UW Molecular Engineering and Sciences Institute at a glance:

Core research areas in Biotech and Cleantech

Over 130 affiliated faculty from 20 different departments

Growing community of graduate and postdoctoral researchers

13,000 square foot Molecular Analysis Facility with state-of-the-art instrumentation for molecular-scale analysis and characterization

“Many of the exciting developments in the biopharmaceutical industry — nanotechnology, RNAi, gene therapy, synthetic biology — either have molecular engineering as an underlying theme, or require breakthroughs in molecular engineering to realize their promise.”

Paul A. Burke, Ph.D., Principal, Burke Bioventures LLC

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Think Small for Big Impact
Ph.D. in Molecular Engineering
Think Small for Big Impact

The emerging field of molecular engineering is dynamic and evolving. The field offers compelling challenges for creative engineers ready to make an impact in a global way. Students enrolled in the Molecular Engineering (MoE) Ph.D. program at the University of Washington engage in cutting edge research, learn from world-class faculty and enjoy the flexibility to structure their degree around interests in biotech or clean technology.

This unique degree program, administered by the UW Molecular Engineering and Sciences (MoES) Institute, includes training that covers both the breadth of fundamental molecular description of matter and depth of specialization towards molecular systems. Students may pursue the MoE Data Science Option to receive additional training in the fundamentals of data science and develop the skills to apply data science methods and techniques to their research.

MoE Ph.D. candidates:

- **Design and characterize molecules and systems of molecules**
- **Model molecular system behaviors and inspire new molecular designs**
- **Grow as engineers, effectively able to recognize and utilize rational molecular engineering principles**

Upon completion, MoE Ph.D.s are prepared for careers in the many different areas that rely on molecular engineering principles including energy, aerospace, manufacturing, health care, and pharmaceuticals.

Reach Across Disciplines

The MoE Ph.D. program fosters the translation and communication of ideas across multiple academic disciplines. Instructors of core courses and research areas come from the following departments:

- Bioengineering
- Biochemistry
- Chemical Engineering
- Chemistry
- Electrical and Computer Engineering
- Computer Science
- Physics
- Materials Sciences and Engineering
- Mechanical Engineering

Students may select a research advisor from participating faculty in the MoES Institute based on their backgrounds and interests. Institute members hail from 20 different departments across the fields of engineering, science, and medicine.

Thrive in an Environment of Opportunity

The University of Washington is located in Seattle, the major city center of the greater Puget Sound region. The University of Washington is among the nation’s top public universities for research funding. With more than $1.4 billion in sponsored research funds, UW is a major contributor to the Puget Sound area’s reputation as a hotbed for research and development.

Seattle is home to some of the most recognizable global companies and a diverse population of more than 3.6 million people. It offers spectacular natural surroundings, thriving neighborhoods, and an active arts, cultural and sports scene.

“The Molecular Engineering Ph.D. exposes students to tools and techniques from a variety of disciplines, allowing them to tackle today’s industrial research goals from a global perspective.”

Katharine Geramita, Ph.D., Director of Research and Development, EnerG2