

## Teaching philosophy

Based on my years of experience in giving seminars and trainings to students in different laboratories, I think that a formative professional teaching that aims to develop students into practitioners who are diligent, thorough, and passionate about their job is the greatest way to advance materials science and technology. Creating a vibrant and stimulating learning environment where students are inspired to take an active role in their own education is at the heart of my teaching philosophy. I think that student-led conversations, group projects, and practical exercises can enhance comprehension and develop critical thinking abilities, which are crucial for material scientists and engineers. I start with a fundamental understanding of the changes that take place in the material as a result of diverse design, chemical composition, thermal processing and sustainable processing methods, and active learning.

I approach my instruction with reflection and purpose. In its broadest sense, active learning involves moving the emphasis of the activity from the instructor to the student. Multimodal learning—listening, reading, writing, talking, and problem-solving—as well as higher order thinking exercises like analysis, synthesis, and critique are recommended by this student-centered approach. The impact of a learner's constructions, or mental filters, and the various ways that knowledge is created as new information interacts with pre-existing information are taken into account by a constructivist approach to active learning. This method encourages the use of discovery, practical experience, project- and task-based learning, and teamwork; it capitalizes on a student's natural interest about materials, procedures, and how things work.

I make sure that students embrace the notion that they are in charge of their own education from the very beginning and are aware of how this viewpoint will influence the course. Students are not left to fend for themselves in this setting; I offer direction and excellent examples for each new subject area at the outset, followed by numerous chances for problem-based application that give them the freedom to fail, explore options without a predetermined answer, and look for resources before asking for help from me or their peers. By pushing students to consider their objectives carefully both inside and outside of the course, I put theory into practice. I also aim to teach in a way that is accessible to everyone - for example, by explaining a process verbally, showing visual demonstrations and then guiding students through practical exercises. Although lesson plans have clear goals, they are adaptable enough to consider changing circumstances and the needs of specific students.

I hold my pupils to the greatest standards of professionalism in their work, even though I foster a comfortable and welcoming learning environment. My rigorous grading guidelines and high standards are often mentioned in comments from my student evaluations. They also express gratitude for my lighthearted, kind, and encouraging demeanor. The majority of my pupils joyfully take control of their own education and accept my teaching methodology. It is satisfying to observe how many people apply their new learning attitudes, values, and beliefs to their upcoming academics and professional endeavors.