School of Life Sciences

Hands-On Life Sciences at RIT

What makes us different?

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In the College of Science, biology is something that students do, rather than something they merely learn.

- Our courses present biology as it is done by career biologists, and we emphasize hands-on laboratory and field experience.
- Employers and graduate school mentors report that our students can walk into a laboratory and start working with little or no training because of the experience they gain in our programs.

Research—in the Classroom, Laboratory and Field

Scientific knowledge is based on research, and we encourage students to undertake research projects in the laboratories of faculty. Our Research Scholars Program is designed for students who want an intensive research experience. Participation requires written research proposals and regular progress reports, a seminar presentation and a final report. These reports are written in the format of a scientific journal, and many of them are published in peer-reviewed scientific journals.

Recent examples of student-faculty research include • *Development of Bioengineered particles to target HL60 leukocytes* • *Analysis of ceramide from 293T programmed cell death model using HPLC-MS analysis* • *Dissolved organic carbon and its phenolic content in natural waters* • *Effects of bivalves in different estuarine sediments* • *Multiple antibiotic resistance found in enteric bacteria from wild green frogs* • *Population genetics and molecular genetics of presbycusis*, and • *Molecular genetics of ear infections*.

Real-World Experience—Co-operative Education

We give our students an opportunity to apply the knowledge and skills acquired in their courses by working in full-time, paid positions for private, academic or government employers in state-of-the-art settings. A co-op experience enables a student to overcome the challenge of needing experience before *applying* for a job, but needing to *have had a job* to gain that experience! Our long history of co-operative education ensures that we have the knowledge and contacts to assist our students in finding appropriate positions.

Which Program?

- If you are interested in graduating as a *broadly trained biologist with a wide range of career options*, our **Biology** program will get you there.
- If you want *to explore the potential of genetic engineering and molecular medicine*, the **Molecular Bioscience and Biotechnology** program is for you.
- If you would like to *get outdoors and address environmental issues*, you will get your feet wet (literally) in our **Environmental Science** program and learn the laboratory skills that support field studies.
- If *managing and interpreting biological information* using statistics, databases and programming languages like Python, Perl, Java, and C++ appeals to you, choose our **Bioinformatics** program.

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