

Associate of Science in Civil Engineering Technology (ASCET)

Program Educational Objectives:

Recent graduates of the ASCET program will be able to achieve the following career and professional accomplishments:

1. Demonstrate an appropriate mastery of aspects of civil engineering technology such as construction materials, surveying, structures, soil mechanics, highways, and water resources.
2. Demonstrate the ability to utilize accumulated knowledge supplemented with practical experience and continuing education to adapt to changing technology within their chosen area of specialization.
3. Demonstrate the ability to communicate effectively by oral and written means and display the interpersonal and leadership skills needed to work and participate effectively in a team environment.
4. Exhibit appropriate behavior when dealing with professional, ethical and social issues and display evidence of a commitment to quality and dependability.
5. Demonstrate the ability to successfully pursue and complete studies at the baccalaureate level if they so choose.

Student Outcomes:

Graduates of the ASCET program should be able to:

1. Apply principles of mathematics and applied science to perform technical calculations and solve the types of technical problems commonly encountered in civil engineering technology careers.
2. Function effectively in a laboratory setting by operating technical equipment, making measurements, recording results in suitable form, critically examining experimental results, and properly reporting on experimental results.
3. Use modern computational tools, including scientific calculators, computers, and appropriate software for technical problem solving.
4. Utilize computer software applications used in civil engineering technology such as CAD programs and supplements, spreadsheets, word processing, and industry-standard applications software.
5. Demonstrate a sufficiently broad knowledge of present-day issues in a global and societal context to develop professional and ethical responsibility to employers and to society at large.
6. Recognize the need for, and have acquired, self-learning and life-long learning skills essential for professional growth after graduation.
7. Demonstrate the ability to communicate effectively by oral and written means
8. Demonstrate the interpersonal skills needed to function effectively in a team environment.
9. Use manual techniques and industry-standard CADD packages to produce drawings in accepted form for projects in civil engineering and related fields.
10. Conduct standardized field and laboratory tests to investigate the properties of aggregates, soils and concrete in accordance with standards set out by ASTM, ACI and other relevant codes.
11. Use traditional and current electronic surveying equipment and accepted surveying methods to obtain and record measurements necessary for engineering and construction surveys.
12. Perform coordinate geometry calculations manually and with the use of related surveying software to derive control and mapping data, earthwork quantities and other required information.
13. Analyze forces and stresses in elementary structural systems and design components of steel and reinforced concrete structures in conformance with AISC and ACI specifications.
14. Apply technical concepts to analyze problems involving water resources, soils, and highways and perform basic design computations in these areas in accordance with standard practice.