

UC San Diego



SCRIPPS INSTITUTION OF  
OCEANOGRAPHY

Scripps Institution of Oceanography's  
Mentoring Handbook.

SIO's Mentoring handbook is based on UC San Diego's Health Sciences Faculty Mentoring Toolkit 3.0, 2022 (with permission) and adapted and modified for SIO by Lisa Adams, SIO Associate Chair.

A Collection of Tools and Evidence-Based Strategies for Mentoring in the  
STEM Fields

May 15, 2023

## Table of Contents

### **Overview**

[Scripps Institution of Oceanography's \(SIO\) Mentoring Handbook 2023 is based on UC San Diego's Health Sciences Faculty Mentoring Mentor Training Toolkit](#)

[SIO's Commitment to Mentor Training](#)

[History of Mentoring Development at SIO](#)

[Evidence-based Research Studies on Mentoring](#)

### **Preparing for Success**

[Establishing Effective Communication and Trust](#)

[Attributes of a Good Mentor and Mentee](#)

### **Getting Started**

[Initial Mentoring Conversation: Preparing the Relationship](#)

[Aligning Mentor and Mentee Expectations](#)

### **Crucial Conversations**

[Enhancing Work-Life Integration](#)

[Equity and Inclusion Resources](#)

[Promoting Self-Efficacy](#)

### **Logistical Tools**

[First Meeting Checklist](#)

### **Evidence-Based Tools & Activities**

[Effective Communication Styles Inventory](#)

[Mentoring Relationship](#)

[Mentoring Action Plan](#)

[Developing a Mentoring Philosophy](#)

### **Resources and Services to Support Students and Academics**

[Students](#)

[Faculty, Researchers, and Academics](#)

[Mediation](#)

[Mentoring](#)

### **Acknowledgments**

SIO Contributors

Health Sciences Faculty and Staff Contributors to the UC San Diego Faculty  
Mentoring Toolkit 3.0, 2022

## Overview

### Scripps Institution of Oceanography's (SIO) Mentoring Handbook 2023

Scripps Institution of Oceanography's (SIO) Mentoring Handbook has been adapted from UC San Diego's Health Sciences Faculty Mentoring (HSFM) Toolkit 3.0, 2022 (developed by The Office of Faculty Affairs, 2020) by Lisa Adams (SIO Department Associate Chair) with the assistance of Cheryl Peach (Director of Scripps Educational Alliances). At UC San Diego Health Sciences, the HSFM Toolkit was originally developed with the senior faculty to junior faculty relationship in mind; this handbook now targets the mentor relationship between PIs and mentees (i.e., undergraduates, graduate students, and postdocs) at SIO. We gratefully acknowledge the many UCSD Health Sciences contributors (see Acknowledgment Section), without whom this SIO version of the Handbook would not have been possible.

### SIO's Commitment to Mentor Training

SIO is committed to improving mentoring at all levels. Research synthesized in the National Academies report [The Science of Effective Mentorship in STEMM](#) shows that high-quality, sustained mentoring is a key factor in student success and greatly affects student achievement.<sup>[1]</sup> The NASEM report recommends the research-based curriculum developed by the University of Wisconsin-Madison's Center for the Improvement of Mentored Experiences in Research (CIMER, <https://cimerproject.org/>) as an exemplary approach to mentorship education.

### History of Mentoring Development at SIO

In Spring 2021, the SIO Department hosted an **Anti-Bullying Workshop** co-hosted by Ellen Beck, M.D., Office of Leadership and Faculty Development, and SIO Associate Chair Lisa Adams. The workshop aimed to promote a safe, supportive, and mutually respectful culture at SIO. High-level topics included levels of responsibility, bullying scenarios, bystanders, and resources. Takeaways from the workshop included an increased awareness of our impact on our colleagues (senior and junior) and the students we mentor. Coverage and discussions included ways that we could improve the climate of our immediate environment and sphere of influence, identifying examples of abusive conduct/bullying in academia, reasons for inaction on the part of the bystander, short and long-term impacts of bullying, strategies to be an ally and active bystander, campus resources, and UC San Diego's Principles of Community and Behavior Expectations.

In Spring 2022, a group of SIO-trained facilitators (Lisa Adams, Keiara Auzenne, Simone Baumann-Pickering, Carlene Burton, Peter Franks, Jamin Greenbaum, Jennifer

---

<sup>[1]</sup>National Academies of Sciences, Engineering, and Medicine. 2019. *The Science of Effective Mentorship in STEMM*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25568>

MacKinnon, and Cheryl Peach) piloted a **Mentoring Development Training at SIO** for 10 Faculty and Researchers based on the CIMER curriculum.

In the Summer of 2022, a subset (Adams, Auzenne, Burton, and Peach) of the SIO-trained facilitators, led by Cheryl Peach, piloted a **Mentoring Development Training at SIO** for 24 graduate students and postdoctoral scholars who were anticipating supervising undergraduate research interns in the summer. The curriculum was based on the University of Wisconsin-Madison's Center for the Improvement of Mentored Experiences in Research (CIMER) curriculum designed specifically for undergraduate mentoring.

In the Winter of 2023 (January), SIO coordinated an **Individual Development Plan (IDP) Workshop** by Simone Baumann-Pickering, with Cheryl Peach and Lisa Adams as support facilitators. The workshop was recorded and is posted: <https://scripps.ucsd.edu/portal/faculty-resources>

In Spring 2023, the SIO Department held its second **Mentor Training Workshop**. Eighteen academics attended the training. A trained CIMER Consultant, Kelly Diggs-Andrews, facilitated the workshop.

