

ENGINEERING TECHNOLOGY PROGRAM EVALUATION REPORT

Effective for evaluations during the 2023-2024 Accreditation Cycle

Instructions

*The Program Evaluation Report is **required** for each program being evaluated. During the pre-visit phase, the Program Evaluator (PEV) must complete this form based primarily on the Self-Study Report (SSR) content, latest Accreditation Criteria and information found in the Request for Evaluation (RFE) in AMS. This report should be completed at least two weeks prior to the visit and shared with the Team Chair (TC). Some TCs may require it sooner. At the completion of the visit, the final version of this form must be left with the TC. **Some technical societies require their evaluators to submit additional information. It is the responsibility of the evaluator to determine and meet this requirement.***

The completed Program Evaluation Report by PEV at the conclusion of a visit consists of the following:

- *Any program findings entered into the Program Audit Form (PAF) in AMS located on the ABET Website. Including the program introduction section in accordance with the T422.*
- *The T351 Report Form, which includes:*
 - *General Information Sheet, Criteria Evaluation, Transcript Analysis*
 - *Program Review Worksheet*
- *Signed PEV Program Summary Form with Recommended Accreditation Action (Last page of the T351)*

Use the following quality ratings throughout the form:

- | | |
|----------|---|
| E | Exceptional (Strength): strong, effective practice or condition |
| S | Satisfactory: a criterion, policy, or procedure is in full compliance |
| O | Observation: 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 |
| C | Concern: a criterion, policy, or procedure is currently satisfied; however, the potential exists for future compliance may not be satisfied |
| W | Weakness: a criterion, policy, or procedure lacks the strength of compliance, and remedial action is required. |
| D | Deficiency: a criterion, policy, or procedure is not satisfied, and corrective action is required. |
| X | Not Applicable |

Enter your quality rating next to each topic. A “Finding” is any topic rated other than S or X. For all findings rated C, W, or D enter explanatory comments. Appropriate comments should also be entered for ratings of E or O. The PAF in the AMS should be completed during the visit for unresolved findings recorded as C, W, or D. Strengths, and Observations may be entered for situations that are not criteria related.

At the conclusion of the visit, leave the original of this form (or digital copy) with the team chair. *Note: This document can be completed electronically using Microsoft Word or any suitable word processing program, as long as the file format is compatible with Microsoft Word.*

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General

(Items in parenthesis refer to applicable ETAC Criteria or to sections in the Accreditation Policy and Procedure Manual, e.g., APPM-1.D.1.f.

Please remember to refer to the Request for Evaluation (RFE) section in AMS, for program specifics.

Program Identification					
Institution State University			Program Name (APPM-I.C.3 and I.C.4) Construction Engineering Technology (BS)		
Evaluated By: Norman Dennis			Society Represented: (e.g., ASME) ASCE		
Applicable Program Criteria: Program Criteria for Construction Engineering Technology and Similarly Named Programs (e.g., Innovation Engineering Technology and Similarly Named Programs, 20XX-20XX)					
Academic Term	Semester <input checked="" type="checkbox"/>	Quarter <input type="checkbox"/>	Other <input type="checkbox"/>	_____	
Degree(s) Awarded	Associate <input type="checkbox"/>	Baccalaureate <input checked="" type="checkbox"/>	Other <input type="checkbox"/>	_____	
2 Yr. <input type="checkbox"/>	4 or 5 Yr. <input checked="" type="checkbox"/>	2 + 2 Yr. <input type="checkbox"/>	Upper Division <input type="checkbox"/>	Closely-Related <input type="checkbox"/>	Other <input type="checkbox"/> <i>Specify</i> _____
Offerings		Locations, Descriptions (as applicable)			
Options (APPM-1.D.1.f)		No options or tracks. Students are encouraged to pursue minors.			
Evening		Limited evening classes			
Remote Locations (APPM-1.D.1.f)		None			
Alternate Delivery (APPM-1.D.1.f)		No significant distance or web based delivery, except for spring 2020.			
Cooperative Education (Criterion 5)		Available, but not required. About 10% of CET students enroll.			
Describe any unique aspects of the program:					

