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August 30, 2016

James Gaudino
President
Central Washington University
400 E University Way
Ellensburg, WA 98926

Dear Dr. Gaudino :

I am pleased to transmit to you the findings of the Engineering Technology Accreditation Commission (ETAC) of ABET with respect to the evaluation conducted for Central Washington University during 2015-2016. Each of ABET's Commissions is fully authorized to take the actions described in the accompanying letter under the policies of the ABET Board of Directors.

We are pleased that your institution has elected to participate in this accreditation process. This process, which is conducted by approximately 2,000 ABET volunteers from the professional community, is designed to advance and assure the quality of professional education. We look forward to our continuing shared efforts toward this common goal.

Sincerely,

Lawrence Jones
President

Enclosure: Commission letter and attachments



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August 30, 2016

Paul Ballard
Dean, College of Education & Professional Studies
Central Washington University
400 East University Way
Ellensburg, WA 98926-7415

Dear Dean Ballard :

The Engineering Technology Accreditation Commission (ETAC) of ABET recently held its 2016 Summer Meeting to act on the program evaluations conducted during 2015-2016. Each evaluation was summarized in a report to the Commission and was considered by the full Commission before a vote was taken on the accreditation action. The results of the evaluation for Central Washington University are included in the enclosed Summary of Accreditation Actions. The Final Statement to your institution that discusses the findings on which each action was based is also enclosed.

The policy of ABET is to grant accreditation for a limited number of years, not to exceed six, in all cases. The period of accreditation is not an indication of program quality. Any restriction of the period of accreditation is based upon conditions indicating that compliance with the applicable accreditation criteria must be strengthened. Continuation of accreditation beyond the time specified requires a reevaluation of the program at the request of the institution as noted in the accreditation action. ABET policy prohibits public disclosure of the period for which a program is accredited. For further guidance concerning the public release of accreditation information, please refer to Section II.A. of the 2015-2016 Accreditation Policy and Procedure Manual (available at www.abet.org).

A list of accredited programs is published annually by ABET. Information about ABET accredited programs at your institution will be listed in the forthcoming ABET Accreditation Yearbook and on the ABET web site (www.abet.org).

It is the obligation of the officer responsible for ABET accredited programs at your institution to notify ABET of any significant changes in program title, personnel, curriculum, or other factors which could affect the accreditation status of a program during the period of accreditation stated in Section II.H. of the 2015-2016 Accreditation Policy and Procedure Manual (available at www.abet.org).

ABET requires that each accredited program publicly state the program's educational objectives and student outcomes as well as publicly post annual student enrollment and graduation data as stated in Section II.A.6. of the Accreditation Policy and Procedure Manual (available at www.abet.org).

ABET will examine all newly accredited programs' websites within the next two weeks to ensure compliance.

Please note that appeals are allowed only in the case of Not to Accredit actions. Also, such appeals may be based only on the conditions stated in Section II.L. of the 2015-2016 Accreditation Policy and Procedure Manual (available at www.abet.org).

Sincerely,

A handwritten signature in blue ink that reads "Wilson T. Gautreaux". The signature is written in a cursive style.

Wilson T. Gautreaux, Chair
Engineering Technology Accreditation Commission

Enclosure: Summary of Accreditation Action
Final Statement

cc: James Gaudino, President
Ismail Fidan, Visit Team Chair



Engineering Technology Accreditation Commission

Summary of Accreditation Actions
for the
2015-2016 Accreditation Cycle

Central Washington University
Ellensburg, WA

Electronic(s) Engineering Technology (BS)

Mechanical Engineering Technology (BS)

Accredit to September 30, 2018. A request to ABET by January 31, 2017 will be required to initiate a reaccreditation evaluation visit during Fall, 2017. In preparation for the visit, a report describing the actions taken to correct shortcomings identified in the attached final statement must be submitted to ABET by July 01, 2017. The reaccreditation evaluation will focus on these shortcomings.