### Evidence-based Research Studies on Mentoring

- Research shows that mentorship is integral to successful careers in academia, particularly for women and underrepresented minorities <sup>[1] [2] [3] [4] [5]</sup>
- Formal, structured mentorship supports the success of junior faculty in publishing scholarly work and receiving federal/extramural funding, while also improving their sense of satisfaction and engagement with the institution <sup>[6]</sup>
- Federal funding agencies are calling for evidence-based mentor training programs for faculty; all NSF awards that include a postdoc require a Postdoc Mentoring Plan, and several categories of NIH grants require evidence of mentor training or a mentoring plan.

- [1] C. Pfund, "Training mentors of clinical and translational research scholars: A randomized controlled trial.," *Academic Medicine*, vol. 89, no. 5, pp. 774-782, 2014.
- [2] A. Ries, D. Wingard, A. Gamst, C. Larsen, E. Farrell and V. Reznick, "Measuring Faculty Retention and Success in Academic Medicine," *Academic Medicine*, vol. 87, no. 8, pp. 1046-1051, 2012.
- [3] S. Daley, D. L. Wingard and V. Reznick, "Improving the retention of underrepresented minority faculty in academic medicine.," *Journal of the National Medical Association*, vol. 98, no. 9, pp. 1435-1440, 2006.
- [4] C. Moutier, D. Wingard, M. Gudea, D. Jeste, S. Goodman and V. Reznick, "The Culture of Academic Medicine: Faculty Behaviors Impacting the Learning Environment.," *Academic Psychiatry*, vol. 40, no. 6, pp. 912-918, 2016.
- [5] S. Mark, H. Link, P. Morahan, L. Pololi, V. Reznick and S. Tropez-Sims, "Innovative mentoring programs to promote gender equity in academic medicine.," *Academic Medicine: journal of the Association of American Medical Colleges*, vol. 76, no. 1, pp. 39-42, 2001.
- [6] C. Pfund, P. C. Maidl, J. Branchaw, L. S. Miller and J. Handelsman, "Professional Skills. The merits of training mentors.," *Science*, vol. 31, no. 5760, pp. 473-474, 2006.

---

## Preparing for Success

---

### Establishing Effective Communication and Trust

Good communication is a key element of any relationship, and a mentoring relationship is no exception. As mentors, it is not enough to say that we know good communication when we see it. Rather, it is critical that mentors reflect upon and identify characteristics of effective communication and take time to practice communication skills.

#### Building a Relationship with a Mentee

Building an effective relationship of mutual understanding and trust with the mentee is a critical component of effective mentoring. Mentors can establish rapport with their mentees by using effective interpersonal communication skills, building trust, and maintaining confidentiality.

#### Strategies to build rapport

- Build community among your mentees (undergraduates, graduate students, and postdocs) within your lab.
- Schedule one-on-one weekly meetings.
- Make eye contact, minimize distractions, and be enthusiastic.
- Discuss the trainee's background and career goals.
- Consider sharing your own background and career goals.
- Talk about "big picture" educational and professional goals.
- Introduce them to people in the department, business offices, and others they may need to rely on for assistance.
- Acquaint them with department/university policies.
- Encourage them to ask questions and identify resources to answer their questions.

#### Interpersonal Communication

Interpersonal communication is a person-to-person, two-way, verbal, and nonverbal information-sharing between two or more persons. Good communication helps develop a positive working relationship between the mentor and mentee by helping the mentee understand the mentor's directions and feedback better, feel respected and understood, and be motivated to learn from the mentor. Mentees learn best from mentors who are sincere, approachable, and nonjudgmental. These qualities are communicated primarily by facial expressions and, to a lesser extent, by words. People often remember more about how a subject is communicated than the speaker's knowledge.

There are two types of communication: verbal and nonverbal. Verbal communication is communication that occurs through spoken words. Nonverbal communication occurs through unspoken mediums, such as gestures, posture, facial expressions, silence, and eye contact. Mentors need to remember they are communicating with mentees both when they are speaking and when they are not speaking. Up to 93% of human communication is nonverbal. Body language tells those with whom we communicate what we think and feel. Positive or open body language includes:

- Eye contact (depending on the culture)
- Open or relaxed posture
- Nodding or other affirmation
- Pleasant facial expressions

Examples of negative or closed body language include crossed arms, averted eyes, and pointing fingers. The mentor needs to be aware of what he or she is communicating nonverbally and what the mentee is communicating non-verbally.

When mentoring, effective communication involves more than providing information or giving advice; it requires asking questions, listening carefully, trying to understand a mentee's concerns or needs, demonstrating a caring attitude, remaining open-minded, and helping solve problems. Mentors can utilize many communication skills to communicate with mentees, including the following:

- Active listening: Be sure to listen to what a mentee is saying. Instead of truly listening to the mentee, the mentor often thinks about his or her response, what to say next, or something else entirely. It is important to quiet these thoughts and remain fully engaged in listening.
- Attending: Listen while observing and communicate attentiveness with verbal follow-up (saying "yes" or "I see") or nonverbal cues (making eye contact and nodding the head).
- Reflective listening: Verbally reflect on what the mentee has just said. This helps the mentor check whether he or she understands the mentee and helps the mentee feel understood. *Examples: "So it seems you're overwhelmed with your workload." "It seems that you are concerned about that experiment."*
- Paraphrasing: Determine the basic message of the mentee's previous statement and rephrase it in your own words to check for understanding. *Examples: "You're interested in developing a system for improving that." "It sounds like you're concerned about the design of the experiment."*
- Summarizing: Select the main points from a conversation and bring them together in a complete statement. This helps ensure the message is received correctly. For example, "Let me tell you what I heard, so I can be sure I understand you. You said that the main challenge right now is balancing your teaching and research responsibilities."