Criterion 1 - Students

1. A. Performance: *Evaluate the extent to which the program attains the following elements of Criterion 1.*

Objective	Quality Rating	Comment
a. Policies for admission to the program exist and are enforced.	S	The university is a test optional school, requires high school GPA of 3.0 on a 4.0 scale and a B or better in Algebra II. Test ACT 21 or better with a math score of 20 or better.
b. Student performance is evaluated and student progress through curriculum is monitored. Prerequisites are enforced and any waivers documented.	S	Need to see transcripts. Lots of computer checks for monitoring academic standing. Transcripts showed no prerequisite violations and all records showed graduation requirements were met.
c. Policies exist and are enforced for accepting transfer students and transfer credit.	S	Self-study does not address the minimum grade for a transfer course. A structures course was transferred as a soil mechanics course. Need to see who evaluated and why it was accepted. Resolved, the “structures” course was really a soils course.
d. Adequate procedures exist and are used for student advisement regarding curriculum and career matters.	S	ADDSSs conduct all academic advising. CET apparently shares one dedicated person with a student load of 298:1. CET has one primary faculty contact for career and curriculum advise. Contributions of other faculty is not well established.
e. Policies exist, are documented, and enforced for awarding credit in lieu of courses [note that not granting such credit is an acceptable policy].	S	Yes, pretty standard criteria for academic placement tests and credit for work experience.
f. Policies exist and are enforced for ensuring and documenting that each graduate meets all program graduation requirements.	S	Yes, computer based and checked by college AD and department ADDSS. Will verify with Transcript review. It appears the computer system does not check for required courses in the curriculum. One student did not take two required courses. Resolved for one student who did not meet 2019 curriculum requirements. He graduated under 2012 curriculum which did not require two required courses in the 2019 curriculum.
g. Use the transcript analysis form on the next page. Make entries above (a. – f.), as appropriate based on transcript analysis.	S	Deficiency resolved with analysis of 2012 transcript and student #5.

TRANSCRIPT ANALYSIS for ASSOCIATE or BACHELOR’S LEVEL PROGRAM

Institution *State University*

Program *Construction Engineering
Technology (BS)*

This worksheet is designed to guide the analysis of transcripts. The “ABET Criteria Requirement” column should be filled in to identify the Criterion 5 (or program criteria, if applicable) requirement in place for the program being reviewed. For example, for a bachelor’s degree, the ABET Criteria for Discipline Specific Topics is one-third of the total credit hours for the curriculum but no more than two-thirds of the credit hours. Some curricular categories may not have criteria requirements. The entry labeled “Total” should be the sum of the number of credits in each category for one transcript. Be sure to only tabulate credits that apply/meet graduation requirements of the degree under review.

Table 5-1 in the self-study reflects the *current* curriculum and may serve as a roadmap for transcript analysis. You should categorize each course based on the information provided by the program in Table 5.1. However, some graduates may have utilized an older curriculum. If needed, the program can supply a copy of the curriculum in place for the particular graduate whose transcript is being analyzed. In addition, supplemental information such as a degree audit may be helpful in completing this table.

Please complete this worksheet prior to your visit and provide a copy to your team chair at the start of the visit. (Note that space is provided for up to 6 transcripts. Replicate the table if necessary for more transcripts). Please note: the PEV should complete this table utilizing information displayed on the graduate transcripts. This worksheet should **not** be completed by the institution or program contacts.

ABET Curricular Category	ABET Criteria Requirement	Number of Credits*					
		Credits Actually Earned by Student #					
		1	2	3	4	5	6
Mathematics and Basic Sciences	N/A	28	30	28	27	28	36
Discipline Specific Content	43-85	76	77	76	78	71	78
General Education	N/A	24	21	24	24	24	21
Other	N/A	0	30	15	9	>50	25
Total	128	128	158	143	137	>173	160
Other Transcript Analysis Questions		Is this requirement met? YES or NO					
Transcript demonstrates the student meets all program graduation requirements.		Y	Y	Y	Y	Y	Y
Transcript demonstrates the student follows all prerequisite requirements and any waivers documented.		Y	Y	Y	Y	Y	Y
Degree audit information matches the program’s published criteria.		Y	Y	Y	Y	Y	Y
Prerequisite violations are justified by documented prerequisite waivers.		Y	Y	Y	Y	Y	Y

* Computed as in curriculum analysis table 5.1 in the SSR.

In the space below, document specific course prerequisite concerns/violations for each transcript as needed.

Student number 5 seems to be missing required courses CET 3010, Architectural CADD and CET 2010, Construction Safety. Although there is a note saying transfer course ENV 110, OSHA General Safety was accepted as a technical elective. Perhaps it should have satisfied CET 2010.

After further review, student #5 graduated under the 2012 curriculum that did not require the above listed required courses. The 2012 curriculum required more electives and the student had many transfer courses that could be used to satisfy technical electives in the program.

1. B. Summary: Summarize the extent to which Criterion 1 is met.

Summary for Criterion 1	Quality Rating	Comment
Extent to which Criterion 1 is met.	S	All students took all required courses for graduation.

