can be allayed if the advisor enters the conversation with an open mind and makes clear that what matters most is that the student pursues a career that suits their strengths and interests. Students often do not know how faculty members will respond if the student proposes plans that they believe that the faculty member does not prefer or endorse. Some students fear a negative reaction from the faculty advisor if they plan a career outside of academia, for example, or wish to devote time to teaching.

Students enormously appreciate knowing that their advisors are supportive and have confidence in their ability to succeed. Ultimately, students must take responsibility for their own professional development, so it is also appropriate for the advisor to encourage the student to seek out resources and educational opportunities in other areas of their department, school or the university as a whole.

## Updating Graduate Committee Meetings at MSU

### Objective

Our objective is to update standard practices regarding graduate student guidance committee meetings at Michigan State University. We propose that graduate degree granting programs at Michigan State University adopt as routine practice a policy that, in addition to having the graduate student temporarily leave the room while the committee consults with the graduate advisor, the graduate advisor would also temporarily leave the room to allow student and committee to confidentially consult.

### Purpose

Currently, it is not common practice at MSU that graduate advisors temporarily leave the room during student committee meetings. However, the benefits of this practice are several:

- Students understand that committee members can serve as independent, trustworthy, neutral, and confidential sources of advising and advocacy.
- Committee members receive unbiased perspective on student progress and experience.
- Advisors benefit from sharing with committee members the responsibility for student progress and experience.
- Graduate programs demonstrate support for student experience and commitment to fostering productive, ethical training environments and systematic prevention of abuse.

### Precedent

Graduate programs that have already implemented this practice exist at the following institutes:

- [Albert Einstein College of Medicine](#)
- [Harvard University](#)
- [Johns Hopkins University](#)
- [University of California Berkeley](#)
- [University of North Carolina, Chapel Hill](#)
- [University of Pennsylvania](#)
- [Throughout Europe and Australia](#)

### Suggestions for Implementation

1. Advisor is asked to step out of the room for 5-10 minutes so that the committee can confer with the student.
2. Once the advisor has stepped out of the room, the committee chair should explain to the student that each of the committee members can be trusted as a confidential advocate independent of the advisor.
3. The committee chair then asks the student if they would like to discuss any issues or concerns regarding progress toward their degree. Examples include:
  - a. Quality of their training environment (resources, lab personnel, graduate advisor)
  - b. Progress toward the degree (course work, thesis project, publications)
  - c. Professional development (goals and opportunities)
4. The committee members should then explain to the student that:
  - a. It is appropriate for the student to approach individual committee members one-on-one to discuss any of these topics outside of his or her committee meetings.
  - b. The director of the student's graduate program is always available for confidential discussion of logistical, practical, interpersonal, or sensitive issues related to their training experience.

### **Anticipated Results**

To facilitate open discussion, the student should understand that most matters of discussion will be kept confidential, except for cases where mandatory reporting is required. It is anticipated that most advisor-absent sessions will describe standard graduate school issues and result in productive discussion.

However, in the event that the student has encountered harassment, has personal safety concerns, has witnessed scientific misconduct, or has other ethical concerns which s/he feels uncomfortable discussing with the advisor, the committee will be able to document and intervene and direct the student to appropriate campus resources. For example, the committee should direct the student to report scientific misconduct to the federal Office of Research Integrity.

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A quantitative mentoring evaluation based on Table 1 in Pfund et al. 2016

### Mentor-Mentee Evaluation Forms (Mentor)

Read and assess your mentor on a scale from 1-5 for each statement (1 – needs considerable work, 5 – has demonstrated with excellence).

MENTOR EVALUATION						
Attribute	Metric Statement	Metric Scale				
<b>Research</b>						
Developing disciplinary research skills	Teach mentees to design and carry out a research project	1	2	3	4	5 NA
Developing technical skills	Provide instruction in core disciplinary research techniques and opportunities to observe techniques	1	2	3	4	5 NA
Teaching and helping to learn disciplinary knowledge	Identify the knowledge mentees need to be successful in the discipline and guide them in learning that knowledge	1	2	3	4	5 NA
Accurately assessing understanding of disciplinary knowledge and skills	Assess mentee learning of disciplinary knowledge and skills and provide feedback and guidance to address gaps	1	2	3	4	5 NA
Valuing the practice of ethical behavior and responsible conduct of research	Model the ethical conduct of research and actively engage in conversations with their mentees	1	2	3	4	5 NA
Developing mentee research self-efficacy	Foster mentees' internalization of their own research success	1	2	3	4	5 NA
<b>Interpersonal</b>						
Listening actively	Give their undivided attention and listen to both their mentees' words and the emotion behind the words	1	2	3	4	5 NA
Aligning mentor and mentee expectations	Establish and communicate mutual expectations for the mentoring relationship	1	2	3	4	5 NA
Building trusting and honest relationships	Offer honest and open feedback on how the relationship is progressing	1	2	3	4	5 NA
<b>Psychosocial and Career</b>						
Providing motivation and facilitating coping efficacy	Scaffold research work in ways that yield periodic success; celebrate the successes and offer support after failures	1	2	3	4	5 NA
Developing mentee career self-efficacy	Foster and affirm mentees' career aspirations	1	2	3	4	5 NA

