

This plan provides the PLO/SLO assessment plan for AY 2022-2025

Name of the program: __BS in Biotechnology_____

Plan for AY 2022-2023, 2023-2024, 2024-2025_____

Expected date of submission 6/30/2022

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To ensure NYIT's CPI process meeting *MSCHE Standard V: Educational Effectiveness Assessment: Assessment of student learning and achievement demonstrates that the institution's students have accomplished educational goals consistent with their program of study, degree level, the institution's mission, and appropriate expectations for institutions of higher education.* in this CPI report, each department is requested to create a three-year assessment/evaluation plan to improve student learning **for each degree programs**. Reports should address the following points:

Program's Student Learning Outcome Assessment Plan

1. PLO: State/update each degree program's learning outcomes. The original PLO are here:
http://www.nyit.edu/planning/academic_assessment_plans_reports.

*Upon completing the **Biotechnology** degree, graduates will be able to:*

CPI_STUDENT/PROGRAM LEARNING OUTCOMES

- **PLO#1** Design and/or conduct investigations to test hypotheses by applying the scientific method
 - **PLO#2** Critically review and communicate scientific data in a quantitative and qualitative manner via oral and written formats
 - **PLO#3** Analyze DNA and protein function via instrumentation and recombinant technology
 - **PLO#4** Analyze and explain the principles of bioprocessing for the production of recombinant DNA-based pharmaceuticals and therapeutics
 - **PLO#5** Evaluate the principles of genetic engineering for the production and applications of transgenic plants and animals
 - **PLO#6** Evaluate the ethical, legal, regulatory and societal impact of Biotechnology
2. Matrix: provide/update the assessment matrix that indicate which learning outcomes are assessed in which set of courses. The original matrix is here: http://www.nyit.edu/planning/academic_assessment_plans_reports.

CPI_STUDENT/PROGRAM LEARNING OUTCOMES

Course#	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
BIOL 233		x			x	
BIOL 238						x
BIOL 341				x	x	x
BIOL 420				x		
BIOL 442				x		
BIOL 395	x	x				
BIOL 432		x				
BIOL 48x	x	x	x			

3. **METHOD:** Describe the method of assessment, and measurement instruments (e.g., rubric, exam items, scoring guide for a particular task, supervisor evaluation form, and standardized assessment tool). Note: direct learning outcome assessment is required. Both direct and indirect assessment are strongly recommended.

Direct measuring instruments include but are not limited to: course assignments, research projects, exams, oral presentations, written reports, capstone projects and internship evaluations.

Indirect measuring instruments include but are not limited to: student surveys, interviews, and student reflections.

CPI_STUDENT/PROGRAM LEARNING OUTCOMES

4. Timeline of the PLO assessment: for example:

Program Learning Outcome	AY22-23	AY23-24	AY24-25
1	X		
2	X		
3		X	
4			X
5			X
6		X	

5. Personal responsibilities for implementing the assessment, collecting data and analyzing the results against expected outcomes

Each faculty member will be aware of which course and assignment is being assessed each year. Faculty will collect their data and send it to a departmental database. A faculty members with expertise in the course topics assessed will analyze the data at the end of each academic year.

II. Brief description of how the plan is shared and communicated with all faculty members in the department

The plan and its results will be conveyed to the department through periodic updates at departmental meetings such as the monthly faculty meeting and the annual retreat.

Last updated 2/11/22