Criterion 2 - Program Educational Objectives

2. A. Performance: Evaluate the extent to which the program attains the following elements of Criterion 2.

Objective	Quality Rating	Comment
a. There are published program educational objectives consistent with the mission of the institution, constituency needs, and ETAC Criteria.	S	They are well stated and published
b. The key constituencies served by the program are stated.	S	<p>Faculty and students are discussed in the review process but are not listed as constituents. Apparently faculty have final approval of PEOs</p> <p>According to self-study alumni, employers and co-op employers (the listed constituinst besides the IAB) participate in the review via surveys. The surveys do not mention PEOs but do request feedback on SOs This process does not allow these constituents to address the the PEOs.</p> <p>Subsequently it was determined that the IAB has representation from the alumni and both types of employers.</p>
c. There is a documented process for periodic review of the PEOs by the key constituencies as stated by the program.	S	A review process is described.
d. The documented process is systematically utilized and effective; involves stated program constituencies so that the PEOs remain consistent with the mission of the institution, the needs of the program’s constituencies, and the ETAC Criteria.	S	<p>Need to see minutes of IAB meetings, employer surveys, etc. They were not summarized in self-study.</p> <p>The IAB reviews PEOs and SOs on an annual basis and provides feedback to the program director. The IAB also represents the interests of the alumni and the employers.</p>

2. B. Summary: Summarize the extent to which Criterion 2 is met.

Summary for Criterion 2	Quality Rating	Comment
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Extent to which Criterion 2 is met.	S	Need to see documentation of review process. Annual meeting minutes provided
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Criterion 3 - Student Outcomes

3. A. Performance: *Evaluate the extent to which the associate or baccalaureate program student outcomes encompass the following elements of Criterion 3:*

Associate Degree Student Outcomes	Quality Rating	Comment
a. There is a documented and effective process for the periodic review and revision of the program’s student outcomes.		
b. The program has student outcomes that are documented and clearly defined to encompass all the Associate Degree elements listed in 3(1) - 3(5).		
3(1). An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline.		
3(2). An ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.		
3(3). An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.		
3(4). An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results.		
3(5). An ability to function effectively as a member of a technical team.		

Baccalaureate Degree Student Outcomes	Quality Rating	Comment
a. There is a documented and effective process for the periodic review and revision of the program’s student outcomes.	S	<p>Claimed process is the same as for PEO review. Need to see documentation of meetings where SOs are reviewed. Self-study also mentions program outcomes in addition to SOs but does not identify them. Missing are alumni, co-op employers and employers. Need to see survey instruments.</p> <p>Further investigation reveals that surveys sent to alumni, employers and co-op employers does address the SOs</p>
b. The program has student outcomes that are documented and clearly defined to encompass all the Baccalaureate Degree elements listed in 3(1) - 3(5).	S	SOs are carbon copies of ETAC 1-5 for BS programs.
3(1). An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline.	S	
3(2). An ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline.	S	
3(3). An ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.	S	
3(4). An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes.	S	
3(5). An ability to function effectively as a member as well as a leader on technical teams.	S	

3. B. Summary: *Summarize the extent to which Criterion 3 is met.*

Summary for Criterion 3	Quality Rating	Comment
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Extent to which Criterion 3 is met.	S	Need to see documentation of periodic reviews and see what the program outcomes are and how they are assessed. Periodic reviews are being conducted.
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Criterion 4 - Continuous Improvement

4. A. Performance: *Evaluate the assessment, evaluation, and continuous improvement processes for the program with regard to the following Criterion 4 requirements.*

Element	Quality Rating	Comment
a. There is an appropriate, documented process for continuous improvement of the program that includes assessment of student outcome attainment, evaluation of the assessment results, and use of these evaluations as input for continuous improvement actions.	W	The assessment and evaluation process is described, however no direct measure instruments are provided and it appears that indirect and direct measures data are being averaged to obtain an overall assessment of each outcome. Upon further investigation it was determined that direct measures of assessment are averaged/aggregated across all courses to determine if a program level outcome is attained. This practice tends to mask certain trouble spots in the program.
b. Appropriate assessment tools and metrics are used, yielding valid data for evaluating the extent to which student outcomes are attained.	W	Unable to see any assessment instruments at this time. Need to see some instruments and how the data is being aggregated. Direct assessment artifacts look OK but results are averaged across the program.
c. Assessment data collection is performed on a regular basis, as scheduled in documentation.	S	At least annually. Direct measures are collected every semester.
d. Evaluation of assessment data to determine the extent to which the student outcomes are being attained is performed on a regular basis, as scheduled in the documentation.	S	Annually,
e. Evaluation results are used as input for continuous program improvement decisions and actions.	W	Yes, however sometime indirect measures trump direct measures and no substantive action is taken to improve the curriculum
f. Continuous improvement actions are documented.	S	Yes, on and outcome by outcome basis. Principally at the course level.
g. Other available information may be used to assist continuous improvement of the program.	S	The program uses employer and recent alumni surveys as well as senior exit interviews (all indirect measures)

