415 North Charles Street Baltimore, MD 21201
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August 29, 2018

Bernadette M.E. Jungblut
Associate Provost for Accreditation, Academic Planning, and Assessment
Central Washington
400 East University Way
Barge 202
Ellensburg, WA 98926-7421

Dear Dr. Jungblut :

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 2017-2018. 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,

Michael R. Lightner

President

Enclosure: Commission letter and attachments

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August 29, 2018

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 2018 Summer Meeting to act on the program evaluations conducted during 2017-2018. 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 2017-2018 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 2017-2018 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 2017-2018 Accreditation Policy and Procedure Manual (available at www.abet.org).

Sincerely,

Scott C. Dunning

Scott C. Dunning, Chair

Engineering Technology Accreditation Commission

Enclosure: Summary of Accreditation Action
Final Statement

cc: Bernadette M.E. Jungblut, Associate Provost for Accreditation, Academic Planning, and Assessment

Lad Holden, ETSC Dept.EET Program Coordinator

Thomas Bartlett Quimby, Team Chair

Engineering Technology Accreditation Commission

Summary of Accreditation Actions
for the
2017-2018 Accreditation Cycle

Central Washington University
Ellensburg, WA

Electronic(s) Engineering Technology (BS)

Mechanical Engineering Technology (BS)

Accredit to September 30, 2022. A request to ABET by January 31, 2021 will be required to initiate a reaccreditation evaluation visit. In preparation for the visit, a Self-Study Report must be submitted to ABET by July 01, 2021. The reaccreditation evaluation will be a comprehensive general review.

Engineering Technology Accreditation Commission

Final Statement of Accreditation
to

Central Washington University

Ellensburg, WA

2017-2018 Accreditation Cycle

ABET

ENGINEERING TECHNOLOGY ACCREDITATION COMMISSION

FINAL INTERIM VISIT STATEMENT

on

CENTRAL WASHINGTON UNIVERSITY

Ellensburg, Washington

Date of Visit:

October 29-31, 2017

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.

CENTRAL WASHINGTON UNIVERSITY

Ellensburg, Washington

INSTITUTIONAL FACTORS AFFECTING

THE ENGINEERING TECHNOLOGY UNIT

Introduction

The Engineering Technology Accreditation Commission (ETAC) of ABET has completed an evaluation visit for the following programs

- Bachelor of Science in Electronics Engineering Technology; and
- Bachelor of Science in Mechanical Engineering Technology;

of Central Washington University (CWU). This review was made to evaluate progress by the programs in addressing findings identified in the Final General Review Statement from ETAC of ABET dated August 30, 2016. The extent to which the previous findings have been resolved has been evaluated using the cycle 2015-16 *Criteria for Accrediting Engineering Technology Programs* and the 2017-18 *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 11,500 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 initially accredited by ETAC of ABET in 1988 and 1997, respectively, and both have held continuous accreditation since that time. Both programs have been visited in this review cycle.

PROGRAM EVALUATION

ELECTRONIC(S) ENGINEERING TECHNOLOGY

Baccalaureate Degree

Introduction

The electronics engineering technology (EET) program began in 1982, evolving from the existing electronics courses offered in the Industrial Engineering Technology (IET) department. The electronics engineering technology major has been accredited by ABET/ETAC since 1988 on the Ellensburg campus. The program added the computer engineering technology specialization and the electronic systems specialization in 2001. These specializations were in place until 2012, when, by request of the CWU Academic Affairs Committee, the specializations were removed as a result of low enrollment in the computer engineering technology specialization. The program has been restructured so that students are required to complete two of three sequences that provide depth in computer science, power systems, and/or cooperative education that complement the breadth of the program core. For the 2015-2016 academic year, the EET program had an enrollment of 42 students and 21 graduates. The program educational objectives are:

