

Teaching Statement

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Teaching Philosophy and Experience

As an educator in materials and chemical engineering, I believe in bridging the gap between theoretical frameworks and practical laboratory applications. My teaching philosophy centers on **mentorship-driven learning** and **structured technical guidance**. I aim to equip students with the analytical tools necessary to solve real-world engineering challenges.

Pedagogical Approach

I utilize a three-pillar approach to instruction:

- **Practical Mastery:** I design experiments that require students to apply classroom theory to physical material testing.
- **Critical Evaluation:** I implement rigorous assessment strategies, such as problem evaluation and failure analysis, to sharpen student diagnostic skills.
- **Social Responsibility:** I mentor students to align their technical projects with community needs and sustainability goals.

Academic Leadership and Instructional Experience

Laboratory Coordination and Technical Instruction

- **Ceramic Laboratory Coordinator (ITB):** I managed the full lifecycle of experimental practice. This included designing laboratory modules, preparing learning materials, and coordinating a team of assistants to ensure consistent testing standards.
- **Biomaterials Research Assistant:** I provided technical oversight for undergraduate theses. I guided students through experimental setups, data interpretation, and manuscript feedback to ensure high-quality research outcomes.
- **Introduction to Engineering & Biochemical Engineering:** I support faculty by grading complex assignments, and proctoring examinations to maintain academic integrity.

Postgraduate and Professional Mentorship

- **FTMD-KAI Joint Program:** I delivered specialized coursework for postgraduate students and professionals. My instruction focused on **Research Methodology**, **Failure Analysis**, and **Materials Testing**, bridging the gap between academic theory and industrial application.
- **Beasiswa Indonesia Maju Mentor:** I guided scholarship awardees through the strategic design of social projects. I focused on needs assessment and goal-setting to maximize community impact.