

Department Assessment Tools

While the assessment and continuous improvement plan for CIVT and CMET program is currently being developed, the ELET Program has put in place an assessment tools model for program objectives and program outcome. The process has been put forth to establish and review the ELET Program's Education Objectives (long term objectives) and Program's Outcomes (at the time of graduation) by utilizing the following tools.

Assessment Tools for Program Education Objectives (PEO)

1. Alumni Survey
2. Employers' Survey
3. Input from Industrial Advisory Committee
4. Program Educational Objectives Students' Survey
5. Faculty Annual Self-Assessment (faculty meeting)
6. Facilities and Resources Assessment (faculty meeting)

Assessment Tools for Program Outcomes (PO)

1. Course Embedded Assessment
2. Student Course Satisfaction Exit Survey
3. Cumulative GPA Index for Each Course
4. Electrical Engineering Technology -- Basics Exam
5. Senior Design Projects -- Index of Excellence
6. a. Program TAC/ABET Accreditation
b. Academic Review – Texas Southern University

PEO Assessment Tools – Protocols

1. PEO Assessment Tool: Alumni Survey Protocol

Measurable: Program's adequacy toward stated PEOs and adequacy of PEOs.
Constituency: Alumni
Methodology of Data Gathering: Survey Form
Data collection frequency: Yearly
Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and Inferential
Frequency of Analysis and Interpretation: Every three years
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Department Faculty
Faculty Responsible for this assessment tool: Professor Michael Agina
Assessment Goal: 75% of the graduates surveyed would answer all survey items at a scale of 2.5 or better out of 4.0.
Outcome: Assessment goal met; Data exhibited for examination during visit of Dr. Danielson and his team.

2. PEO Assessment Tool: Employers' Survey Protocol

Measurable: Program's adequacy toward stated PEOs and adequacy of PEOs.
Constituency: Employers
Methodology of Data Gathering: Survey forms, including online ELET link and mailing

Data collection frequency: Once a year
Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and Inferential
Frequency of Analysis and Interpretation: Once a year
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Department Faculty
Faculty Responsible for this assessment tool: Professor Sahryar Darayan
Assessment Goal: 60% of the received surveys will convey an average of 2.5/4
Outcome: Assessment goal met; data exhibited during visit of Dr. Danielson and his team

3. PEO Assessment Tool: Input from Industrial Advisory Committee Protocol

Measurable: Program's adequacy toward stated PEOs and adequacy of PEOs
Constituency: Industrial Advisory committee
Methodology of Data Gathering: Input from minutes of the meeting
Data collection frequency: Twice a year
Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and Inferential
Frequency of Analysis and Interpretation: Every year
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Department Faculty
Faculty Responsible: Professor David Olowokere
Assessment Goal: Recommendations after faculty analysis are realized within the realm of available resources.
Outcome: Modifications to content of ELET 441, Senior Design Class and the department seminars have all been made based on input from the Industrial Advisory Board.

4. PEO Assessment Tool: Program Educational Objectives Students' Survey Protocol

Measurable: Program's adequacy toward stated PEOs and adequacy of PEOs.
Constituency: Student Body
Methodology of Data Gathering: A representative sample of student body is randomly chosen from 2nd year (4th semester), 3rd year and 4th year standing of ELET Program
Data collection frequency: Spring of each year
Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and Inferential
Frequency of Analysis and Interpretation: Every three years
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Department Faculty
Faculty Responsible: Professor Sharayah Darayan
Assessment Goal: 50% of the surveyed items (1-10), would each have a mean of 2.5 or better or in other words each of the items surveyed would have a median of 2.5 or better

5. PEO Assessment Tool: Faculty Annual Self-Assessment Protocol

Measurable: Program's adequacy toward stated PEOs and adequacy of PEOs
Constituency: Department's Faculty
Methodology of Data Gathering: Annual Review
Data collection frequency: Once a year
Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and Inferential
Frequency of Analysis and Interpretation: Once a year
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Department Faculty
Faculty Responsible: Professor David Olowokere
Assessment Goal: 75% of the time the faculty self established goals are achieved at the level of "Meets All Expectation"

6. PEO Assessment Tool: Facilities and Resources Assessment Protocol

Measurable: Program's adequacy toward stated PEOs and adequacy of PEOs.
Constituency: Department's Faculty
Methodology of Data Gathering: Agenda line item during Faculty Meeting
Data collection frequency: Every year
Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and Inferential
Frequency of Analysis and Interpretation: Every year
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Department Faculty
Faculty Responsible: Professor Michael Agina
Assessment Goal: Faculty input is translated into Annual Capital Budget and Expenditure Outcome: PLC System has been procured. Purchase Order has been raised for purchase of several software including the Multism Educational software.

