

MASTER OF SCIENCE IN BIOENGINEERING

The Master of Science in Bioengineering curriculum includes core courses in advanced mathematics and statistics, bioengineering, and biomolecular technology, as well as technical electives chosen from numerous engineering and life science courses. The curriculum is designed to provide flexibility and support for a student's research specialty. M.S. students are involved in the design and regulatory approval of advanced medical technologies, as well as the manufacturing of health care products. Each student's research is guided by an advisor and contributes to the knowledge base in the scientific community that forms the basis of the student's thesis. Funding opportunities are available for M.S. students.

Students interested in graduate work should refer to the Graduate and Professional Bulletin (<http://catalog.colostate.edu/general-catalog/graduate-bulletin/>).

Strengths of the program include:

- Research leading to major advances in a health care field
- Nationally and internationally recognized faculty from over a dozen departments
- Coverage of regulatory issues and approval processes with animal and human subjects
- Conducting research in state-of-the-art facilities, including the nationally renowned Veterinary Teaching Hospital
- Community of innovators on the cutting edge of research in cancer, orthopaedics, cardiovascular diseases, nanotechnology, biosensors, and more

Learning Objectives

The M.S. program in Bioengineering aims to produce graduates who:

1. Demonstrate technical mastery of the core bioengineering disciplines of advanced engineering mathematics, biomolecular tools, bioengineering, physiology, and statistics.
2. Conduct original research in bioengineering and related fields, by assembling a body of new knowledge that advances the field.
3. Maintain high standards of scholarly excellence and responsible research conduct.
4. Competently and professionally communicate their research in both written and oral forms.
5. Effectively contribute to a broader research endeavor by directly collaborating with other scientists and engineers or by conducting and communicating their work in such a way that their individual contributions are readily assimilated with the work of other researchers in their field and related fields.