College of Engineering, Technology, and Computer Science
Computer, Electrical, and Information Technology (CEIT) Department
A.S. Electrical Engineering Technology
Program Educational Objectives and Student Outcomes

EET A.S. Program Educational Objectives

The ETAC/ABET[1] outcome-based accreditation assures quality education of engineering technology students. This approach focuses on inputs from EET Program constituencies, the teaching-learning process and outcomes, student achievement, graduation, employment, faculty qualifications and development, supporting facilities and resources, and continuous improvement. Accreditation decisions are based solely on the ETAC/ABET criteria, policies and procedures as defined in the ABET "Accreditation Policy and Procedure Manual" and "Criteria for Accrediting Engineering Technology Programs" for evaluation during the annual accreditation cycle.

ETAC/ABET defines program educational objectives as "…broad statements that describe what graduates are expected to attain within a few years after graduation."

EET program educational objectives are consistent with the mission of Indiana University-Purdue University Fort Wayne (IPFW), the College of ETCS and the needs of programs' constituents. The program educational objectives describe the expected skills, knowledge, and abilities that a graduate should achieve during the initial years following graduation. These program educational objectives were developed, and are annually evaluated, with the IPFW Strategic Objectives/Goals and the needs of the programs' constituents kept in mind. Educational objectives are closely related to the Program Outcomes. Assessment of these objectives is coupled to assessment of the program and course outcomes.

EET A.S. Program Educational Objectives

1. Demonstrate fundamental and emerging mathematical, scientific, engineering, and technical skills necessary to function as an electrical, electronic, computer, or engineering technician.
2. Demonstrate knowledge, skills, and techniques in the building, testing, operation, and maintenance of electronic/computer systems.
3. Demonstrate continuous learning, either on-the-job or in a B.S. degree program.
4. Demonstrate communications skills necessary to function effectively as a member of an engineering team.
5. Demonstrate an awareness of the social, ethical, and global impact of their work upon the profession and society.

1. Accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org
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EET A.S. Student Outcomes

Accrediting Engineering Technology Program: "The program must have documented outcomes that prepare graduates to attain the program educational objectives. There must be a documented and effective process for the periodic review and revision of these outcomes." It further states that for baccalaureate degree programs, these student outcomes must include, but are not limited to, the following learned capabilities:

a. an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;

b. an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;

c. an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;

d. an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;

e. an ability to function effectively as a member or leader on a technical team;

f. an ability to identify, analyze, and solve broadly-defined engineering technology problems;

g. an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;

h. an understanding of the need for and an ability to engage in self-directed continuing professional development;

i. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;

j. a knowledge of the impact of engineering technology solutions in a societal and global context; and

k. a commitment to quality, timeliness, and continuous improvement.

Achievement of these student outcomes should show that the graduate is equipped to achieve the program educational objectives. EET student outcomes are statements that describe what students are expected to know and be able to do by the time of graduation. These are related to the skills, knowledge and behaviors that students acquire in their matriculation through the program.

The student outcomes are a set of internal criteria which are used to measure the achievement of the program objectives. Achievement of these student outcomes should show that the graduate

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is equipped to achieve the program educational objectives.

EET A.S. - Student Outcomes

Graduates will have:

a. an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined electrical engineering technology activities;

b. an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;

c. an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;

d. an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;

e. an ability to function effectively as a member or leader on a technical team;

f. an ability to identify, analyze, and solve broadly-defined engineering technology problems;

g. an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;

h. an understanding of the need for and an ability to engage in self-directed continuing professional development;

i. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;

j. a knowledge of the impact of engineering technology solutions in a societal and global context; and

k. a commitment to quality, timeliness, and continuous improvement.

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