Engineering Technology Accreditation Commission

Final Statement of Accreditation
to

Central Washington University
Ellensburg, WA

2015-2016 Accreditation Cycle

CENTRAL WASHINGTON UNIVERSITY

ABET

ENGINEERING TECHNOLOGY ACCREDITATION COMMISSION

FINAL GENERAL REVIEW STATEMENT

on

CENTRAL WASHINGTON UNIVERSITY

Ellensburg, Washington

Dates of Visit:

November 8-10, 2015

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The statement that follows consists of two parts: the first addresses the overall institution and its engineering technology operation, and the second addresses the individual engineering technology programs. Accreditation actions taken by ETAC of ABET will be based upon the findings summarized in this statement and will depend on the range of compliance or non-compliance with ABET criteria, policies, and procedures. The range can be construed from the following definitions for findings:

Strength: A program Strength is an exceptionally strong and effective practice or condition that stands above the norm and that has a positive effect on the program.

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 evaluation.

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 which does not relate directly to the accreditation action but is offered to assist the institution in its continuing efforts to improve its programs.

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Ellensburg, Washington

INSTITUTIONAL FACTORS AFFECTING THE ENGINEERING TECHNOLOGY UNIT

Introduction

The Engineering Technology Accreditation Commission (ETAC) of ABET has evaluated the following baccalaureate degree programs:

- Electronics Engineering Technology and
- Mechanical Engineering Technology

of Central Washington University. The programs were evaluated using the 2015-16 *Criteria for Accrediting Engineering Technology Programs* and the 2015-16 *Accreditation Policy and Procedure Manual*.

Central Washington University is a comprehensive public university located in the rural town of Ellensburg, offering a variety of baccalaureate degree programs, primarily in liberal arts, education, business, and science. It is one of six state-supported institutions offering baccalaureate and graduate degrees. The Commission on Colleges of the Northwest Association of Schools and Colleges reaffirmed accreditation of this institution in the fall of 2014. Approximately 13,000 students attend Central Washington University at the Ellensburg main campus and seven off-campus degree centers. The electronics engineering technology program and the mechanical engineering technology program each lead to the Bachelor of Science degree. The electronics engineering technology program and the mechanical engineering technology program were

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initially accredited by ETAC of ABET in 1988 and 1997, respectively, and both have held continuous accreditation since that time. Both programs have been submitted for reaccreditation evaluation.

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PROGRAM EVALUATION

ELECTRONICS ENGINEERING TECHNOLOGY

Baccalaureate Degree

Introduction

The electronics engineering technology (EET) program was started in 1982, and initially accredited by ABET in 1988. The program added a computer engineering technology and an electronic systems specialization in 2001. In 2012 the program was restructured so that students were required to complete two of three sequences (computer science sequence, instrumentation sequence, and power sequence) that provided depth in computer engineering technology, instrumentation, or power systems that complemented the breadth of the program core. A distant EET program was offered at the Central Washington University-Pierce County center starting with courses in the late 1980s. This program was initially accredited by ABET in 1994 and was moved to the Central Washington University-Des Moines Center in 2006. The program at the Des Moines Center stopped accepting students in 2009, and a phase-out process is in place to ensure students currently enrolled in the program at the Des Moines Center can complete their degrees. A letter received by ABET from the President of Central Washington University states that the Des Moines campus will cease offering EET courses at the end of 2015-2016 academic year. The program educational objectives are that its graduates:

- will be prepared for careers or educational opportunities of their choice;
- will be able to communicate with their desired constituencies;
- will be able to continue acquiring skills and expertise in their areas of interest;
- will participate in professional community organizations; and

- will be able to use information from a variety of media and constituencies to develop practical methods and procedures to solve professional challenges.

The Program Criteria for Electrical/Electronic(s) Engineering Technology and Similarly Named Programs as published in the 2015-16 *Criteria for Accrediting Engineering Technology Programs* also were used to evaluate this program. Findings related to ABET criteria or policies and procedures are described below.

