## **BIOPROCESS SCIENCE MINOR**

Coordinator: Dr. Gary Scott

The bioprocess science minor gives students an understanding of the rapidly developing bioprocessing industry, which uses the chemical, physical and biological processes developed by living organisms or their cellular components in a type of advanced manufacturing of specialty commercial products. Bioprocess science will influence diverse fields as it becomes widely used, such as for producing energy from sustainable sources.

The bioprocess science minor is available to all ESF and SU undergraduate students (except students in the bioprocess engineering program) who maintain a minimum cumulative grade point average of 2.70, and who desire to develop greater knowledge of bioprocess science and its related fields. Interested students must submit an application form, with courses listed, to their academic advisor and the coordinator of the minor. Students should declare the minor by the end of the sophomore year, but may petition to their home department for enrollment at any time after that. Successful completion of the minor will be noted on the student's transcript.

Eighteen credit hours (6 courses) are required to satisfy the minor. Specified courses: ECH 202 Principles of Mass and Energy Balance (3); BPE 310 Colloid and Interface Science (3); BPE 420 Bioseparations (3); and at least three directed elective courses available from both ESF and Syracuse University including biology, forestry, chemical engineering, chemistry, paper science and engineering, bioprocess engineering, and environmental and biological engineering. Students are required to complete at least one course from a list of biological and chemistry electives and at least one course from a list of engineering electives. The complete list of courses is available from faculty advisors.