4. B. Summary: *Summarize the extent to which Criterion 4 is met.*

Summary for Criterion 4	Quality Rating	Comment

Extent to which Criterion 4 is met.	W	<p>I need more information, but at this time it appears that data are being averaged which does mask the fact that direct measures in 3 SO are not meeting the set standard of achievement. Non attainment was often attributed to lack of full time faculty or turnover in part-time faculty.</p> <p>After review of the assessment artifacts it is clear that direct measures are being averaged across multiple courses and sometimes indirect measures are being used to support attainment when direct measures indicate otherwise.</p>
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Criterion 5 - Curriculum

5. A. Performance: *Evaluate the extent to which the program demonstrates the following characteristics required by the Criterion.*

GENERAL	Quality Rating	Comment
Curriculum specifies topics appropriate to engineering technology.		

CURRICULUM	Quality Rating	Comment
Mathematics - The curriculum provides:		
a. For an Associate degree program, the application of algebra and trigonometry appropriate to the student outcomes and the discipline.		
b. For a Baccalaureate degree program, the application of integral and differential calculus or other mathematics above the level of algebra and trigonometry appropriate to the student outcomes and the discipline.	S	Two semesters of Calculus are included in the curriculum. No indication that calculus is applied in the discipline specific topics of the curriculum. Need an interpretation of the criteria. Calculus is applied in the probability, statistics and experimental design course.
Discipline Specific Content - The curriculum must focus on the applied aspects of science and engineering and must:	S	
a. Represent at least one-third, but no more than two-thirds of the total credit hours for the curriculum.	S	59% of the curriculum is devoted to discipline specific topics.
b. Include a technical core preparing students for increasingly complex technical specialties later in the curriculum.	S	Sequencing of technical topics is good and there is a significant prerequisite string.
c. Develop student competency in the discipline.	S	Covers all aspects of the General and Program Criteria
d. Include design considerations appropriate to the discipline such as: industry and engineering standards and codes; public safety and health; and local and global impact of engineering solutions on individuals, organizations and society.	S	Topical coverage in courses. Need to see capstone projects to determine application. Capstone projects referenced certain codes and standards, but discussion of those was missing in reports. There is a course that discusses codes and standards in the program.
e. Combine technical, professional, and general education components to prepare students for a career, further study, and lifelong professional development.	S	24 Hours of Gen Ed, 28 hours basic science and math, 76 hours of discipline topics.

CURRICULUM	Quality Rating	Comment
Other Content - Include topics related to professional and ethical responsibilities, diversity and inclusion awareness, quality and continuous improvement.	S	Covered in the Capstone Course,
Physical and Natural Science - The program provides physical or natural science content of the curriculum appropriate to the discipline and includes laboratory experiences.	S	Ten hours of Technical Physics, 3 hours of Geology or 4 hours of Chemistry
Integration of Content - Baccalaureate degree programs must provide a capstone or other integrating experience that develops student competencies in applying both technical and non-technical skills in solving problems.	S	ENGT 4050 Senior Technology Capstone
Cooperative Education - When used to satisfy degree requirements, cooperative internships or similar experiences must include an appropriate academic component evaluated by the program faculty.	S	This is described in both Section 1 and 5 of the self study.
Advisory Committee - The committee, with representation from organizations being served by the program graduates must:	S	Advisory Council consists mainly of employers, but also includes alumni.
a. Periodically review the program’s educational objectives and curriculum.	S	Meets Annually
b. Provide advisement on current and future aspects of the technical fields for which the graduates are being prepared.	S	Informal discussions of skills required of graduates.

5. B. Summary: *Summarize the extent to which Criterion 5 is met.*

Summary for Criterion 5	Quality Rating	Comment
Extent to which Criterion 5 is met.	S	<p>The curriculum meets all aspects of the General and Program Criteria except Application of Calculus. Need interpretation of criteria. Calculus is only a prerequisite for Statistics (doubtful if it is used in that course.)</p> <p>OK, Used in Applied Statistics and Experimental design.</p>

Criterion 6 - Faculty

6. A. Performance: *Evaluate the extent to which the faculty demonstrate the following characteristics required by the Criterion.*