PO Assessment Tools -- Protocols

1. PO Assessment Tool: Course Embedded Assessment Protocol

Measurable: Realization of course learning objectives and a – k ABET/Departmental Outcomes
Constituency: Students
Methodology of Data Gathering: Student work
Data collection frequency: Each semester for each course offered
Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and/or inferential
Frequency of Analysis and Interpretation: Every semester
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Concerned faculty and the Quality Improvement committee in their respective discipline
Faculty Responsible: Professor Michael Agina

Assessment Goal: Each assessed item would have a score of 70% or better. Faculty would take corrective action to any item having a score of less than 70%

2. PO Assessment Tool: Student Course Satisfaction Exit Survey Protocol

Measurable: Realization of course learning objectives and a – k
ABET/Departmental Outcomes

Constituency: Students and Faculty

Methodology of Data Gathering: Survey form completed at the conclusion of each class

Data collection frequency: Each Semester for each course offered

Data collection responsibility: Department Assessment Committee

Statistical Analysis: Descriptive and/or Inferential

Frequency of Analysis and Interpretation: Every Semester

Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Concerned Faculty

Faculty Responsible: Professor David Olowokere

Assessment Goal: Each semester 90% of the courses should have a rating at or above 2.5 out of 4

3. PO Assessment Tool: Course Cumulative GPA Index Protocol

Measurable: Realization of course learning objectives and a – k
ABET/Departmental Outcomes

Constituency: Students and Faculty

Methodology of Data gathering: Data collected from each course at the end of the semester

Data collection frequency: Each Semester for each course offered

Data collection responsibility: Department Assessment Committee

Statistical Analysis: Descriptive and/or Inferential

Frequency of Analysis and Interpretation: Every Semester

Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Concerned Faculty

Faculty Responsible: Professor Michael Agina

Assessment Goal: Each semester 90% of the courses should have a cumulative GPA Index at or above 2.5 out of 4

4. PO Assessment Tool: Electronics Engineering Technology Basics Exam Protocol

Measurable: The soundness of theoretical knowledge base will be measured by a comprehensive examination to be taken by all the graduating students of ELET at the senior level. This examination will comprise of: "the concept mapping" of all the core courses of ECET curriculum (Circuit theory, Digital Electronics, Analog Electronics and Computer Programming)

Constituency: Students

Methodology of Data Gathering: A computational examination

Data collection frequency: Each Semester

Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and/or Inferential
Frequency of Analysis and Interpretation: Every two years
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Department Faculty
Faculty Responsible: Professor David Olowokere
Assessment Goal: Each semester 55% of the ECET students who will take the comprehensive examination will score more than 60%

5. PO Assessment Tool: Senior Design Projects Index of Excellence Protocol

Measurable: The soundness of designing capability along with technical report writing and oral presentation skills of students will be measured by a panel made up of faculty and engineering staff from the industry. All ELET 432, Senior Design projects will be evaluated on the above mentioned criteria. The input of the panel will be cumulated into a 100 point index
Constituency: Students, Faculty and Industrial Advisory Body
Methodology of Data Gathering: All the members of the panel will fill a measurement rubric for all successful projects
Data collection frequency: Each Semester ELET 432 is offered
Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and/or Inferential
Frequency of Analysis and Interpretation: Every two years
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Department Faculty
Faculty Responsible: Professor Sharayr Darayan
Assessment Goal: Each semester the cumulative index of excellence for the Senior Design in the Electronics Engineering Technology will be better than 75 %

6.a PO Assessment Tool: Program TAC/ABET Accreditation

Measurable: Program Accreditation from TAC/ABET – indicating that the program satisfies the published criteria of TAC/ABET
Constituency: TAC/ABET
Methodology of Data Gathering: Self-study report and final TAC/ABET outcome
Data collection frequency: Once every six years
Data collection responsibility: Department Assessment Committee
Statistical Analysis: Descriptive and/or Inferential
Frequency of Analysis and Interpretation: Every six years
Responsibility for Analysis, Interpretation and Implementation resulting in Continuous Improvement: Department Faculty
Faculty Responsible: Professor David Olowokere
Assessment Goal: Get the maximum years of accreditation (six years)

6.b PO Assessment Tool: Texas Southern University Wide Academic Review Protocol

Measurable: Program viability toward the department's stated goals
Constituency: University-wide faculty committee outside of the department

Methodology of Data gathering: Comprehensive self-study report on program evaluation

Data collection frequency: Once every five years

Data collection responsibility: Department Assessment Committee

Statistical Analysis: Descriptive and/or Inferential

Frequency of Analysis and Interpretation: Every five years

Responsibility for Analysis, Interpretation and Implementation resulting in

Continuous Improvement: Department Faculty

Faculty Responsible: Professor Demetrios Kazakos

Assessment Goal: Address and resolve all the stated recommendations