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

- program graduates 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. Previous Finding and 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 prior evaluation team was unable to find evidence of an in-depth review of the program educational objectives. No documented evidence was found in the Industrial Advisory Board meeting minutes or from other campus interviews of constituencies to confirm that the program educational objectives (PEOs) were systematically and periodically reviewed to ensure 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 the program

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

Progress: The electronics engineering technology program now has a formal process for reviewing and revising the program educational objectives (PEOs) that is documented in the assessment plan and is currently functioning. Industrial Advisory Board minutes dated 11/18/2016 show that the program educational objectives are being periodically reviewed and updated to ensure that they remain consistent with the institutional mission, the programs' constituents' needs and ABET criteria.

Status: This finding is resolved.

2. Previous Finding and Criteria: Criterion 3, Student Outcomes states, "There must be a documented and effective process for the periodic review and revision of these student outcomes." The prior evaluation team found no documented evidence in IAC meeting minutes, campus interviews and display materials to demonstrate that student outcomes were periodically reviewed to ensure that they were consistent with the program educational objectives, the institutional mission, the programs constituents' needs, and ABET criteria. Brief handwritten notes of the Industrial Advisory Board and departmental faculty meeting minutes provided during the visit did not provide sufficient documentation. 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.

Progress: The electronics engineering technology program has instituted a formal process for reviewing and revising student outcomes that is currently functioning. Outcomes are reviewed annually by the Industrial Advisory Board, faculty and alumni. Evidence through Industrial

Advisory Board minutes dated 11/18/2016 and 5/5/2017 show that the student outcomes are being periodically reviewed and updated to ensure that they remain consistent with the institutional mission, the programs' constituents' needs and ABET criteria.

Status: This finding is resolved.

3. Previous Finding and 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 prior evaluation team found that the student outcome assessment and evaluation process was not properly documented. Additionally, they found no evidence that the assessment and evaluation data was utilized as input for program improvement. The lack of rubrics 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: (1) it assesses student outcomes and evaluates the extent to which student outcomes are attained, and (2) that the results of these evaluations are systematically utilized as input for the continuous improvement of the program.

Progress: Since the previous review, the program has developed a documented process for student outcome assessment and program continuous improvement. All outcomes are addressed in one or more courses and then two separate tools are used for assessment. Each general and program specific outcome is directly assessed in a predetermined course through specific course learning objectives on a three-year cycle. Targets and rubrics are provided for determining whether the outcome is met. In addition, each outcome is indirectly assessed through multiple questions on a senior student survey and targets for attainment are provided. This process is described in a written

assessment plan and summarized in an assessment process table. Evidence was provided to demonstrate that the first year of the three-year cycle for assessment has been completed and has generated quantitative results that can be used for continuous improvement. These data are then utilized in a review process that occurs annually. Some evidence was provided to demonstrate that assessment data is being used to make continuous improvements to the program. With the newness of the current processes, there has not been time for the program to complete a full cycle of assessment and continuous improvement leaving the possibility of not completing the implementation of the full process.

Status: This finding is reduced to a Concern until the program demonstrates a fully functional, documented process that spans a complete cycle of assessment and continuous improvement.

Due Process Response: The program submitted no additional evidence related to this finding.

Status after Due Process: This finding remains a Concern until the program demonstrates a fully functional, documented process that spans a complete cycle of assessment and continuous improvement.

4. Previous Finding and 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 prior evaluation team found that 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 and student transcripts provided by the program indicated that a number of 2015 EET graduates received diplomas with EET 490 Cooperative Education substituted for the capstone sequence. In addition, the prior evaluation team found no evidence to demonstrate that the cooperative education experience provides the capstone or integrating experience. Program graduates who did

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

Progress: Since the previous visit, the electronics engineering technology program has changed the curriculum to require a sequence of three capstone courses and associated laboratories, EET 487/488/489. All students that did not have a previous commitment from the program to make cooperative education substitutions were moved to the new curriculum (this included all but two students). As evidence that these changes have been made, the program has provided formal academic requirement reports (degree evaluations) for a sample of current students that show the capstone course sequence is a condition for their completion of all degree requirements.

