Premed Prep
Strong in math and chemistry, the molecular biology program is perfect preparation for students interested in medical, veterinary and dental fields.

High-Tech Tools
Photomicroscopes, a scanning electron microscope and all manner of laboratory equipment, from centrifuges to growth chambers, are available to you.

Hands-On Science
Biology at Florida Tech is not just something you study—it’s something you step into the lab and do. Analyzing the elemental components of materials, for example.

The molecular biology option provides training in DNA and protein purification, recombinant DNA technology, gene manipulation, gene expression assays and genomics. Students completing the program are qualified for employment in the rapidly growing biotechnology industry and for entry into graduate study in a wide variety of areas encompassed by molecular biology and in medical programs.

Why Molecular Biology at Florida Tech?
Led by faculty mentors deeply committed to the success of their students, our molecular biology program involves students directly in hands-on research. By working in research labs alongside faculty, graduate students and fellow undergraduates, students build valuable skills and a highly competitive résumé. Students at Florida Tech are learning the skills necessary to change the world through genetics and molecular biology. They are active participants in the kind of research that will one day cure our genetic diseases and feed the world. They are welcomed into our professors’ labs as research assistants, working on real-life problems like antibiotic-resistant bacteria, a cure for cancer, crime-scene analysis and agriculture in space.

Your First-Year Experience
At Florida Tech, you will dive into your biological science studies starting day one. Your first year includes two courses in biology, two courses in chemistry and two in calculus—so you build a strong foundation early and quickly. Florida Tech’s “fast start” approach also means that you can get involved in undergraduate research during your first year. Many faculty research laboratories and teams are open to freshman participation.

QUICK FACTS
• High-achieving students may become members of Tri Beta, the biological sciences honor society.
• The biological sciences department maintains nine teaching labs, 19 research labs, animal care facilities for small mammals and reptiles, a greenhouse, and a high resolution microscopy and imaging laboratory.
• The senior year of our molecular biology students culminates in an intensive hands-on laboratory experience in genetic engineering and nucleic acid analysis.
Focused primarily on understanding the interactions between the various systems of a cell, molecular biology is the field of science that will likely lead to a cure for cancer.

What to Expect
Molecular biology students may expect small classes and to learn from professors who are passionate about two things: research and teaching. The biological sciences department is a tight-knit and active community of scholars and learners, with lots of faculty-student interaction and collaboration. Hands-on lab work is a key component of every student’s experience.

Facilities & Labs
The biological sciences department is housed in the F.W. Olin Life Sciences Building, which contains eight teaching labs, 12 research labs, animal care facilities for small mammals and reptiles, and a greenhouse. The department maintains a high resolution microscopy and imaging laboratory.

Faculty Research Areas
Molecular biology faculty conduct diverse research that spans the field. Current areas of interest include:
• infrared imaging systems of pit vipers, pythons and boas
• forensic analysis
• molecular mechanisms underlying sperm-egg fusion
• animal behavior
• development of vision in marine fishes and turtles
• identification of molecular targets that can be used to develop novel antibiotics
• DNA replication

Careers
Graduates of the molecular biology program are well prepared for entry-level positions as research scientists in a variety of industries. Molecular biology alumni have gone on to positions in:
• health care/medicine
• pharmaceutical/drug development
• forensic science
• research
• biotechnology
• genetics
• food science
• bioengineering

Graduate Study
Molecular biology students are prepared to pursue advanced degrees in molecular biology, its subfields and medicine, and have gone on to study at graduate schools such as:
• Boston College of Pharmacy
• Johns Hopkins University
• Miami University
• Nova Southeastern College of Osteopathic Medicine
• Pennsylvania College of Optometry
• University of Florida
• University of Texas

Internship Opportunities
Molecular biology students are well-prepared for a variety of internships. Recent sites have included Cold Spring Harbor Laboratory, Fred Hutchinson Cancer Research Center and the National Science Foundation.

Strong Finish
The pinnacle of the molecular biology program is the senior laboratory experience, during which students spend up to 20 hours a week doing hands-on research using the same high-tech tools and techniques as professional molecular biologists.

You May Have Heard
The research of professor Michael Grace has been featured on National Geographic Television, Discovery Channel, TLC, CNN, Discovery Canada, ABC News, National Public Radio and National Geographic Magazine.

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