A quantitative mentoring evaluation based on Table 1 in Pfund et al. 2016

Developing science identity	Recognize mentees as scientists	1	2	3	4	5	NA
Developing a sense of belonging	Create a welcoming and inclusive research environment	1	2	3	4	5	NA
<b>Culturally Responsive</b>							
Advancing equity and inclusion	Employ strategies for recognizing and addressing issues of equity and inclusion	1	2	3	4	5	NA
Being culturally responsive	Effectively negotiate dialogue across diverse dimensions	1	2	3	4	5	NA
Reducing the impact of bias	Consider their unconscious biases and regularly check that they are not negatively impacting their own or their research team's behavior	1	2	3	4	5	NA
Reducing the impact of stereotype threat	Recognize, acknowledge, and work to reduce stereotypes that may negatively impact their mentees	1	2	3	4	5	NA
<b>Sponsorship</b>							
Fostering independence	Continuously assess mentees' development and design increasingly challenging tasks and projects to advance mentees' independence	1	2	3	4	5	NA
Promoting professional development	Identify opportunities for mentee professional development and support their engagement in them	1	2	3	4	5	NA
Establishing and fostering mentee professional networks	Introduce and facilitate relationship building between their network of colleagues and their mentees	1	2	3	4	5	NA
Actively advocating	Promote mentees' work; provide professional support	1	2	3	4	5	NA

### Mentor-Mentee Evaluation Forms (Mentee)

Read and assess your mentee on a scale from 1-5 for each statement (1 – needs considerable work, 5 – has demonstrated with excellence). For questions that you do not have enough information to evaluate, select 'NA'.

MENTEE EVALUATION						
Attribute	Metric Statement	Metric Scale				
<b>Research</b>						
Developing disciplinary research skills	Develop the skills to design and carry out a research project	1	2	3	4	5 NA
Developing technical skills	Commit to learning and gaining proficiency in disciplinary research techniques	1	2	3	4	5 NA
Teaching and helping to learn disciplinary knowledge	Seek guidance from their mentors to identify the disciplinary knowledge they need and be receptive to mentor feedback that guides their learning	1	2	3	4	5 NA
Accurately assessing understanding of disciplinary knowledge and skills	Self-assess learning of disciplinary knowledge and skills and respond to mentor feedback	1	2	3	4	5 NA
Valuing the practice of ethical behavior and responsible conduct of research	Actively familiarize themselves with and follow ethical practices in their research	1	2	3	4	5 NA
Developing mentee research self-efficacy	Effectively manage anxiety associated with independently conducting research	1	2	3	4	5 NA
<b>Interpersonal</b>						
Listening actively	Give their undivided attention and listen to their mentors	1	2	3	4	5 NA
Aligning mentor and mentee expectations	Establish and communicate mutual expectations for the mentoring relationship	1	2	3	4	5 NA
Building trusting and honest relationships	Offer honest and open feedback on how the relationship is progressing	1	2	3	4	5 NA
<b>Psychosocial and Career</b>						
Providing motivation and facilitating coping efficacy	Acknowledge that research frequently involves setbacks and develop strategies to deal with them	1	2	3	4	5 NA
Developing mentee career self-efficacy	Seek opportunities to explore and prepare for a career	1	2	3	4	5 NA

A quantitative mentoring evaluation based on Table 1 in Pfund et al. 2016

Developing science identity	Affirm themselves as scientists	1	2	3	4	5	NA
Developing a sense of belonging	Actively engage and establish relationships with research team members	1	2	3	4	5	NA
<b>Culturally Responsive</b>							
Advancing equity and inclusion	Identify strategies for recognizing and addressing issues of equity and inclusion	1	2	3	4	5	NA
Being culturally responsive	Effectively negotiate dialogue across diverse dimensions	1	2	3	4	5	NA
Reducing the impact of bias	Recognize unconscious bias, regularly check that it is not negatively impacting their behavior, and address it when they observe it	1	2	3	4	5	NA
Reducing the impact of stereotype threat	Recognize stereotypes associated with their group identity and address them to reduce potentially negative impacts	1	2	3	4	5	NA
<b>Sponsorship</b>							
Fostering independence	Push themselves to increase responsibility for and ownership of their research, while asking for support and guidance as needed	1	2	3	4	5	NA
Promoting professional development	Identify and engage in opportunities to develop the professional skills needed to become a successful scientist	1	2	3	4	5	NA
Establishing and fostering mentee professional networks	Actively identify and seek ways to meet and establish relationships with potential future colleagues in the discipline	1	2	3	4	5	NA
Actively advocating	Report successful outcomes to mentor; Seek out and accept advocacy	1	2	3	4	5	NA