

Architectural Design Engineering Technology

Program Mission Statement

The mission of the in the Architectural Engineering Technology program is to provide students with a quality education that will prepare them to pursue careers for a broad range of entry-level positions in the architectural, civil, and construction industry. Graduates typically find positions with architects, engineers, contractors, building manufacturers, real estate developers, facility managers, surveyors, and various governmental agencies.

ETAC/ABET Engineering Technology Criteria

Program Educational Objectives and Student Outcomes must support ETAC/ABET Engineering Technology criteria a-i:

- a. an ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities;
- b. an ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge;
- c. an ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments;
- d. an ability to function effectively as a member of a technical team;
- e. an ability to identify, analyze, and solve narrowly defined engineering technology problems;
- f. 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;
- g. an understanding of the need for and an ability to engage in self-directed continuing professional development;
- h. an understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity; and
- i. a commitment to quality, timeliness, and continuous improvement.

Also, the Program Educational Objectives and Student Outcomes must support ETAC/ABET Architectural Engineering Technology outcomes:

Graduates of Architectural Engineering Technology programs will have the technical and managerial skills necessary to enter careers in the planning, design, construction, operation or maintenance of the built environment. Graduates of associate degree programs are prepared for careers in the construction, testing, operation, and maintenance of building systems; they have the abilities to produce and utilize basic construction documents and to perform basic analysis and design of system components.

Graduates of associate degree programs will, to the extent required to meet Program Educational Objectives:

- a. employ concepts of architectural theory and design in a design environment;
- b. utilize instruments, methods, software, and techniques that are appropriate to produce A/E documents and presentations;
- c. utilize measuring methods that are appropriate for field, office, or laboratory;
- d. apply fundamental computational methods and elementary analytical techniques in sub-disciplines related to architectural engineering.

Program Educational Objectives

Within a few years of graduation, Architectural Engineering Technology students are expected to:

PEO-1 attain successful and productive Architectural Engineering Technology or related careers with attention to ethical standards and effective communication;

PEO-2 engage in life-long learning activities, such as continued studies and/or professional workshops and conferences

PEO-3 engage in professional service, such as participation in professional society and/or community service

The Architectural Engineering Technology faculty members periodically review these objectives. As part of this review process, the faculty members encourage comments from all interested parties including current students, alumni, prospective students, faculty, employers of graduates, those who admit our graduates to other programs, members of related professional organizations, and colleagues from other educational institutions. Please send comments to our program coordinator Robert Tom, rtom@southwest.tn.edu.

Student Outcomes

The **Architectural Engineering Technology** student will have demonstrated the following attributes upon graduation:

- SO-1. an ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities;
- SO-2. an ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge;
- SO-3. an ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments;
- SO-4. an ability to function effectively as a member of a technical team;
- SO-5. an ability to identify, analyze, and solve narrowly defined engineering technology problems;

- SO-6. 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;
- SO-7. an understanding of the need for and an ability to engage in self-directed continuing professional development;
- SO-8. an understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity; and
- SO-9. a commitment to quality, timeliness, and continuous improvement.
- SO-10. employ concepts of architectural theory and design in a design environment;
- SO-11. utilize instruments, methods, software, and techniques that are appropriate to produce A/E documents and presentations;
- SO-12. utilize measuring methods that are appropriate for field, office, or laboratory;
- SO-13. apply fundamental computational methods and elementary analytical techniques in sub-disciplines related to architectural engineering;

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