- **Asking open-ended questions:** Ask mentees questions that cannot be answered with a simple yes or no. Open-ended questions encourage a full, meaningful answer using the mentee's knowledge and feelings, whereas closed-ended questions encourage a short or single-word answer. Examples:  
*Close-ended question: "You didn't think the experiment would work?"*  
*Open-ended question: "What factors led you to change the protocol?"*  
*Close-ended question: "Did you understand what we discussed today?"*  
*Open-ended question: "Can you summarize what we discussed today?"*
- **Probing:** Identify a subject or topic that needs further discussion or clarification and use open-ended questions to examine the situation in greater depth. For example, "I heard you say you are overwhelmed; please tell me more about that."
- **Self-disclosure:** Share appropriate personal feelings, attitudes, opinions, and experiences to increase communication intimacy. *Example: "I can relate to your difficult situation; I have experienced something similar and recall being very frustrated. Let me try to help you figure out how to move forward."*
- **Interpreting:** Add to the mentee's ideas to present alternative ways of looking at circumstances. When using this technique, it is important to check back in with the mentee and be sure you are interpreting correctly before assigning additional meaning to their words. *Example: "So you are saying that the interpretation is flawed because of the statistical test used to analyze the data. That is likely one reason, but let's try to identify other potential issues or sources of error to eliminate them."*
- **Confrontation:** Use questions or statements to encourage mentees to face difficult issues without accusing, judging, or devaluing them. This can include gently pointing out contradictions in mentees' behavior or statements and guiding mentees to face an issue that is being avoided. *Example: "It's great that you are so committed to mentoring the younger researcher in the group. Do you think this mentoring might affect the time you give to your research?"*

Some attitudes and/or behaviors can serve as barriers to communication—these can be verbal or nonverbal. Verbal barriers to communication that should be avoided include the following:

- **Moralizing:** Making judgments about a mentee's behavior, including calling it right or wrong or telling them what they should or should not do.
- **Arguing:** Disagreeing with instead of encouraging the mentee.
- **Preaching:** Telling the mentee what to do in a self-righteous way.
- **Storytelling:** Relating long-winded personal narratives that are not relevant or helpful to the mentee.
- **Blocking communication:** Speaking without listening to the mentee's responses, using an aggressive voice, showing impatience, annoyance when interrupted, or being authoritative. These behaviors often lead to the mentee feeling down, humiliated, scared, and insecure. As a result, the mentee may remain passive and refrain from asking questions or distrust the mentor and disregard recommendations.



- Talking too much: Talking so much that the mentee does not have time to express themselves. As a mentor, it is important not to dominate the interaction.

Examples of nonverbal barriers to communication include shuffling papers, not looking directly at the mentee when he or she is speaking and allowing interruptions or distractions. These barriers may have consequences for both the mentor and the mentee. They may lead to poor information sharing, fewer questions being asked by the mentee, difficulty in understanding problems, uncomfortable situations, and a lack of motivation on the mentee's part.

## Establishing Trust

Establishing trust is essential in building rapport with a mentee. Trust is the trait of believing in the honesty and reliability of others. Some mentees may be nervous about working with a mentor. To put them at ease, create a trusting relationship by empathizing with their challenges, sharing knowledge without patronizing, and remaining nonjudgmental. Along with the other communication skills listed above, establishing a trusting dynamic is essential for a productive and positive mentor/mentee relationship.

Trust must be earned and is built through consistently reliable behaviors and interactions. Building trust can take time; destroying trust can occur in a single interaction. Trust and respect are different things. A mentee can respect their mentor but not trust them, and they could trust them but not respect them.

The following list provides some ideas for how the mentor can build trust with the mentee:

- Share appropriate personal experiences from when you were mentored.
- Acknowledge mentees' strengths and accomplishments from the onset of the mentoring process.
- Encourage questions of any type and tell mentees there is no such thing as a bad question.
- Take time to learn culturally appropriate ways of interacting with your mentees and help them interact appropriately with their peers.
- When appropriate, consider how local knowledge can be incorporated into the mentoring experience.
- Acknowledge mentees' existing knowledge and incorporate new knowledge into existing knowledge.
- Ask for and be open to receiving feedback from mentees and apply constructive feedback to improve mentoring skills.

Adapted from the I-TECH Clinical Mentoring Toolkit, produced by the International Training and Education Center for Health (I-TECH)/University of Washington with funding from the US Health Resources and Services Administration. For more information, visit [www.go2itech.org](http://www.go2itech.org).

## Attributes of a Good Mentor

- available and engaged
- has the mentee's best interests in mind
- is focused on getting the best out of the mentee by inspiring and energizing them
- sets a good example of how to be a colleague and mentor
- a good listener
- flexible and able to adapt to mentees' individual needs
- respected by peers and leadership
- humble, self-reflective, and respectful
- empathic to the mentee's personal and professional needs and cultural background
- has a sincere desire and commitment to be a mentor
- provides both critically positive and negative feedback (supportive and challenging)
- stays mindful of the needs of the mentee beyond formal mentor meetings
- shares/finds some common goals or background with the mentee
- serves as a role model
- feel/finds benefit in the relationship with the mentee
- problem solves collaboratively
- provides career coaching
- celebrates the mentee's accomplishments
- reflects on how their own cultural background and personal history influence mentoring relationships

## Attributes of a Good Mentee

- motivated
- curious and creative
- invested in their own success
- a good listener
- responsible, responsive, and respectful
- able to work independently as well as in a team
- resilient and open to multiple outcomes
- humble and self-reflective
- receives feedback effectively and graciously
- takes an active role in their own learning and professional development
- engages in problem solving with the mentor
- actively assesses and communicates their changing needs
- seeks/finds additional informal mentors
- reflects on how their own cultural background and personal history influence mentoring relationships