Characteristic	Quality Rating	Comment
a. Faculty teaching in program have expertise and educational background consistent with contributions expected of them.	C	It is unclear how adjunct faculty credentials match the courses they are teaching. Only one part-time faculty has a PhD in Civil or Construction Technology and two part timers have only BS degrees and perhaps not the appropriate work experience to cover the course(s) they teach.
b. Individual faculty members demonstrate appropriate competence factors such as: <ul style="list-style-type: none"> • Educational background • Professional credentials and certifications • Professional experience • Ongoing professional development • Contributions to the discipline • Teaching effectiveness • Communication skills • Other factors important to the program 	C	Need to interview faculty. Some faculty are not keeping up with technology and frankly are not considered to be good teachers by students. Most adjuncts have adequate industrial experience even though they do not possess an advanced degree.
c. Collectively, the faculty has breadth and depth to cover all program curricular areas.	C	Must match credentials to courses being taught during interviews.
d. The size of the faculty is sufficient to maintain continuity, stability, oversight, and to provide student interaction and advising.	W	Only two full-time faculty and Continuous Improvement section cited lack of permanent faculty as the primary reason for failure to meet attainment targets for more than one student outcome. Also only two elective courses are listed in the catalog of studies, neither were taught in the record year. Exit surveys cite lack of full time faculty as a weakness in the program and lack of construction related electives as a weakness in the curriculum.
e. The faculty has sufficient responsibility and authority to improve the program through definition and revision of program educational objectives, student outcomes, and a program of study fostering attainment of student outcomes.	S	It is unclear how CET operates within ENGT and how part time faculty are treated. Part-time faculty only teach and have no responsibility to contribute to curriculum development or to be familiar with PEOs or SOs except for the SOs that their course covers

6. B. Summary: *Summarize the extent to which Criterion 6 is met.*

Summary for Criterion 6	Quality Rating	Comment
Extent to which Criterion 6 is met.	W	Limited full-time faculty and lack of, or change in, faculty was cited as the reason for not achieving attainment targets for student outcomes in at least two of the five outcomes. There is also a lack of professional development activities among the part-time faculty.

Criterion 7 - Facilities

7. A. Performance: *Evaluate the following characteristics related to the engineering technology facilities that are required by this Criterion.*

Characteristic	Quality Rating	Comment
<p>a. Classrooms, offices, laboratories, and associated equipment:</p> <ul style="list-style-type: none"> • Suitable to support attainment of student outcomes • Provide an atmosphere conducive to learning 	W	<p>The soils equipment is old and some is in questionable working condition. Survey instruments are not exactly state of practice, no GPS survey equipment which is current state of practice. Equipment to measure engineering properties of soil is very old, still analog and with questionable serviceability of dial gauges.</p> <p>No record of equipment maintenance or expenditures on equipment in the materials lab, with the exception of calibration of the concrete compression tester.</p> <p>Current equipment is not what students will see when they go into practice.</p>
<p>b. Modern tools, equipment, computing resources, and laboratories:</p> <ul style="list-style-type: none"> • Appropriate to the program and to support program needs • Available, accessible, and systematically maintained and upgraded • Appropriate guidance provided to students on usage 	S	<p>Need to see how software is deployed, and its availability to students.</p> <p>Software availability is generally good and computing facilities are excellent. MS Project is the only limited license.</p>
<p>c. There are appropriate information resources to support the scholarly and professional activities of students and faculty, e.g.:</p> <ul style="list-style-type: none"> • Library services <ul style="list-style-type: none"> · physical or electronic holdings/resources · professional technical publications · other technical literature (e.g., handbooks, manuals of industrial processes) • Computing and information infrastructure 	S	<p>These appear to be adequate to meet student needs</p>

7. B. Summary: *Summarize the extent to which Criterion 7 is met.*

Summary for Criterion 7	Quality Rating	Comment

Extent to which Criterion 7 is met.	W	<p>Need to view facilities either in person or virtually to make a determination</p> <p>Equipment is not modern or state of industry practice.</p>
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Criterion 8 - Institutional Support

8. A. Performance: *Evaluate the support and financial resources for the program by the institution and employers as required by this Criterion.*

Characteristic	Quality Rating	Comment
Institutional support and leadership		
a. Adequate to assure the quality and continuity of the program.	W	Need more full-time faculty
Resources (institutional services, financial support, administrative staff, and technical staff)	W	It is unclear how program is able to maintain lab equipment on the limited budget they have.
a. Sufficient resources to meet program needs.	W	It is unclear how program is able to maintain lab equipment on the limited budget they have.
b. Sufficient resources available to attract, retain, and provide for the continued professional development of a qualified faculty.	W	The loss of faculty and inability to hire new faculty.
c. Sufficient resources available to acquire, maintain, update, and operate infrastructures, facilities, and equipment appropriate to the program.	W	Equipment is old and some items are in questionable repair. No record of equipment expenditures.
d. Sufficient resources available to provide an environment in which student outcomes can be attained.	W	Lack of tenure/tenure track or full time faculty has been cited as a factor in achieving student outcomes.

8. B. Summary: *Summarize the extent to which Criterion 8 is met.*

Summary for Criterion 8	Quality Rating	Comment
Extent to which Criterion 8 is met.	W	Difficulty in hiring and retaining faculty. Limited operational budget. All contribute to not meeting student outcomes.

