



# ESF Minor Curriculum Change Proposal Form

Committee on Curriculum - ESF Faculty Governance  
Office of Instruction & Graduate Studies

**Date:** January 4, 2022  
**Department:** Chemical Engineering  
**Curriculum Title:** BS. Bioprocess Engineering

***For Minor Changes in existing curriculum (check all that apply):***

- |   |  |
|---|--|
| <input type="checkbox"/> revised courses              | <input type="checkbox"/> change in total cr. hrs.                  |
| <input type="checkbox"/> new course sequence          | <input type="checkbox"/> new program objectives*                   |
| <input checked="" type="checkbox"/> new courses added | <input type="checkbox"/> new accreditation/assessment requirements |

\*See SUNY Guidelines

## 1. Rationale for Change

Please provide an explanatory narrative outlining the rationale for the change, and the impacts of this change on the learning outcomes of the curriculum:

Adding the DEISJ as a required General Education component in the curriculum as mandated by SUNY.

## 2. Institutional Impact:

**Changes from existing condition:**

Anticipated Enrollment or Enrollment Change:

Faculty or Staffing Requirements:

Technology, Computing Resources, and Classroom Resource Demands:

Change in Accreditation Requirements:

Changes to Assessment Plan:

Library Resource Requirements:

## 3. Catalog Narrative:

Please attach to this proposal form a copy of the current catalog description in MS Word format, with revisions shown in "track changes".

The bioprocess engineering program prepares students for careers as engineers in the bioprocess or biotechnology industry filling positions that are typically filled by chemical engineers with additional training. The bioprocess engineering program seeks to educate

engineers versed in the chemical engineering fields in biologics / biopharmaceutical, bioprocess, biotechnology, biochemical and bioenergy, with a focus on developing products from sustainable sources in a sustainable manner or through the applications of green chemistry. The bioprocess engineering program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org> following the criteria of Chemical, Biochemical, Biomolecular and Similarly Named Engineering Programs since 2012 (<https://www.aiche.org/abetaccredited-universities>).

Students gain valuable experience through a capstone-design experience in which they work on significant problems in the design and implementation of new technologies. In addition, a summer internship is required of all students during which they gain valuable skills and experience in terms of technical knowledge and professional development. Both of these experiences serve to integrate the knowledge gained in their coursework with real-world work experiences commonly seen in their first positions after graduation.

The curriculum consists of a number of categories of courses. The general education component, which is required of all ESF students, broadens the students' perspectives on global and societal issues, an important component of any education. Students also take a number of courses in math and the basic sciences—chemistry, physics, and biology—to provide the background for the courses that prepare students for engineering practice. The engineering courses cover a variety of topics that are traditional for a chemical engineering program, supplemented with courses specific to bioprocess engineering. The moderate requirement of 128 credits hour allows room for students to supplement more courses at their own desire (no limitation on free electives).

Students may be admitted to the bioprocess engineering program as first-year students with appropriate science backgrounds from their high school or as transfer students at any level with accommodations for coursework requirements. Students who have the associate degree in engineering science, chemical technology, biological sciences, or general science and mathematics are encouraged to apply as transfer students.

## 4. Curriculum Transition Plan:

Please provide a narrative description of your plan for transitioning from your existing curriculum to the proposed new curriculum. Please provide specific dates for implementing curriculum changes, overlap periods where old and new curricula may exist simultaneously, and final phase out of old curricula. Please also include impacts and mitigating considerations for transfer students and students in mid-program during implementation, impacts of changes in semester delivery of existing courses, addition of new courses within a particular semester, etc.

## 5. Approval Signatures:

Signatures below, or attached letters, indicate that the affected departments, programs or units have been notified of this proposal and have had an opportunity to assess the impact of the proposal on their respective units. If departments did not respond to your notification, you may wish to document your effort to contact them.

### Affected Academic Department(s) or Program(s):

\_\_\_\_\_  
Department/Program 1

\_\_\_\_\_  
Name of Chair/Program Director

\_\_\_\_\_  
Chair Signature

\_\_\_\_\_  
Date

Or letter attached

\_\_\_\_\_  
Department/Program 2

\_\_\_\_\_  
Name of Chair/Program Director

\_\_\_\_\_  
Chair Signature

\_\_\_\_\_  
Date

Or letter attached

\_\_\_\_\_  
Department/Program 3

\_\_\_\_\_  
Name of Chair/Program Director

\_\_\_\_\_  
Chair Signature

\_\_\_\_\_  
Date

Or letter attached

*[If more/ess than three Departments/Programs, please add/delete lines as appropriate.]*

### Other Units

\_\_\_\_\_  
Library Director

\_\_\_\_\_  
Date

Or letter attached

\_\_\_\_\_  
Computing and Network Services

\_\_\_\_\_  
Date

Or letter attached

Physical Plant

Date

Or letter attached

Forest Properties

Date

Or letter attached

Environmental Health and Safety

Date

Or letter attached

Admissions

Date

Or letter attached

Other

Date

Or letter attached

Other

Date

Or letter attached

### Office of the Provost

Signature below, or attached letter, indicates that the Provost either a) agrees that there is no need for additional resources from the College; or b) indicates willingness to provide the extra support to the department.

Provost Signature

Date

Or letter attached

## 6. Proposer Information and Department Chair Affirmation:

Contact Person:

Name: \_\_\_\_\_ Department: \_\_\_\_\_

Email: \_\_\_\_\_ Phone: \_\_\_\_\_

This proposal has been reviewed and approved by the sponsoring Department. Affected departments have been notified and given the opportunity to provide feedback. Department resources are or will be made available to support this curriculum revision, or a plan is in place to meet the resource needs as identified in the Institutional Impacts section of this proposal (see Section 2, above) .

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Department Chair (or designated curriculum representative)

Signature: \_\_\_\_\_ Or letter attached   
Department Chair (or designated curriculum representative)

## 7. Final Approvals:

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**Curriculum Committee**

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**Date**

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**Faculty Governance**

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**Date**

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**Provost**

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**Date**