



ABET

ENGINEERING TECHNOLOGY ACCREDITATION
COMMISSION

WEBER STATE UNIVERSITY

OGDEN, UT, UNITED STATES

DRAFT STATEMENT OF ACCREDITATION

2021-22 ACCREDITATION CYCLE

WEBER STATE UNIVERSITY

Ogden, UT, United States

ABET ENGINEERING TECHNOLOGY ACCREDITATION COMMISSION

DRAFT STATEMENT

VISIT DATES: NOVEMBER 7-10, 2021

ACCREDITATION CYCLE CRITERIA: 2021-2022

INTRODUCTION & DISCUSSION OF STATEMENT CONSTRUCT

The Engineering Technology Accreditation Commission (ETAC) of ABET has evaluated the Electronic(s) Engineering Technology (BS), Manufacturing Engineering Technology (BS), Mechanical Engineering Technology (BS), and Product Design and Development (B.S.) programs at Weber State University.

The statement that follows consists of two parts: the first addresses the institution and its overall educational unit, and the second addresses the individual programs.

A program's accreditation action will be based upon the findings summarized in this statement. Actions will depend on the program's range of compliance or non-compliance with the criteria. This range can be construed from the following terminology:

- **Deficiency** A deficiency indicates that a criterion, policy, or procedure is not satisfied. Therefore, the program is not in compliance with the criterion, policy, or procedure.
- **Weakness** A weakness indicates that a program lacks the strength of compliance with a criterion, policy, or procedure to ensure that the quality of the program will not be compromised. Therefore, remedial action is required to strengthen compliance with the criterion, policy, or procedure prior to the next review.
- **Concern** A concern indicates that a program currently satisfies a criterion, policy, or procedure; however, the potential exists for the situation to change such that the criterion, policy, or procedure may not be satisfied.
- **Observation** An observation is a comment or suggestion that does not relate directly to the current accreditation action but is offered to assist the institution in its continuing efforts to improve its programs.

INFORMATION RECEIVED AFTER THE REVIEW

- **Seven-Day Response** No information was received in the seven-day response period.

INSTITUTIONAL SUMMARY

Weber State University (WSU), founded as Weber State Academy in 1889, is a comprehensive public university with its main campus in Ogden, Utah. The mission of WSU is to provide "transformative educational experiences for students of all identities and backgrounds through meaningful personal connections with faculty and staff in and out of the classroom. The university promotes student achievement, equity and inclusion, and vibrant community relationships through multiple credentials and degree pathways, experiential learning, research, civic engagement, and stewardship. In the 2020-2021 academic year, the enrollment was 28,788 undergraduate and certificate students and 986 graduate students. The programs in engineering technology are within the College of Engineering, Applied Science, and Technology (EAST). EAST has an enrollment of 2967 undergraduate students and 38 graduate students. WSU is accredited by the Northwest Commission on Colleges and Universities.

Mechanical Engineering Technology

BS Program

Evaluated under ETAC Program Criteria for
Mechanical Engineering Technology and Similarly Named Programs

INTRODUCTION

The Bachelor of Science in Mechanical Engineering Technology prepares students for technical careers in the manufacturing industry, providing hands-on experiences enabling them to be productive in their jobs soon after graduation. The program's focus is on design, manufacturing, materials, testing, and processes. The program works closely with all of the institutions within the Utah System of Higher Education providing students with a seamless transfer process to the mechanical engineering technology program. Courses are offered in a traditional lecture and laboratory method and enhanced by web-based delivery system. Target employers of the graduates are primarily located in northern Utah, which includes Weber County, Salt Lake County, and Davis County. There were 115 undergraduate students enrolled in the program in fall 2021 and 12 graduates during the 2020 -2021 academic year.

PROGRAM WEAKNESSES

1. Criterion 1. Students

This criterion states: "The program must have and enforce procedures to ensure and document that students who graduate meet all graduation requirements." The majority of student transcripts provided insufficient evidence of a documented procedure for prerequisite waivers. The program follows a process that allows instructors the authority to override prerequisites on a case-by-case basis. While the rationales for the waivers were justified, the documentation for these waivers is inconsistent. For example, waivers are frequently not kept in the electronic advising record system. This allows the possibility for errors and inconsistencies in the process, burdening department faculty and impeding student progress. The strength of compliance with this criterion is lacking.

2. Criterion 5. Curriculum

This criterion states: "Baccalaureate degree curricula must provide a capstone or integrating experience that develops student competencies in applying both technical and non-technical skills in solving problems." Review of student work from the senior projects did not show consistent ability to design systems for broadly-defined engineering problems appropriate for mechanical engineering technology. Without a sufficiently broad capstone or integrating experience, the program may not prepare the students sufficiently for the needs of the program's constituents. The strength of compliance with this criterion is lacking.

3. Program Criteria

This criterion states: "... The following curricular topics are required: (a) Application of principles of geometric dimensioning and tolerancing; ..." Based on the evidence provided, the topic of geometric dimensioning and tolerancing (GD&T) is introduced in MET 3400 Machine Design. However, review of student work and discussions with the program faculty and students revealed that coverage of this topic was limited to basic knowledge of the symbols, and did not cover applications of GD&T. Without the application of GD&T in the curriculum, graduates of the program may not have the necessary knowledge and skills to be successful in their careers. The strength of compliance with this criterion is lacking.

PROGRAM CONCERN

Criterion 5. Curriculum

This criterion states: "An advisory committee with representation from organizations being served by the program graduates must periodically review the program's educational objectives and curriculum. The advisory committee must provide advisement on current and future aspects of the technical fields for which the graduates are being prepared." The program provided minutes of meetings with its constituents where various program-related issues had been discussed. However, the evidence shows that there is little involvement of the industrial advisory committee (IAC) members other than this annual meeting. There was scant evidence that other feedback from the IAC had been sought or considered for strengthening the curriculum, such as capstone experience, or improving the program. Without active engagement from the IAC, the program risks not preparing the students for future aspects of their field. There is a potential that future compliance with this criterion could be jeopardized.