Program Criteria

Performance: *If specific program criteria apply to this program, enter the title(s). If needed, reproduce this entire section for each set of applicable program-specific criteria.*

Program Criteria for Construction Engineering Technology and Similarly Named Programs
Criteria title document

2023-2024
Date of criteria

For each element of these criteria, enter a brief description and record appropriate quality ratings for each. Add rows as needed. Indicate how each required curriculum topic is addressed or how any specific faculty requirements are met.

Element	Quality Rating	Comment
<i>a) The utilization techniques that are appropriate to administer and evaluate construction contracts, documents, and codes</i>	S	Covered in CET 1100 Arch Graphics, CDT 1150 Construction Materials and Codes, CET 2060 Construction Estimating, and CET 3160 Contracts and specifications.
<i>b) the estimation of costs, estimation of quantities, and evaluation of materials for construction projects</i>	S	Covered in Covered in CET 1150 Construction Materials, CET 2110 Materials Testing, CET 2220 Soil Mechanics, and CET 1250 Building Systems
<i>c) the utilization of measuring methods, hardware, and software that are appropriate for field, laboratory, and office processes related to construction;</i>	S	Covered in CET 1210 Surveying, CET 3210 Surveying Applications, CET 2110 Materials Testing and CET 2220 Soil Mechanics
<i>d) the application of fundamental computational methods and elementary analytical techniques in sub-disciplines related to construction engineering</i>	S	Covered in CET 1200 Engineering Mechanics, CET 2250 Structural Design, CET 1250 Building Systems, CET 1210 Surveying, and CET 2030 Construction Graphics
<i>e) the production and utilization of documents related to design, construction and operations</i>	S	Covered in CET 2030 Construction Graphics, CET 3010 Arch CADD, CET 3160 Contracts and Specifications, and ENGT 4050 Senior Technology Capstone.
<i>f) the performance of economic analyses and cost estimates related to design, construction, and maintenance of systems associated with construction engineering;</i>	S	Covered in CET 2060 Construction estimating, CET 3120 Advanced Construction Materials, ENGT 3600 Engineering Economics, and CET 4460 Construction management and Scheduling.
<i>g) the selection of appropriate construction materials and practices</i>	S	Covered in CET 3120 Advanced Construction Materials, CET 3220 Hydrology and Hydraulics, CET 4250 Advanced Structural Design, and CET 4350 Soils, Foundations and Retaining Structures.
<i>h) the application of appropriate principles of construction management, law and ethics;</i>	S	Covered in CET 3160 Contracts and Specifications, CET 4460 Construction Management and Scheduling, CET 1100 Introction to CET, and ENGT 4050 Senior Technology Capstone.

<i>i) the performance of standard analysis and design in at least one sub-discipline related to construction engineering.</i>	S	Covered in CET 3120 Advanced Construction Materials, CET 3220 Hydrology and Hydraulics, CET 4350 Soils, Foundations and Earth Structures.
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Summary: *Summarize the extent to which program specific criteria are met. [Comments and suggestions regarding possible improvements to the Program Criteria should be directed to the appropriate society and the ETAC Criteria Committee.]*

Summary for Program-Specific Criteria	Quality Rating	Comment
Extent to which program-specific criteria are met.	S	The program has met all of the specified program curricular requirements.

Accreditation Policy and Procedure Manual (APPM)

APPM Requirements	Quality Rating	Comment
I.A.4 Accredited program must have a name that is distinct from that of any non-accredited program.	S	No problem here
I.A.6 Accredited programs identified as “accredited by the Engineering Technology Accreditation Commission of ABET, https://www.abet.org .”	S	Language OK
I.A.6.a. Accredited programs must publicly state their program educational objectives (PEOs) and student outcomes (SOs).	S	They do it.
I.A.6.b. Accredited programs must publicly post annual enrollment and graduation data per program.	S	Posted up to previous academic year.
I.C.4.b Program name must be shown consistently on the record of academic work (transcripts), all publications, and the Request for Evaluation (RFE).	S	Yes
I.C.4.c. (2) If a program name implies specialization(s) for which Program Criteria have been developed, the program must satisfy all applicable Program Criteria.	S	Using the correct Program Criteria
1.D.1.g. For programs where the language of instruction is not English <ul style="list-style-type: none"> • Self-Study Report in English. 	X	