---

## Getting Started

---

### Initial Mentoring Conversation: Preparing the Relationship

To-Do List	Strategies for Conversation	Questions to Consider
Take time to get to know each other.	Determine your mentees' interest in this field of science.	Ask mentees: What direction do you want to take your science?
Take inventory of mentees' strengths and weaknesses.	Review your mentee's CV and transcripts in advance of the conversation. Identify growth opportunities.	What points of connection have you discovered in your conversation? What areas (discipline and/or skills related) would you like to develop while at SIO?
Talk about mentoring.	Share your previous mentoring experiences.	What did you like about the academic experiences you each want to carry forward into this relationship? What do you want to avoid?
Determine their professional development goals.	Describe your career pathway and goals.	What professional development goals would align with your future career?
Determine relationship needs and expectations.	Ask your mentee what he/she/they want, needs, and expects out of the relationship.	Are you clear about each other's wants, needs, and expectations for this mentoring relationship?
Candidly share your assumptions and imitations	Ask your mentee about his/her assumptions and limitations. Discuss implications for your relationship.	What assumptions do you hold about each other and your relationship? What are you each willing and capable of contributing to the relationship? What limitations do you each bring to the relationship?
Discuss your personal style.	Talk about your personal styles. You may have data from instruments such as EI, MBTI, DiSC, and LSI.*	How might each other's styles affect the learning in the mentoring relationship?

\*Emotional Intelligence; Myers Briggs Type Indicator; Dominance, Influence, Steadiness, Conscientiousness Tests; Learning Styles Inventory.

## Aligning Mentor and Mentee Expectations

### Mentor Alignment

The alignment phase should be completed early on and includes a more formal articulation and documentation of expectations, roles, and responsibilities of the mentor/mentee relationship. This formal clarification of communication style, goals, progress plans, etc., can help establish a trusting and open relationship and guide both mentor and mentees on being engaged and mutually responsible. Recognize that the mentoring strategies and mentee needs will change over time.

What needs to be aligned? Expectations.

- **Relational:** These expectations are unique to each relationship and establish ground rules for how the mentor and mentee can bring their best and whole selves forward. These expectations change over time as the mentee gains maturity and experience.
- **Goals:** These expectations clarify what specific work will be done, when, and by whom.
- **Responsibilities/Accountability:** These expectations apply to each mentor/mentee.

Establish a mentorship agreement/compact to address specific goals, timelines, responsibilities, and outcomes. Revisit these issues frequently and adjust your expectations and goals accordingly.

### Mentee Alignment

A mentee must take responsibility to ensure the mentor/mentee's expectations are compatible and realistic. The alignment phase is a time to establish and assess goals and timelines.

A mentee should consider and evaluate:

- Mentee goals
- Strengths
- Areas for professional growth
- Expectations of the mentor
- Timeliness
- Learning style
- Communication/meeting preferences
- How progress is evaluated
- Red flags in the mentor/mentee relationship

A mentorship agreement/compact made at the beginning of the mentor/mentee relationship should reflect the best of intentions for the relationship and how things will move forward. One resource to structure interactions between the mentee and mentor

is an Individual Development Plan (IDP), which is nominally structured to be initiated by the mentee. Mentees can refer to the [UCSD Individual Development Plan](#) template. IDPs are intended to be reviewed with the mentor every six months.

A recording of a January 2023 IDP workshop, led by Simone Baumann-Pickering with Cheryl Peach and Lisa Adams, at SIO, is available here:

<https://scripps.ucsd.edu/portal/faculty-resources>

Other SIO resources for mentorship alignment include:

[Advisor-Doctoral Students Expectations at SIO](#)

[Handbooks | Scripps Institution of Oceanography](#)

### Mentor-Mentee Misalignment

If there is misalignment, reevaluate the relationship as necessary. As soon as symptoms of misalignment are detected, have a candid discussion to get to the root cause of misalignment. If necessary, seek guidance from the SIO ombuds, the Department, or the Office of the SIO Deputy Director for Research to help realign the pair.

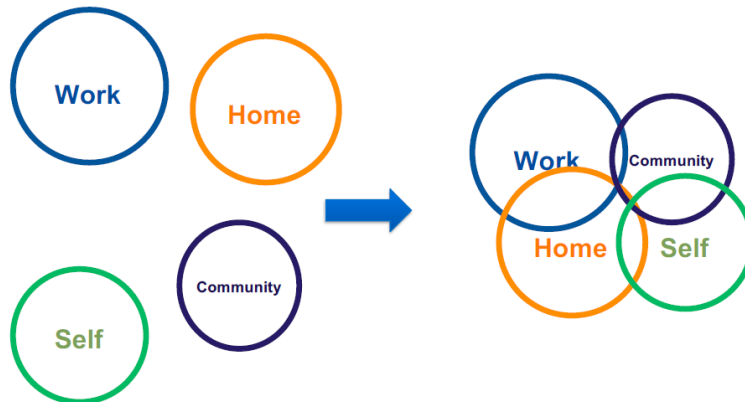
### Symptoms of Mentor Misalignment

- Mentee and/or mentor dread attending mentor meetings.
- Mentor does not find the time to meet as agreed upon.
- Mentor does not respond to written documents (grants, emails) in a timely manner.
- Mentee does not follow through on deadlines.
- Mentee does not feel a sense of belonging within the professional culture.
- Mentee's work is successful, but the mentor does not foster the movement toward independence (e.g., the mentor does not assign an appropriate authorship position or publicly advocates for the mentee).
- A sense of shared curiosity and teamwork is not present.
- Mentor does most of the talking and direction-setting during mentoring meetings.
- Mentor or mentee finds themselves avoiding the other.
- Mentor and/or mentee avoid(s) eye contact during mentor meetings (can be culturally relative).

