

Program Learning Outcomes
PhD and MS in Chemical and Biomolecular Engineering (formerly
Chemical and Biochemical Engineering)

PhD in Chemical and Biomolecular Engineering (CBE): PLOs

1. **Core Knowledge.** Students will be able to demonstrate general knowledge of core topics and theory in CBE necessary for professional practice and/or academic research.
2. **Pedagogy.** Students will be able to communicate effectively to large and small groups in pedagogical settings in lecture and/or discussion formats.
3. **Scholarly Communication.** Students will be able to (1) structure a coherent academic argument that rigorously presents and evaluates research data; (2) make clear and cogent presentations, and professional documents that summarize their research and its significance.
4. **Independent Research.** Students will be able to (1) develop and carry out independent research projects with theoretical and methodological rigor.
5. **Broader Impacts.** Students will be able to understand the technological and societal impacts of their research.

MS in Chemical and Biomolecular Engineering: PLOs

1. **Core Knowledge.** Student will be able to demonstrate general knowledge of core topics and theory in Chemical and Molecular Engineering necessary for professional practice or PhD studies.
2. **Research Methods and Analysis.** Student will be able to (1) understand the qualitative and quantitative methodologies typically used in Chemical and Biomolecular Engineering practice and research, and (2) demonstrate the ability to critically analyze research literature.
3. **Professionalism.** Students will participate in seminar series in Chemical and Biomolecular Engineering.