<p>I.E.5.b. (2) Materials - The program provides materials to the visit team, including examples of graded student work, materials addressing issues arising from review of the Self-Study Report or on-line instructional materials, documentation to substantiate the Self-Study Report, and demonstration of compliance with criteria and policies.</p>	<p>S</p>	<p>Electronic via Teams</p>
<p>Other APPM requirements.</p>		
<ul style="list-style-type: none"> • Official records of academic work may be provided in the language of instruction with English translation. • Supporting materials may be in the language of instruction, but an English translator must be provided by the program and be available to the visit team to assist in understanding the supporting materials. • Team may request written translation of selected supporting materials to verify compliance with criteria. 		
<p>I.E.1 All paths to completion of the program must satisfy the appropriate criteria.</p>	<p>S</p>	<p>All criteria are met through required courses.</p>
<p>I.E.5.b. (1) Facilities - Program’s instructional and learning environments are adequate and safe for intended purposes.</p>	<p>W</p>	<p>A number of safety violations were noted in the materials testing lab. Lack of proper signage, lack of MSDS sheets, lack of eye wash. PPE not externally visible. Lack of hearing protection near loud machinery. No NFPA fire safety diamonds posted.</p>

Corrective Action on Previous ETAC of ABET Findings

List the unresolved findings from the most recent ETAC Final Statement for this program and briefly describe the corrective action given in the self-study or found during the site visit. Describe findings not yet resolved.

Unresolved findings from previous accreditation actions and brief statement of corrective actions reported in the self-study or found during the site visit.	New quality rating	Findings not yet resolved (details of which should be listed in the appropriate criterion section above)
<p>Criterion 8 Institutional Support:</p> <p><i>Over the last 10 years, total university enrollment had decreased while the college of engineering enrollment had significantly increased. Because of the university enrollment decrease, there have been budget reductions from the Ohio Legislature. The University of Toledo budget reductions resulted in budget cuts across all colleges, regardless of enrollment. Because of budget cuts in the college of engineering, the ability to retain and recruit faculty has been limited and there is the potential that future compliance with this criterion could be jeopardized. This finding remains a Concern until there is sufficient support to meet program needs.</i></p> <p>The program provided a detailed plan to address this concern. Additional resources were authorized at the time for the College of Engineering, including the construction engineering technology program, to add new faculty and staff. A permanent Engineering Technology Chair was hired in 2019.</p> <p>The program lost three full-time faculty members in 2020 to retirement or disassociating from the university. In the spring of 2021 a search to fill a lecturer position commenced which resulted in the hiring of Dr. Taha Alyousef to start in the fall of 2021. Dr. Alyousef, however, resigned from his position prior to the start of the fall term. In the fall of 2021, the CET program was directed to search for a full-time tenure-track position which resulted in the hiring of Dr. Temitope Akanbi who began his time assigned to the CET the program in the spring of 2022. In the spring of 2022 a search to fill a lecturer position was about to commenced when the search was place on hold. The CET program continues to employ the contiguous services of part-</p>	<p>W</p>	<p>The program still has a shortfall in full time faculty and has limited financial support from the institution.</p>

<p>time instructors. The program currently employs six part-time instructors teaching courses in spring and fall terms.</p>		
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General Comments:

Associate Degree Program Review Worksheet

Institution: Name of institution on RFE	Program: Name of program on RFE
Evaluated By: PEV Name	

Enter the appropriate quality rating for each topic for each of the days indicated

Criteria	Pre-visit	Day 0	Day 1	Exit Statement	Comment
1. Students					
2. Program Educational Objectives					
3. Student Outcomes					
(1). An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline.					
(2). An ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.					
(3). An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.					
(4). An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results.					
(5). An ability to function effectively as a member of a technical team.					
4. Continuous Improvement					
5. Curriculum					
6. Faculty					
7. Facilities					
8. Institutional Support					
Program Criteria					
Accreditation Policy and Procedures					
Previous Unresolved ETAC of ABET Findings					

Baccalaureate Degree Program Review Worksheet

Institution: State University	Program: Construction Engineering Technology (BS)
Evaluated By: PEV John Smith	

Enter the appropriate quality rating for each topic for each of the days indicated

Criteria	Pre-visit	Day 0	Day 1	Exit Statement	Comment
1. Students	S	S	S	S	One student transcript shows student is missing two required courses. Deficiency was resolved student graduated under an older curriculum
2. Program Educational Objectives	W	W	S	S	No record of engaging alumni, co-op employers and employers using a direct question about adequacy or need for review of PEO's
3. Student Outcomes	S	S	S	S	SOs are reviewed annually by the IAB and periodically through indirect measures by the other constituents.
(1). An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline.	S	S	S	S	
(2). An ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline.	S	S	S	S	
(3). An ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.	S	S	S	S	
(4). An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes.	S	S	S	S	
(5). An ability to function effectively as a member as well as a leader on technical teams.	S	S	S	S	
4. Continuous Improvement	S	S	W	W	Need to see assessment instruments. Process relies heavily on indirect measures at the program level, but there are ample direct measures for every SO. Major issue is that attainment measures for a particular student outcome are averaged across all courses in which a measure is made. Some course may have as many as ten measures and some may have only one. This practice