Program Weaknesses

1. Criteria: Criterion 2, Program Educational Objectives states, “There must be a documented, systematically utilized, and effective process, involving program constituencies, for the periodic review of these program educational objectives that ensures they remain consistent with the institutional mission, the program’s constituents’ needs, and these criteria.” The program has provided handwritten notes from the industry advisory committee (IAC) and departmental faculty meetings as evidence of review. However, these notes do not indicate an in-depth review of program educational objectives. Review by other program constituencies was not evident. No documented evidence was found in the IAC meeting minutes and from other campus interviews of constituencies to confirm that the PEOs were systematically and periodically reviewed to ensure that they were consistent with the institutional mission, the program’s constituents’ needs, and ABET criteria. Without a documented, systematically utilized and effective process for gathering information from all of its constituents, the program PEOs may become inconsistent with the Central Washington University’s mission, the program constituents’ needs and ABET criteria. Therefore, the program must demonstrate that it has a documented, systematically utilized, and effective process, involving all program constituencies, for the periodic review of program

educational objectives that ensures they remain consistent with the institutional mission, the programs constituents' needs, and ABET criteria.

2. Criteria: Criterion 3, Student Outcomes states, "There must be a documented and effective process for the periodic review and revision of these student outcomes." No documented evidence was found in IAC meeting minutes, campus interviews and display materials to demonstrate that student outcomes were periodically reviewed to ensure that they were consistent with program educational objectives, the institutional mission, the programs constituents' needs, and ABET criteria. Brief handwritten notes of IAC and departmental faculty meeting minutes provided during the campus visit do not provide sufficient documentation of the periodic review and revision of student outcomes. Without a documented and effective process to periodically review and revise student outcomes the outcomes may lack currency and may not reflect the needs of program constituencies. Therefore, the program must demonstrate that it has a documented and effective process for the periodic review and revision of student outcomes.

3. Criteria: Criterion 4, Continuous Improvement states, "The program must regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained. The results of these evaluations must be systematically utilized as input for the continuous improvement of the program. Other available information may also be used to assist in the continuous improvement of the program." Anecdotal evidence indicate that student outcomes are assessed from coursework. However, the student outcome assessment and evaluation process is not properly documented. Additionally, there was no evidence that the assessment and evaluation data have been utilized as input for program improvement. The lack of rubric and goals for attainment threshold makes it difficult to determine the shortcomings and therefore, the need for corrective action and improvement. The program must demonstrate that:

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(1) it assesses student outcomes and evaluates the extent to which student outcomes are attained, and (2) that the results of these evaluations is systematically utilized as input for the continuous improvement of the program.

4. Criteria: Criterion 5, Curriculum states, “Baccalaureate degree programs must provide a capstone or integrating experience that develops student competencies in applying both technical and non-technical skills in solving problems.” The program has a policy of permitting students to substitute cooperative education in place of the capstone course sequence EET 478 –Senior Project I and EET 479 – Senior Project II. Student transcripts provided by the program indicate that a number of 2015 EET graduates received diplomas with EET 490 Cooperative Education that was substituted for the capstone sequence. However, no evidence was provided to demonstrate that the cooperative education experience provides the capstone or integrating experience. Program graduates who do not receive a capstone experience may not have acquired the competence to be able to integrate technical and non-technical skills for problem solving. The EET program must demonstrate that it has a capstone or integrating experience for all students that develops student competencies in applying both technical and non-technical skills in solving problems.

