



University of California, Santa Barbara
Program Learning Outcomes

PhD in Biochemistry and Molecular Biology

Students graduating with a PhD in Biochemistry and Molecular Biology should be able to:

Core Knowledge

- Demonstrate competency in fundamental areas of molecular biology, biochemistry, biophysics and bioengineering.
- Demonstrate mastery of their chosen emphasis, either Biochemistry & Molecular Biology or Biophysics & Bioengineering.
- Demonstrate fluency in comprehension of primary research literature in their chosen subfield.

Research Methods and Analysis

- Conduct primary research literature searches in their chosen subfield.
- Apply theoretical and/or experimental tools, as appropriate, to make progress in expanding the frontiers of biomolecular science.

Pedagogy

- Transmit knowledge in interdisciplinary bioscience effectively to undergraduates.
- Enable undergraduates to acquire mastery of basic biomolecular science through one-on-one interaction.

Scholarly Communication

- Communicate effectively the results of their research to professionals within their subfield, and within the broader biological science community, through both oral presentation and written work.

Professionalism

- Comply with the ethical standards of research within the biological science and engineering community.
- Maintain professional standards of conduct within the broader academic community.

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**University of California, Santa Barbara
Program Learning Outcomes, continued**

Independent Research

- Identify important, unsolved research questions and problems in their chosen subfield.
- Critically examine the consistency of their claimed research results, and articulate possible sources of error.
- Complete an original, creative project that demonstrably advances human knowledge within their subfield.