---

## Crucial Conversations

---



### Enhancing Work-Life Integration

Addressing the complementary roles of work and family life as part of a more comprehensive view of mentees' career development is often a feature of successful mentoring relationships. Work/life integration is a concern for both men and women. In its Statement of Principles on Family Responsibilities and Academic Work, the American Association of University Professors wrote: "Transforming the academic workplace into one that supports family life requires substantial policy changes and, more significantly, changes in academic culture." (1) Considerable planning and foresight are required to manage the inevitable conflicts that exist for early career academics as they attempt to initiate a research-oriented career at the same time that many choose to begin a family. Managing work and other personal demands and responsibilities can be daunting, even for those without children. Mentors can play an important role in guiding and supporting their mentees through the early stages of a career and family life, but are often unsure of an effective method to address these issues with their mentees or even if it is appropriate.

The well-established program of materials, [\*Total Leadership\*](#), is designed to guide participants through a series of reflective exercises assessing the goals participants have for themselves in four domains of their life: 1) work, 2) family, 3) community, and 4) self. The exercises culminate with mentors conducting a small-scale "experiment" designed to make a small but meaningful change in their behavior to better integrate their goals across these four domains. Improved mentor work/life integration skills serve as an effective way to model desired behaviors for mentees and provide a practical experience from which mentors may feel more comfortable addressing issues related to work/life integration with their mentees.

## Work-Life Integration – Four-Way Assessment

Domain/Circles	Importance
Work/Career	%
Home/Family	%
Community/Society	%
Self: Mind, Body, Spirit	%
Overall	100%

### Reflection Questions:

1. What is the biggest, or most compelling disconnect between the importance of a domain and the percentage of your time you spend in it?
2. Are there obvious places where you might work harder to bring a domain of life into more consistency with your core values?
3. Are some of your core values not getting expressed well in all domains of your life? Are there some domains of life where you can express many of your core values?

### Sources:

[American Association of University Professors. Statement of Principles on Family Responsibilities and Academic Work.](#) Draft endorsed June 2001.

Friedman, Stewart D. Total Leadership: Be a Better Leader, Have a Richer Life. Harvard Business Press. 2008, p. 58

Fostering Work-Life Integration Module developed by Dennis Durbin, MD, MSCE and Emma Meagher, MD (2015). The Children's Hospital of Philadelphia Research Institute and the University of Pennsylvania, Perelman School of Medicine.

## Equity and Inclusion Resources

Diversity, along a range of dimensions, offers challenges and opportunities to any relationship. Identifying, reflecting upon, learning from, and engaging with diverse perspectives is critical to forming and maintaining an effective mentoring relationship and a vibrant learning environment.

SIO's [Equity, Diversity, and Inclusion](#) initiatives promote community awareness, resources, engagement, and support. Keiara Auzenne leads the EDI team at SIO.

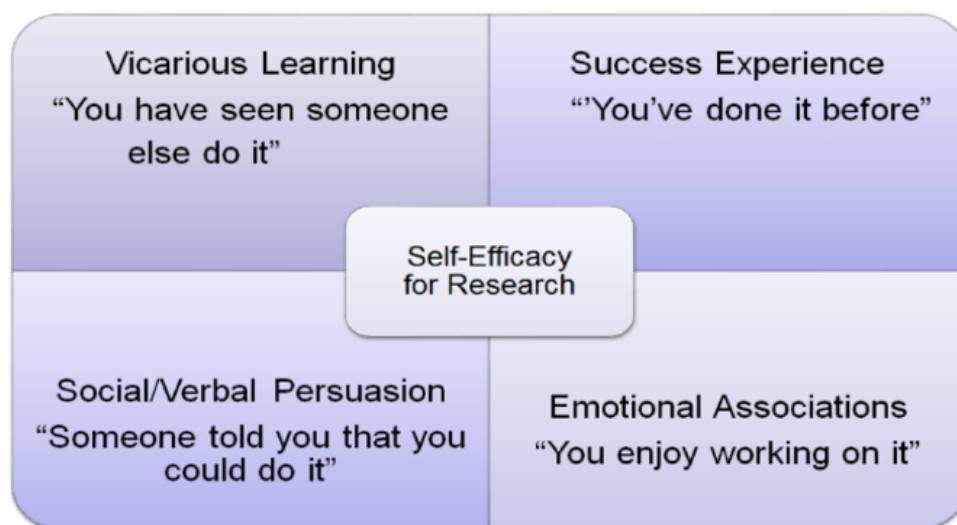
[NSF's Advance GEO Partnership](#) shares resources and workshops to empower (geo)scientists to transform workplace climate resources.

“[Unlearning Racism in Geoscience](#) has four primary objectives. They are to:

- Deepen the Geoscience community’s knowledge of the effects of racism on the participation and retention of People of Color in the discipline
- Draw on existing literature, expert opinions, and personal experiences to develop anti-racist policies and resources
- Share, discuss, and modify anti-racist policies and resources within a dynamic community network and on a national stage
- Implement and assess anti-racist policies and resources within the Geoscience workplaces”

[URGE](#) is supported by NSF (PI Vashan Wright). The SIO [URGE Pod](#) has several resources [here](#).

## Promoting Self-Efficacy



Mentors Matter! You can make a difference in building mentees’ self-efficacy.

Self-efficacy: belief in one’s ability to achieve a specific goal or task. Self-efficacy is a situation-specific self-confidence. Simply put, “*I believe I can do this.*”

Strong self-efficacy beliefs create interest, persistence, actual college degree completion, and career pursuits in science and research fields.