5. Criteria: Criterion 6, Faculty states, “Collectively, the faculty must have the breadth and depth to cover all curricular areas of the program. The faculty serving in the program must be of sufficient number to maintain continuity, stability, oversight, student interaction, and advising. The faculty must have sufficient responsibility and authority to improve the program through definition and revision of program educational objectives and student outcomes as well as through the implementation of a program of study that fosters the attainment of student outcomes. The competence of faculty members must be demonstrated by such factors as education, professional credentials and certifications, professional experience, ongoing professional development,

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contributions to the discipline, teaching effectiveness, and communication skills.” As a result of the current departure of one EET faculty member and the retirement of another EET faculty member, the program may lose faculty depth and breadth and may not have any dedicated full-time faculty member who will have the responsibility and authority to improve the program. Further, loss of the faculty member who was responsible for the assessment and evaluation process and the continuous improvement process, may cause the program to suffer. The part-time faculty members may not be able to provide required leadership to the program and maintain the assessment and evaluation process and continuous improvement of the program. The program may lose data and knowledge base to maintain such activities in future. Some faculty members reported that they could not have taken advantage of the funds provided by the program, college and university for ongoing professional development because of their excessive workload. Without continuous professional development, faculty may lose competence and currency, and may not be able to enable graduates to attain program educational objectives. It is required that faculty serving the program have sufficient number of faculty to maintain continuity, stability, oversight, student monitoring and advising. Program faculty must engage in meaningful professional development to improve skill sets in their related field of technical expertise. The faculty must also have the responsibility and authority to improve the program through the definition and revision of program educational objectives and student outcomes as well as implementation of program of study that fosters attainment of student outcomes.

6. Criteria: Program Criteria for Electrical/Electronic(s) Engineering Technology and Similarly Named Programs states, “...the depth and breadth of expertise demonstrated by baccalaureate graduates must be appropriate to support the goals of the program. The outcomes expected of graduates of baccalaureate degree programs must demonstrate achievement of

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program-specific outcomes. Documented evidence of individual class assessments were provided. However, there was no evidence that a consistent, documented process was applied to determine the level of program specific outcome attainment, and that the results of the evaluated data were used to for program improvement. If the attainment of program specific outcomes is not determined, the shortcomings cannot be identified, and therefore program improvement cannot be made. The EET program must demonstrate that it satisfies all Program Criteria implied by the program title.

Due Process Response: The program chose not to respond to the cited shortcomings.

PROGRAM EVALUATION

MECHANICAL ENGINEERING TECHNOLOGY

Baccalaureate Degree

Introduction

The mechanical engineering technology (MET) program covers a broad range of subject areas with strong laboratory emphasis. Program was an outgrowth of the mechanical technology and manufacturing programs. In 1989, the Washington Higher Education Coordination Board approved a program title change. MET program enrollment has been growing in recent years with approximately 130 declared MET majors in 2015 and 22 graduates in 2014. The program educational objectives are:

- Upon entering the workforce, MET graduates will perform effectively, within their chosen work environments;
- MET alumni will evolve their related skills; and
- MET alumni will support the greater community by participating in appropriate activities such as community support opportunities (e.g. political committee appointments) and discipline organizations (e.g. ASME).

The Program Criteria for Mechanical Engineering Technology and Similarly Named Programs as published in the 2015-16 *Criteria for Accrediting Engineering Technology Programs* also were used to evaluate this program. Findings related to ABET criteria or policies and procedures are described below.

Program Weaknesses

1. Criteria: Criterion 2, Program Educational Objectives states, “There must be a documented, systematically utilized, and effective process, involving program constituencies, for the periodic review of these program educational objectives that ensures they remain consistent with the institutional mission, the program’s constituents’ needs, and these criteria.” The program has provided handwritten notes from the industry advisory committee (IAC) and departmental faculty meetings as evidence of review of PEOs. However, these notes do not indicate an in-depth review of program educational objectives. Review by other program constituencies was not evident. No documented evidence was found in the IAC meeting minutes and from other campus interviews of constituencies to confirm that the PEOs were systematically and periodically reviewed to ensure that they were consistent with the institutional mission, the program’s constituents’ needs, and ABET criteria. Without a documented, systematically utilized and effective process for gathering information from all of its constituents, the program PEOs may become inconsistent with the Central Washington University’s mission, the program constituents’ needs and ABET criteria. Therefore, the program must demonstrate that it has a documented, systematically utilized, and effective process, involving all program constituencies, for the periodic review of program educational objectives that ensures they remain consistent with the institutional mission, the programs constituents’ needs, and ABET criteria.

