Annual Program Report
2023-2024

The report(s) should be inclusive of all levels, degrees (i.e., certificates, bachelor's, and master's), modalities and locations.
Department: Engineering Technology
Department Chair: Dr. Nirajan Mani.
Department Assessment Committee Contact: Dr. Abdel Mustafa, Committee Chair (other Committee members: Dr. Soumitra Basu, and Dr. Hong Yu)
This document is to be kept in the department and an electronic file is due to the AVP of Institutional Research and Planning by June 1, 2024.

Section I: Program Assessment (please complete this section for each program in your department)

Program**: Applied Science & Technology** _____

A. Program Learning Outcomes (PLOs) (Educational Objectives)

I. List of PLOs and the timeline for assessment

PLO #	PLO – Stated in assessable terms	Where are the learning outcomes for this level/program published? (Please specify) Include URLs where appropriate	Timing of assessment (annual, semester, bi-annual, etc.)	When was the last assessment of the PLO completed?
1.	An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to the discipline.	University/Department website https://www.fitchburgstate.edu/academics/programs/applied-science-and-technology-bs	Annual	In-process
2.	An ability to formulate or design a system, process, procedure, or program to meet desired needs.	University/Department website	Annual	In-process

3.	An ability to develop and conduct experiments or test hypotheses, analyze, and interpret data and use scientific judgment to draw conclusions.	University/Department website	Annual	In-process
4.	An ability to communicate effectively with a range of audiences.	University/Department website	Annual	In-process
5.	An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.	University/Department website	Annual	In-process
6.	An ability to function effectively in teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.	University/Department website	Annual	In-process
7.	An ability to demonstrate an appreciation of commitment to quality, timeliness, and continuous improvement	University/Department website	Annual	In-process

II. **PLO Assessment** (Please report on the PLOs assessed and/or reviewed this year. Programs should be assessing at least one each year.)

Using the table below, list and briefly describe the **direct method(s)** used to collect information assessing whether students are learning the core sets of knowledge (K), skills (S) and attitudes (A) identified as essential.

PLO # (from above)	**Assessment description (exam, observation, national standardized exam, oral presentation with rubric, etc.)**	**When assessment was administered in student program (internship, 4th year, 1st year, etc.)**	**To which students were assessments administered (all, only a sample, etc.)**	**What is the target set for the PLO? (Criteria for success)**	**Reflection on the results: How was the "loop closed"?**
1,2, &3	Midterm Exams and Quizzes in core and concentration courses	Every semester for Freshmen, Sophomore, Junior, and Senior level	All	Minimum: Above Average Performance (B or better)	Identify areas where students need additional help (e.g., refereeing students to the Tutoring Center)
4, 5,6	Group Projects, Researched paper, Capstone Project and Presentations.	Senior level	All Senior Level students	Minimum: Above Average Performance (B or better)	Provide structured feedback to students to address areas require improvement.

You may use this comment box to provide any additional information, if applicable:

N/A

Summary of Findings: Briefly summarize the results of the PLO assessments reported in Section II above combined with other relevant evidence gathered and show how these are being reviewed/discussed. How are you "closing the loop"?

Reflection Prompt	Narrative Response
Other than GPA, what data/ evidence is used to determine that graduates have achieved the stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	- Employers feedback. For example, feedback for our Industry Partners who are currently members of The Engineering Technology Advisory Board. - Department developed grading and checklist for capstone presentation and Department project completions. - Tracking of the licensure examinations success - Feedback from faculty and staffs from other department for students works during Undergraduate Research Conference and Department Project Competition - Tracking Students success during Career fair and their ability to obtain internship, part time and full-time jobs offers from our industry partners and others
Who interprets the evidence? What is the process? (e.g. annually by the curriculum committee)	- The Department Chair, the Curriculum Committee, and the Assessment Committee members (annually)
What changes have been made as a result of using the data/evidence? (close the loop)	Updated Capstone course in liaison with our Industry Partners. Inviting practitioners as classroom guest speakers to expose the students to industry requirements to supplement their academic learning.

B. Assessment Plan for Program/Department

I. Insert the program or department Assessment Plan (This is an independent plan from what is reported in this document).
The program has been modified. A new department assessment plan is in progress.

II. Explain any changes in the assessment plan including new or revised PLOs, new assessments that the program/department plans to implement and new targets or goals set for student success.

The program has been modified. Initially the program included a Construction Management Concentration, this concentration is now transformed into a separate Construction Management degree program.

III. If you do not have a plan, would you like help in developing one? ___**Yes**

C. Program Review Action Plan or External action Letter/Report

Annual Reflection/Follow-up on Action Plan from last Program Review or external accreditation (only complete the table that is appropriate for D program

I. **Programs that fall under Program Review:**
N/A: New program action plan is in progress to reflect the re-configuration of the Applied Science and Technology program.
i. Date of most recent Review:
ii. Insert the Action Plan table from your last Program Review and give any progress towards completing the tasks or achieving targets set forth in the plan.