Status: This finding is resolved.

5. Previous Finding and 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, contributions to the discipline, teaching effectiveness, and communication skills." The prior evaluation team found that with the departure of one EET faculty member and the retirement of another, the program was in jeopardy of losing faculty depth and

may not have a dedicated full-time faculty member with responsibility and authority to provide for the maintenance and improvement of the program. As a result, the part-time faculty members may not be able to provide required leadership to the program and maintain the assessment/continuous improvement process and the program may lose the data and knowledge base to maintain such activities in the future. In addition, it was found that faculty members could not take 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.

Progress: Since the visit, the electronics engineering technology program has appointed a full-time, tenured faculty member to serve as program coordinator and hired a full-time tenure-track faculty member. Evidence demonstrates that these faculty members have the authority and responsibility to maintain and improve the program. The University and EET Program also provide support for professional development of all faculty members. Evidence has been provided to demonstrate that all faculty members have recently engaged in meaningful faculty development activities. Currently, the program has two full-time, tenured/tenure-track faculty members as well as two part-time non tenure-track faculty members and one graduate teaching assistant to provide

leadership and oversight and to ensure the maintenance and continuous improvement of the program.

Status: This finding is resolved.

6. Previous Finding and 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 program-specific outcomes." Documented evidence of individual class assessments was 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 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.

Progress: The program now has a documented process to determine attainment of program specific criteria through the use of a direct and an indirect measure that is used on a three-year cycle. This process for assessment of the program specific criteria has been discussed previously under the section on Criterion 4. Evidence has been provided to demonstrate attainment of the program specific outcomes that were assessed in the first year of the three-year cycle.

Status: This finding is resolved.

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. The 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 128 declared MET majors in 2016 and 35 graduates in 2015. The program educational objectives are:

- MET graduates will perform effectively within their chosen work environments and will enhance their professional skills through continuing professional development; and
- MET graduates will demonstrate responsible citizenship by participating in professional organizations and community engagement.

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. Previous finding and 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 prior evaluation team was unable to find evidence of an in-depth review of program educational objectives. No documented evidence was found in the Industrial Advisory Board 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 educational objectives 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.

Progress: Industrial Advisory Board minutes dated 6/1/2015 and 5/13/2017 show that program educational objectives are being periodically reviewed and updated to ensure that they remain consistent with the institutional mission, the programs' constituents' needs and ABET criteria.

Status: This finding is resolved.

2. Previous Finding and Criteria: Criterion 3, Student Outcomes states, "There must be a documented and effective process for the periodic review and revision of these student outcomes." The prior evaluation team found no documented evidence in the Industrial Advisory Board (IAB) 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. 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.

Progress: The mechanical engineering technology program has instituted a formal process for reviewing and revising student outcomes that is currently functioning. These are reviewed annually by the IAB, faculty and alumni. Evidence through Industrial Advisory Board minutes dated 5/31/2017 show that the student outcomes are being periodically reviewed and updated to ensure that they remain consistent with the institutional mission, the programs' constituents' needs and ABET criteria.

Status: This finding is resolved.

3. Previous finding and 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 prior evaluation team found that student outcome assessment metrics for outcome attainment were incomplete or only present for a small number of students. Additionally, there was no meaningful evaluation of the outcomes assessment data. 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.