2. Criteria: Criterion 3, Student Outcomes states, “There must be a documented and effective process for the periodic review and revision of these student outcomes.” No documented evidence was found in IAC meeting minutes, campus interviews and display materials to demonstrate that student outcomes were periodically reviewed to ensure that they were consistent with program educational objectives, the institutional mission, the programs constituents’ needs, and ABET

criteria. Brief handwritten notes of IAC and departmental faculty meeting minutes provided during the campus visit do not provide sufficient documentation of the periodic review and revision of student outcomes. Without a documented and effective process to periodically review and revise student outcomes, the outcomes may lack currency and may not reflect the needs of program constituencies. Therefore, the program must demonstrate that it has a documented and effective process for the periodic review and revision of student outcomes.

3. Criteria: Criterion 4, Continuous Improvement states, “The program must regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained. The results of these evaluations must be systematically utilized as input for the continuous improvement of the program. Other available information may also be used to assist in the continuous improvement of the program.” The Self-Study Report and display materials showed that student outcome assessment metrics include alumni surveys for all outcomes, the FE examination results for outcomes b, c, d and f, and senior project evaluations for outcomes a, c, d, I, j, and k. The display materials and faculty interviews indicated that there was no evaluation of senior-project outcomes attainment. FE examination results were available for only a small number of students. The lack of a rubric and goal for an attainment threshold for student outcomes makes it difficult to evaluate the attainment results and to determine shortcomings, and therefore, the need for corrective actions. The program must demonstrate that: (1) the program uses appropriate and documented processes to assess student outcomes and evaluate the extent to which outcomes are attained; and (2) that the results of these evaluations are systematically utilized as input for the continuous improvement of the program.

4. Criteria: Program Criteria for Mechanical Engineering Technology and Similarly Named Programs state, “The mechanical engineering technology discipline encompasses the areas (and

principles) of materials, applied mechanics, computer-aided drafting/design, manufacturing, experimental techniques/procedure, analysis of engineering data, machine/mechanical design/analysis, conventional or alternative energy system design/analysis, power generation, fluid power, thermal/fluid system design/analysis, plant operation, maintenance, technical sales, instrumentation/control systems, and heating, ventilation, and air conditioning (HVAC), among others. As such, programs outcomes, based on specific program objectives, may have a narrower focus with greater depth, selecting fewer areas, or a broader spectrum approach with less depth, drawing from multiple areas. However, all programs must demonstrate an applied basis in engineering mechanics/sciences.” Display materials and interviews with faculty indicated that there is no documented and effective process for determining program criteria outcome attainment. The lack of specific evaluation processes for program criteria specific outcomes attainment makes it difficult to determine the need for corrective action and continuous improvement of program specific areas. Therefore, the program The MET program must demonstrate that it satisfies all Program Criteria implied by the program title.

Program Concern

1. Criteria: Criterion 6, Faculty states, “The competence of faculty members must be demonstrated by such factors as education, professional credentials and certifications, professional experience, ongoing professional development, contributions to the discipline, teaching effectiveness, and communication skills.” Although funding is provided for professional development and the majority of faculty make excellent use of the resources provided, some faculty members have not taken advantage of the funds provided by the program, college and university for ongoing professional development. If faculty do not maintain their technical

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currency and teaching effectiveness by professional development efforts, program quality may decline eventually. Without continuous professional development, faculty may lose competence and currency, and may not be able to enable graduates to attain program educational objectives. This finding remains a Concern until all program faculty engage in meaningful professional development to improve skill sets in their related field of technical expertise.

Due Process Response: The program chose not to respond to the cited shortcomings.