Specific area where improvement is needed	Evidence to support the recommended change	Person(s) responsible for implementing the change	Timeline for implementation	Resources needed	Assessment Plan	Progress Made this Year
Curriculum update per new general education.	Existing curriculum documents	ENGT Curriculum Committee members	Fall 2024	Faculty and support staff	In progress	Proposal draft to reflect changes.

iii. If you do not have an action plan, would you like help in developing one based on your last program review and needs of the program? _____**Yes**

II. Programs with external Accreditation:

i. Professional, specialized, State, or programmatic accreditations currently held by the program/department.

ii. Date of most recent accreditation action by each listed agency.

Iii. Date and nature of next review and type of review.

Not applicable.

List key issues for continuing accreditation identified in accreditation action letter or report.	**Key performance indicators as required by agency or selected by program (licensure, board or bar pass rates; employment rates, etc.) (If required.)**	**Update on fulfilling the action letter/report or on meeting the key performance indicators.**

Section II – Departmental Outcomes

A. Departmental Strategic Initiatives

Planned Initiatives for AY 23-24 Add more rows as needed	**Associated Strategic Plan Goal & Strategy Goal # followed by Strategy # ex: 1.3**	**Indicate (X) if a Diversity, Equity and Inclusiveness (DEI) Goal**
Mapping and reconfiguring core and elective courses to better meet University General Education and accreditation requirements.	Accreditation/certification and enrollment management. Forge innovative paths to knowledge acquisition, career readiness, social mobility, and lifelong learning (Strategic goal # 1)	

Offering elective courses for concentration and minor in Civil & Environmental Engineering.	Participating in the University wide minor in environmental sustainability initiative.	
Laboratory Upgrade and lab designation course proposals	Accreditation/certification and enrollment management. Establish inclusive excellence, innovation, and environmental stewardship as signature strengths (Strategic goal # 4); Assert our distinctive value proposition and institutional learning outcomes boldly and widely (Strategic goal # 5)	
AUC approval for Civic Learning, AIA, and IHIP designations	Enable the students to meet general education requirement.	
Conduct exit survey and alumni survey	Collect feedback from graduating students and alumni. Become a model student-ready university and narrow the achievement gap (Strategic goal #2)	
Refined MS, in Construction Management course offering.	Continue to recruit national and global students for online master's degree program	

Accomplished Initiatives AY23-24 Add more rows as needed	**Corresponding Strategic Plan Goal & Strategy Goal # followed by Strategy # ex: 1.3**	**Indicate (X) if a Diversity, Equity and Inclusiveness (DEI) Goal**
Align the Engineering Technology and Applied Science & Technology	To meet University General Education requirements.	

Curriculum with FSU General Education requirements.		
Outreached high schools	To improve enrollment	
Industry Advisory Board Meeting	To align curriculum offering with industry. Collect feedback from prospective employers	
Alumni outreach	To collect feedback from alumni; track success, and maintain relationship with our graduates	
Obtained AUC approval for Civic Learning, AIA, and IHIP designations for three Construction Management courses, such as Construction Law & Legal Systems, Internship, and Construction Management Capstone, respectively.	Enabled the students to meet general education requirement.	
Received approval for MS, in Construction Management program (online); courses offering from fall 2024	Continue to recruit national and global students for online master's degree program	

B. Departmental Accomplishments and Reflection:

The Engineering Technology Department completed and streamlined the program changes from Industrial Technology to Engineering Technology. All the concentrations in the program (Electronics, Architecture, Manufacturing and Energy Management) have finalized the core and electives courses and published their respective 4-year plans. The following are some of the projects completed to support the new Engineering Technology Program during the 2023-2024 academic year:

1. Reviewed the program core courses and mapped the curriculum to meet the University General Education requirements.
2. Convened a meeting with the program Industry Advisory Board and solicited their input to include industry and employers' requirements in the new curriculum.

3. In coordination with the Career Service the Department organized a Career Fair attended by local and regional industry leaders that provide employment and internship opportunities.
4. To further the collaboration between Fitchburg state and Rhine Waal University, Germany, the Department hosted Dr. Irmgard Budder. During her visit Dr. Budder met with faculty and presented on energy sustainability during the Engineering Technology Speakers Series.
5. The Engineering Technology Program coordinated the senior year capstone with Construction Management Capstone so the students benefit from the faculty inputs from both programs.
6. The department continued the Engineering Technology Competition where students showcased several innovative projects. The winners of the competition were recognized by the Provost and the Dean of the school during the department annual BBQ.
7. To stay current with trends and development, The Engineering Technology Department continued The Engineering Visionaries Lecture Series. We had several speakers from Industry and Academia.

Initiatives that you may be considering for the 24-25 academic year that you did not already capture above.

- We are working to provide more elective courses in Environmental Engineering in collaboration thru participation in the university wide minor in environmental sustainability initiative.
- We are working to provide more elective courses in Civil and Environmental Engineering in collaboration with the Earth and Geographical Science Department.
- Realigning the department's existing concentrations and curriculum and submit application for ABET accreditation.
- Conduct self-study for Construction Management program and align curriculum for ACCE accreditation
- Develop detailed systematic assessments of the department's programs and courses.

It is recognized that time is of the essence and we are, therefore, aiming to accomplish the mentioned above initiatives by the Spring of 2025.