When mentees’ career self-efficacy falters, you can support them in four ways:

1. Vicarious Experience Ask yourself: *What are mentees observing?* Do they have any role models in their network of peers? Can they “see” themselves reflected in the



faculty, staff, and policies in your department/units? Are others from historically underrepresented groups able to see themselves at your institution? Why or why not?

What you can do:

- Talk about your career path and the experience: How do you know when you are doing well along your career path? What are the things that increase your confidence in your field?
- Consider who your mentee's role models are and what skills (and attitudes) are being modeled for them by you and others.
- Be aware of what skills and behaviors mentees are observing about coping with challenges and setbacks; share strategies for what you do when you hit a wall and how you encourage yourself to overcome challenges/setbacks.
- Offer time to develop skills and reinforce strong skills.
- Encourage your department to run a session where advanced mentees or faculty talk about setbacks, challenges, and how they overcame them.

## 2. Success/Mastery Experience

Ask yourself: *What are your mentees doing?* Are they doing well but still lacking self-efficacy for their chosen career?

What you can do:

- Reinforce your mentee's past successes (have them recall and highlight a personal "significant moment" or other specific successes in other domains to understand what contributed to their success in the past and recreate that in the present).
- Encourage mentees to reference past successes (e.g., "You did it before, you can do it now"). Help mentees adopt success strategies (match strategies to situations: e.g., reinforce effective behaviors that contributed to their past success).

## 3. Social Persuasion

Ask yourself: *What are they hearing?* Are they hearing that they have what it takes? Are they receiving specific feedback relating to their effort or capabilities? Is that feedback constructive? Is the message that you are sending the same as what is being received by the mentee?

What you can do:

- Foster a “you can do it” attitude.
- Be attuned to ways that you can acknowledge the mentee’s current successes.
- Reinforce mentees’ abilities by giving specific, credible feedback about specific skills and less evaluation of the outcome or general feedback.
- Let them know they belong in your unit/program/department.
- Be aware of signs that mentees may feel they do not fit in (“I don’t belong here”).
- Talk about the positive things mentees are doing while giving clear steps on how to improve in areas that are challenging for them.

#### 4. Emotional/Physiological State

Ask yourself: *What are they feeling?* How can you help mentees feel at home in your unit/ department/university? What can you do regarding the environment (e.g., networking time, program policies, etc.) that can help reduce stress and anxiety?

What you can do:

- Be aware of positive (enjoyment) or negative moods (anxiety) mentees may have related to their career decisions.
- Attend to negative, anxiety-related feelings (e.g., negative self-talk that they are not as capable or confident as their peers).
- Acknowledge and normalize when things are difficult: “It’s supposed to be hard; everyone struggles along the way.”
- Give examples of mentees who struggled but made it (successful in your unit/ program/ department).

Sources:

[http://psychology.about.com/od/theoriesofpersonality/a/self\\_efficacy.htm?p=1](http://psychology.about.com/od/theoriesofpersonality/a/self_efficacy.htm?p=1)

Adedokun et al., 2013; Byars-Winston et al., 2010; Lent, Brown, & Larkin, 1986; Lent, Lopez, & Bieschke, 1991.

Butz, A. R., Branchaw, J., Pfund, C., Byars-Winston, A., & Leverett, P. (2018). Promoting STEM Trainee Research Self-Efficacy: A Mentor Training Intervention. *Understanding Interventions Journal*, 9(1).

Madison, WI: University of Wisconsin Press and Handelsman, Miller and Pfund (2007). “Diversity” in *Scientific Teaching*. New York: W.H. Freeman and Co. This activity was taken from the [National Academies Summer Institute on Undergraduate Education in Biology](#) (Access June 2010)

---

## Logistical Tools

---

### First Meeting Checklist

A critical component of a successful mentoring relationship is clarity of commitment and expectations.

### Establish Logistics

- When and where will we meet?
- Mentors and mentees should commit to structured, regular meetings (typically weekly).
- How will we schedule meetings?
- Discuss preparation expectations for scheduled meetings.
  - Who will set the agenda?
  - How to prioritize goals/tasks?
  - How will research results be communicated?
- How will we communicate between meetings?

### Mentoring Assessment

- Establish a protocol for assessing outcomes and deadlines.
- Develop a plan for assessing the effectiveness/success of the mentor relationship.
- Develop a plan for if/when things fall out of alignment.
- Complete an IDP (see bookmark). Consider the educational, career, and personal objectives of the mentee.
- Discuss how external funding sources drive expectations.
- Articulate expectations about professional development.
  - Describe what types of activities constitute professional development.

---

## Evidence-Based Tools & Activities

---

### Effective Communication Styles Inventory

DIRECTIONS: Print and complete this scoring form to determine your communication style.

1. Reflect on your personal characteristics as you read across each of the 15 lines below and circle two descriptive words that best describe you on each line. This is a forced choice, so sometimes all four words describe you, but you **MUST** select only **two**. Sometimes none of the four words “best” describes you; however, you **MUST** select two words on each line.
2. After completing line 15, count the number of words circled on each line (as you read across from left to right). There must only be two words circled on each line.
3. In each column (x, z, w, and y), count the number of words circled and indicate the “total” circled in the box provided.

4. Your “total” scores for each column represent four “points” (w, x, y, z). Take these four points and graph them on the scoring grid that follows. When plotting your points, remember zero is in the middle of the graph no matter which direction you are plotting (left, right, up, or down).

5. Draw a four-sided figure to connect the four points. (In other words, when you connect your four points, they must make a square or rectangle. Do not draw a kite. The largest area (length x width) of the four-sided figure drawn represents your dominant communication style as indicated by the words you selected.) If you disagree about your style, review the words you selected.