Progress: The program has created new assessment metrics to assess all student outcomes and has identified actionable levels of attainment. However, these assessments are very limited in their breadth and do not provide adequate data upon which to make decisions. For 5 of 11 general student outcomes, questions from the FE review test and the actual FE exam are the only data used for assessment. Not only is the sample size small, it has been further impacted by removing data for students who "do not take the exam seriously". Additionally, there may be as few as two questions on a major topic on the exam (note that all questions are typically multiple choice). Once this data is collected, it is compared to the action standard of 70% and proposed actions are identified. However, there is no evidence that the proposed changes had the desired effect. For example, the data for outcome 3b2 has an indicator for mechanics of materials that has been substantially below the 70% threshold since 2013. In 2016, a requirement that students have a grade of C+ in ETSC312 was instituted. There was no assessment of the results of this change and no change in the 2016-17 data. Another proposed change is being implemented but there is no plan to assess the results of this new change. There are measures used for the other six outcomes which should be evaluated for their applicability and effectiveness.

Status: This finding remains a Weakness until the program can 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.

Due Process Response: The program has documented extensive changes to their continuous improvement plan since the site visit. These include a more robust process for implementing the review cycle and the addition of more usable measures. The program has also provided evidence of program changes made in response to currently available data.

Status after Due Process: The finding remains a Weakness until the program can demonstrate that it has implemented the new continuous improvement plan and that the results of these assessments are systematically utilized as input for the continuous improvement of the program.

Post 30-Day Response: The program submitted an additional report showing that most of the new assessment metrics have been implemented. The remaining assessment metrics are scheduled to be completed within the year. The evidence shows, for several outcomes, the need for corrective actions that will be evaluated within a two-year cycle.

Status after Post 30-Day Response: This finding is reduced to a Concern until the program demonstrates a fully functional, documented process that spans a complete cycle of assessment and continuous improvement.

4. Previous Finding and 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." The prior evaluation team found 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 MET program must demonstrate that it satisfies all program criteria implied by the program title.

Progress: The program has created new assessment metrics to assess all student outcomes and has identified actionable levels of attainment. However, these assessments are very limited in their breadth and do not provide adequate data upon which to make decisions. For 5 of 8 program criteria outcomes, questions from the FE review test and the actual FE exam are the only data used for assessment. Not only is the sample size small, it has been further impacted by removing data for students who "do not take the exam seriously". Additionally, there may be as few as two questions on a major topic on the exam (note that all questions are typically multiple choice). Once this data is collected, it is compared to the action standard of 70% and proposed actions are identified. However, there is no evidence that the proposed changes had the desired effect. For example, the data for outcome Mf2 has an indicator for Thermodynamics that has been below the 70% threshold since 2013, although it rose to close to the limit of 70% before dropping precipitously the past two years. In 2016, a change to require on-line homework starting with the winter 2017 class was instituted, however, the scores that semester continued to drop. No additional corrective action has been proposed. There are measures used for the other 3 outcomes which should be evaluated for their applicability and effectiveness.

Status: This finding remains a Weakness until the program can 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.

Due Process Response: The program has documented extensive changes to their continuous improvement plan since the site visit. These include a more robust process for implementing the review cycle and the addition of more usable measures. The program has also provided evidence of program changes made in response to currently available data.

Status after Due Process: The finding remains a Weakness until the program can demonstrate that it has implemented the new continuous improvement plan and that the results of these assessments are systematically utilized as input for the continuous improvement of the program.

Post 30-Day Response: The program submitted an additional report showing that most of the new assessment metrics have been implemented. The remaining assessment metrics are scheduled to be completed within the year. The evidence shows, for several outcomes, the need for corrective actions that will be evaluated within a two-year cycle.

Status after Post 30-Day Response: This finding is reduced to a Concern until the program demonstrates a fully functional, documented process that spans a complete cycle of assessment and continuous improvement.

Program Concern

Previous Finding and 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." The prior evaluation team found that, 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 currency and teaching effectiveness by professional development efforts, program quality may eventually decline. Without continuous professional development, faculty may lose competence and currency, and may not be able to enable graduates to attain program educational objectives. All program faculty must engage in meaningful professional development to improve skill sets in their related field of technical expertise.

Progress: Information presented by the department show significant professional development activities for all full-time faculty and all adjuncts are doing some professional development activities.

Status: This finding is resolved.