					places more weight on courses with more measures. These courses that have multiple measures may be lower division courses, upper division courses with fewer measures may not be meeting the attainment targets. This practice masks the fact that graduates may be leaving without attaining a student outcome in their final courses. Notably, SO one and two have had this issue over multiple years. This practice may mask a particular problem in the attainment of outcomes. In addition sometimes data from indirect measures (perceptual) which are always considered to be excellent or good, may cause an improvement action to be postponed or not taken even when direct measures indicate the outcome target was not met.
5. Curriculum	S	S	S	S	Concerned with inclusion of risk and sustainability in the curriculum. Issue resolved with closer review of syllabi
6. Faculty	W	W	W	W	Limited full time faculty results in the bulk of curriculum being taught by adjuncts, who have varying credentials, some with only a BS degree. The problem of limited no elective courses being taught and only two are listed in curriculum. Lack of full time faculty is cited by students and alumni as an issue and was cited as factor for at least two of the SOs that were not attained.
7. Facilities		W	W	W	Equipment in the materials laboratory is old, in some cases not in good repair and generally does not represent the state of practice in the industry. Soils equipment for measuring engineering properties of soils are not present in sufficient replicates to allow for student hands on measurements. There has been no effort to upgrade any equipment to the current industry digital standards.
8. Institutional Support	W	W	W	W	Inability to hire/retain faculty and provide funds for equipment maintenance or replacement. Limited support staff couples with large number of adjunct faculty has resulted in neglect of some laboratory equipment.
Program Criteria	S	S	S	S	

Accreditation Policy and Procedures	S	W	W	W	Numerous safety violations in the materials to include lack of eyewash station. Signage and placement of PPE, lack of MSDS sheets, no fire safety diamonds to alert first responders to potential hazardous materials.
Previous Unresolved ETAC of ABET Findings	S	S	W	W	Still having issues hiring full time faculty.

PEV PROGRAM SUMMARY

Summarize findings using the ratings E, S, O, C, W, D, or X. Multiple ratings can be entered for an item.

Institution: State University		Visit Dates: Oct 1-3, 2023	
Program Title: Construction Engineering Technology (BS)			
Program Criteria Title and Date: Program Criteria for Construction Engineering Technology and Similarly Named Programs			
Accreditation: Initial <input type="checkbox"/> Or Reaccreditation <input checked="" type="checkbox"/> Degree: BS		Recommended Action*	
Program Evaluator Print & Sign: <i>Electronic Signature</i> Society: ASCE		NGR <input type="checkbox"/> IR X <input type="checkbox"/> IV <input type="checkbox"/> SC <input type="checkbox"/> VE <input type="checkbox"/> SE <input type="checkbox"/> NA <input type="checkbox"/>	
Team Chair Print & Sign: <i>Electronic Signature</i>		NGR <input type="checkbox"/> IR X <input type="checkbox"/> IV <input type="checkbox"/> SC <input type="checkbox"/> VE <input type="checkbox"/> SE <input type="checkbox"/> NA <input type="checkbox"/>	
Program Arrangement: 2yr. <input type="checkbox"/> 4 or 5 yr. <input checked="" type="checkbox"/> 2 + 2 <input type="checkbox"/> Upper Division <input type="checkbox"/> Closely Related <input type="checkbox"/>			
Multiple Campuses <input type="checkbox"/> Distance Education <input type="checkbox"/> Other Alternative Learning <input type="checkbox"/>			
If applicable, enter the date of initial accreditation from the previous page: _____			

Evaluation Summary

CRITERION	QUALITY RATING	COMMENTS
1. Students	S	
2. Program Educational Objectives	S	Need to demonstrate that alumni, co-op employers, and employers are directly engaged in the review of PEO's. Periodic surveys do not address PEOs. Resolved: IAB Represents all constituents of the program
3. Student Outcomes	S	SOs are reviewed by the IAB annually and by the other constituents via periodic surveys.
4. Continuous Improvement	W	Seems there may be an averaging of direct and indirect measures at the program level. Assessment seems to be targeted at the course level.
5. Curriculum	S	Program meets all elements of this criterion.
6. Faculty	W	Too few full-time faculty. Currently numbering two with one new faculty on leave of absence and the other serving as the program director. Cited by students as a problem and cited as an issue in failing the meet attainment of SOs
7. Facilities	W	Outdated equipment that does not represent state of practice in the industry. No record of equipment maintenance.

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8. Institutional Support	W	Limited budget and failure to hire or retain full-time faculty.
Program Criteria	S	All elements met
Accreditation Policy and Procedures	W	A number of safety issues were discovered on the facilities tour.
Previous Unresolved ETAC of ABET Findings	W	Previous concern over limited faculty has not been resolved, in fact it may be worse now than in 2017. They lost three and only hired one.

* Definitions of Recommended Actions are found in the APPM (Paragraph I.E.12)