

Mentoring Philosophy Statement

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Effective mentoring requires balancing three distinct elements: acknowledging that every mentee possesses a unique background and motivation; aligning everyone toward the common goal of scientific independence; and ensuring that the mentoring process remains efficient and sustainable. Balancing individual needs with collective goals transforms mentoring from a simple interaction into a dynamic structural challenge that I am eager to undertake.

My philosophy is grounded in my experience mentoring students from diverse disciplines, including Electrical Engineering, Computer Science, and Medicine. These experiences have shaped the following core tenets of my approach.

Transparency and Strategic Thinking

Transparency creates the foundation for independence. Leading a successful research group requires more than just generating data; it involves navigating a complex landscape of funding, collaboration, and strategic planning.

As a mentor, I am transparent about these operational realities. My goal is not to burden students with administrative concerns, but to demonstrate that research directions are chosen to maximize scientific impact and ensure the group's sustainability, rather than based on arbitrary preferences. By understanding the "why" behind our strategic decisions, mentees learn to think beyond the bench. This transparency creates a "sandbox"—a supportive environment where they can practice making high-level strategic decisions with my guidance before they are required to do so in their own careers.

Alignment of Mission

I believe that scientific excellence is best achieved by a team that is diverse in background but aligned in purpose. It is my responsibility to articulate and inspire a shared vision for our research, much as I must convince the broader scientific community of the value of our work.

This alignment process is active and bidirectional. Initially, it involves guiding mentees through literature, conferences, and grant writing to understand the field's landscape. As they mature, I expect my trainees to challenge our group's research focus, pushing us to adopt more impactful questions and refined methodologies. A shared "why" allows for rigorous debate on the "how," leading to better science.

Individuality and Tailored Growth

I recognize that individuals have distinct learning styles and baseline skillsets. Therefore, I reject the notion of trying to mold mentees into "junior versions of myself." Instead, I focus on identifying their unique strengths and areas for development.

I view the mentor-mentee relationship as a partnership between two distinct individuals with complementary priorities. To ensure we are aligned, I establish clear, documented agreements with my mentees, setting short-, medium-, and long-term goals that we revisit regularly to track their trajectory toward independence.

Fostering Independence within a Structure

I view the structural hierarchy of a lab not as a barrier, but as a scaffold for growth. While a structured environment facilitates research efficiency, I am mindful that it must not stifle a trainee's development into an independent thinker.

My ultimate goal is for mentees to transition from dependence to interdependence. I actively remind my group members that their objective is to become leaders who can advance their field. This requires the ability to contribute to a collective mission while developing the resilience to maintain productivity even amidst intellectual disagreement.

Diversity, Equity, and Inclusion

Science is inherently global, and our team will reflect that diversity. I view the ability to communicate and collaborate across cultural, educational, and generational differences as a technical skill that is just as vital as any experimental technique.

I aim to nurture a culture where every individual is welcome, but every idea is open to rigorous challenge. To achieve this, I hold myself and my group accountable to three standards:

- Respect the individual.
- Actively demonstrate that respect in daily interactions.
- Ensure the person *feels* respected and heard.

I treat inclusive communication as a refined professional skill that we will practice and improve upon continuously.