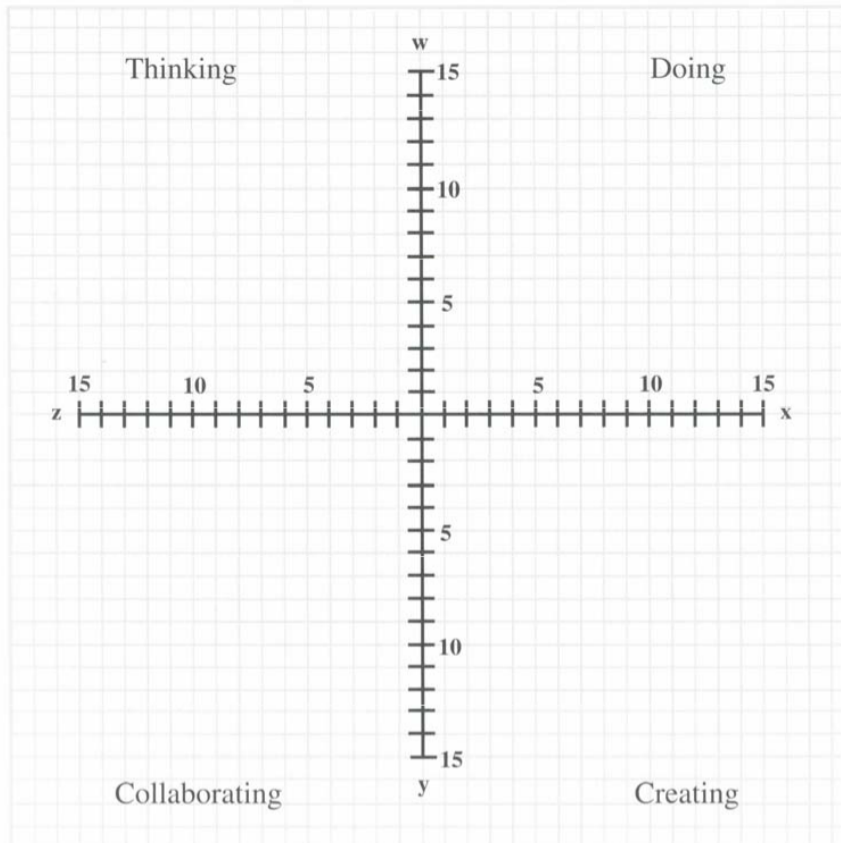
6. Read the summary page for information about your style.

X	Z	W	Y
1. disputes the issue	unruffled	focused	sociable
2. will take a chance	flexible	rational	sympathetic
3. spur-of-the-moment	prudent	composed	extroverted
4. directs others	asks	pensive	lively
5. decisive	ponders	diligent	gregarious
6. takes control	collaborates	independent	amicable
7. self-assured	noncommittal	orderly	demonstrative
8. convincing	open-minded	thorough	free-thinking
9. will fight for	will defend	effective	good-hearted
10. wants to win	hopeful	pragmatic	young-at-heart
11. eager	diplomatic	systematic	innovative
12. confident	accepting	painstaking	high-strung
13. dominant	mild	plans	talkative
14. insistent	sensible	exact	helpful
15. urgent	constant	conventional	good-natured

				= 30
--	--	--	--	------

**Scoring Grid**

## Effective Communication Styles Scoring Grid



Copyright © Wanda Hackett Enterprises 1998, Seattle, Washington

## Effective Communication Styles Inventory Summary

THINKING/PLANNING	DOING/DIRECTING
ASK FOR ... Data Information Facts	TELL ABOUT ... Progress to goals Actions required Solutions to problems
FOCUSED ON	
Process Task Goal Doing things the right way	Task Goal Winning/being successful Making things happen
UNDER STRESS	
Avoid	Become autocratic and tell
NEED/LIKE	
Logical thinking Rational approach Careful planning Documentation	Options Flexibility Directness Conciseness
SUPPORTING/COLLABORATING	VISIONING/CREATING
ASK FOR ... Information re: others' skills/interests Input Feedback	TELL ABOUT ... Visions Ideas Stories, analogies
FOCUSED ON	
People Relationships Collaborations How situations "feel"	Big picture Models/theories/concepts Bringing visions into reality
UNDER STRESS	
Acquiesce or yield	Blame others
NEED/LIKE	
Friendliness Participation Involvement Inclusion	To understand how the details fit their picture Innovation and creativity Others to handle the details

The following compact is a simple form to be used as a starting point. Modify this compact to address the needs of the pair and/or department/division. It is important to be flexible as this compact will likely differ for each mentee. This compact offers a method to articulate expectations, not to serve as a punitive measure.

**Mentoring Relationship**

Reflecting upon your mentoring relationships is vital to becoming a more effective mentor. This is especially important immediately following a mentor-training session so that you can consider how to implement changes in your mentoring practice based on the training. Reflection on your mentoring practice at regular intervals is strongly encouraged.

**Mentoring Action Plan**

Template

For each mentoring competency, please list one or two specific approaches you plan to take in the future.

NAME:	
Mentoring Competencies	What can I do differently in the future?
Maintaining Effective Communication	
Promoting Career Self-efficacy	
Aligning Expectations	
Fostering Independence	
Addressing Diversity	
Promoting Professional Development	



## Developing a Mentoring Philosophy

Many funding agencies are now requesting mentoring philosophies of Principal Investigators (PIs).

Follow the steps below to help create your mentoring philosophy.

1. Mentoring Competencies Reflection Worksheet from *Entering Mentoring (Complete after participating in mentor training)*.

For each mentoring competency, please list one or two specific approaches you have taken in the past and plan to take in the future.

Competency	Approaches you have used in the past	Approaches you intend to try in the future
Maintaining Effective Communication		
Aligning Expectations		
Enhancing Work-Life Integration		
Addressing Equity and Inclusion		
Promoting Career Self-Efficacy		

## 2. Mentor Self-Reflection Template

	What were the unique challenges and opportunities from the past year?	What was your role?	What happened? What were the results?	Was there any further action?
Meetings & Communication				
Expectations & Feedback				
Career Development				
Research Support				
Upcoming Year				
<ul style="list-style-type: none"> <li>• What do you want to keep doing?</li> <li>• What would you like to try differently with your protégé in the upcoming year?</li> <li>• What different resources or training would be helpful to you as the mentor?</li> </ul>				

## 3. Composing a Mentoring Philosophy (250 words or less)

If you were advising a faculty colleague on how to effectively mentor, what would you tell that person? What would you say if they ask how to do each item you mention? Your answers will form the foundation of your “mentoring philosophy.”

Your mentoring philosophy is a statement that explains and justifies the way you approach personal and professional relationships with mentees as you guide their development into professionals.

### Common Themes of Mentoring Philosophies

How you ...

- Identify mentees’ goals.
- Evaluate mentees’ understanding.
- Evaluate mentees’ talents and build on them.
- Develop relationships founded on mutual respect.

- Give mentees ownership of their work and promote accountability.
- Share your own experience.
- Create an interactive research environment.
- Identify what motivates each student.
- Balance belief with action and experience.
- Create a safe environment where mentees feel it is acceptable to fail and learn from their mistakes.
- Encourage growth through challenges.
- Promote learning through inquiry.
- Walk experimental avenues together.

---

## Resources and Services to Support Students and Academics

---

### Students

<https://Triton Community Resource Guide> includes Academic Support, Campus Community Centers, Health and Well-being, and General Support Services for UC San Diego Students.

### Faculty, Researchers, and Academics

[Resources for Faculty and Staff Supporting Students in Distress](#)  
[Triton Concern Line Phone \(Open 24/7\)](#) include emergency, risk and liability, misconduct, health and wellness, misconduct, enrollment management, international, and other forms of resources.

[Counseling: Faculty and Staff Assistance Program \(FSAP\)](#) includes information about counseling and other services provided to faculty and staff through the FSAP.

### Mediation Services

#### [Office for the Prevention of Harassment and Discrimination \(OPHD\)](#)

Educates the UC San Diego community about issues of bias, harassment, and discrimination and assists with the prevention and resolution of these issues fairly and responsibly.

#### [UCSD's Office of Ombuds](#)

Provides confidential, neutral, and informal dispute resolution services for the UC San Diego community.

SIO Ombuds can be found [here](#).

## Mentoring Resources

The [Center for the Improvement of Mentored Experiences in Research \(CIMER\)](#)

Provides mentee, mentor, and facilitator training resources. Provides additional online resources for mentors and mentees.

[National Research Mentoring Network \(NRMN\)](#)

Connects highly knowledgeable and skilled mentors with motivated and diverse mentees, ranging from undergraduate students to early-career faculty. It facilitates long-term, culturally responsive interactions between them.

---

## Acknowledgments

---

### SIO Contributors

SIO's Mentoring handbook is based on UC San Diego's Health Sciences Faculty Mentoring Toolkit 3.0, 2022 (with permission) and adapted and modified by Associate Chair Lisa Adams for SIO. We acknowledge Cheryl Peach for her assistance with the initial edits of the SIO Mentor Training Handbook, Lisa Adams, Keiara Auzenne, Simone Baumann-Pickering, Carlene Burton, Peter Franks, Jamin Greenbaum, Jennifer MacKinnon, and Cheryl Peach for their time and effort in planning and piloting the Spring 2022 Mentor Training at SIO. We also thank Sarah Gille, Lihini Aluwihare, Peter Franks, and Paul Jensen for reviewing the SIO Mentor Training Handbook.

### Health Sciences Faculty and Staff Contributors

The following contributed to the development of the UC San Diego Health Sciences Faculty Mentoring Toolkit 3.0, 2022:

JoAnn Trejo, Ph.D., MBA, Assistant Vice Chancellor, Faculty Affairs  
Professor, Pharmacology, Vivian Reznik, MD, MPH, Professor, Pediatrics and Herbert Wertheim School of Public Health, Deborah Wingard, Ph.D., Professor, Herbert Wertheim School of Public Health, Karen Van Hoesen, MD, Associate Dean, Faculty Affairs, Professor, Emergency Medicine, Samantha Hurst, Ph.D., Evaluation and Assessment, Project Scientist, Virginia Hazen, Ph.D., Manager, Strategy and Operations, Morgan Mouchka, Ph.D., Program Manager, Mariko Poupard, MA, Program Manager, Yelda Serin, Ph.D., Program Manager and Data Analyst, Alexandra Bortnick, Ph.D., and Rachel Tolano, MA.

Trejo, J., Wingard, D., Hazen, V., Bortnick, A., Van Hoesen, K., Byars-Winston, A., Pfund, C., & Reznik, V. (2021). A system-wide health sciences faculty mentor training program is associated with improved effective mentoring and institutional climate. *Journal of Clinical and Translational Science*, 6(1).  
<https://doi.org/10.1017/cts.2021.883>

Our sincere thanks to colleagues from the University of Wisconsin-Madison, Angela Byars-Winston, CIMER Faculty Lead for Strategic Initiatives, Professor of Medicine, and Christine Pfund, CIMER Director, Senior Scientist, Wisconsin Center for Education Research and Institute for Clinical and Translational Research, for their input and guidance.