

ABET  
Engineering Accreditation Commission

## E351 PROGRAM EVALUATOR REPORT FOR 2018-2019 VISITS

### Instructions

*The Program Evaluator Report is **required** for each program being evaluated. It is completed by the Program Evaluator prior to and during the visit and left with the Team Chair. **Some technical societies require their evaluators to submit additional information. It is the responsibility of the evaluator to determine and meet this requirement.***

*A complete Program Evaluator Package consists of the following:*

- *Program Audit Form (E301)*
- *Program Evaluator Worksheet (E341)*
- *This Program Evaluator Report Form (E351), which includes*
  - *Basic Information Sheet*
  - *Curriculum Analysis*
  - *Transcript Analysis*
  - *Recommended Accreditation Action*
  - *Exit Statement*

*For a General Review Visit, complete all forms listed above and submit them to the Team Chair at the conclusion of the visit.*

*For an Interim Visit, the curriculum analysis and/or the transcript analysis may not be relevant. Complete those tables only if they are relevant to the identified shortcomings.*

*Complete the Curriculum Analysis Form and the Transcript Analysis Form (both a part of this E351 Program Evaluator Form) and the first column of the E341 Program Evaluator Worksheet before the visit. Submit a copy to the Team Chair before the visit or at the first team meeting as directed. Modify the forms during the visit as required.*

*The **Program Evaluator Worksheet (E341)**, the appropriate **Program Audit Form (E301/302/303/311)**, the **Recommended Accreditation Action (in E351)**, and the **Exit Statement to the Institution (in E351)** are of particular importance. Together, these form a basis from which the Team Chair will draft the Statement to the Institution. Only a copy of the **Program Audit Form** is to be left with the institution. Please, pay close attention to the instructions on these forms.*

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**PROGRAM EVALUATOR REPORT FOR 2018-2019 VISITS**  
**BASIC INFORMATION SHEET**  
(RFE: Request for Evaluation Form)

Evaluation of BS Program in Civil Engineering  
*RFE* *Program Title as shown on the RFE*  
*Degree*  
*Designation*

At State University  
*Official name of institution as shown on the RFE*

Dates of Visit: 13-15 October 2019

Evaluated by: Jane Smith, PE  
*Name*

1400 University Blvd., Anytown, VA 55555  
*Address*

207-207-2727 207-207-2728  
*Office Phone* *Home Phone*

Jane.smith@anytown.edu  
*e-mail*

Society Represented by Program Evaluator: ASCE  
*Society*

Evaluation conducted in accordance with EAC General Criteria and the following applicable Program Criteria:

Civil and Similarly Named Engineering Programs  
*Program Criteria*

LIST OF PERSONS INTERVIEWED

NAME	POSITION
John Doe, Jim Smith, Mary Johnson	Assistant Professors
Jim Miller, Susan Doe, Mohammad Rashid	Instructors
Shi Wang, Thomas Allen, Bill Carter	Associate Professors
Dan Edwards, Anamika Shah	Professors
Napoleon Cabrera	CE Program Chair
Jesse Dyer	IT Support Staff
Roger Anderson	Laboratory Technician

17 Civil Engineering Students	
Dawn Williams, Bruce Schaefer	Advisory Board Members
Matt Strange	Freshman Advisor
Rachel Pitts	Finance Manager

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**CURRICULUM ANALYSIS for BACHELOR'S LEVEL PROGRAM**  
**(Not applicable to Master's Level Program)**

Institution State University Program Civil Engineering

PLEASE COMPLETE THIS WORKSHEET PRIOR TO YOUR ARRIVAL AT THE INSTITUTION AND PROVIDE ONE COPY OF THE CURRICULUM ANALYSIS TO YOUR TEAM CHAIR BEFORE OR AT THE START OF THE VISIT AS DIRECTED. INCLUDE A COPY IN YOUR REPORT, REVISED AS NECESSARY TO REFLECT YOUR ANALYSIS OF ACTUAL COURSE CONTENT DURING THE VISIT.

Curricular Category	Number of Credits*				
	Criteria Requirement	Table 5-1 of Self-Study		PEV's Evaluation	
College-level Mathematics and Basic Sciences	32	37		37	
Engineering Topics	48	60		60	
General Education		27		27	
Please List Below Any Applicable Program Criteria:		Is Program Criteria Requirement Met? (per Table 5-1 of Self-Study)		Is Program Criteria Requirement Met? (per PEV evaluation)	
		YES	NO	YES	NO
Math through Differential Equations		X		X	
Calculus Based Physics		X		X	
Chemistry		X		X	
One additional basic Science		X		X	
Apply probability and statistics to address uncertainty		X		X	
Conduct experiments in 2 areas of CE; analyze and interpret data		X		X	
Design a system, component or process in 2 CE contexts		X		X	
Include sustainability in design		X		X	
Explain concepts of project management, business, public policy and leadership		X		X	
Analyze issues in professional ethics		X		X	
Explain the importance of licensure		X		X	

\* One year is the lesser of 32 semester hours (or equivalent) or one-fourth of the total credits required for graduation.

<b>Are curricular requirements met in each of the following areas?</b>	<b>YES</b>	<b>NO</b>
Major design experience based on knowledge and skills acquired in earlier course work.	X	
Major design experience incorporates appropriate engineering standards and multiple realistic constraints.	X	
Other requirements contained in applicable program criteria	X	

If “no” is checked in any of the above categories, please describe the specific weakness or deficiency on the PEV Worksheet (E341) and Program Audit Form (E301) as appropriate.

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**TRANSCRIPT ANALYSIS for BACHELOR'S LEVEL PROGRAM**

Institution State University Program Civil Engineering

PLEASE COMPLETE TWO DRAFT COPIES OF THIS WORKSHEET PRIOR TO YOUR ARRIVAL AT THE INSTITUTION AND PROVIDE ONE COPY TO YOUR TEAM CHAIR AT THE START OF THE VISIT. PLEASE INCLUDE A COPY IN YOUR REPORT, REVISED IF NECESSARY TO REFLECT YOUR ANALYSIS OF ACTUAL COURSE CONTENT.

ABET Curricular Category	Number of Credits*										
	ABET Criteria Requirement	Credits Actually Earned by Student Number									
		1	2	3	4	5	6	7	8	9	10
College-level Mathematics and Basic Sciences	32	34	35	32	32	33	32				
Engineering Topics	48	58	58	58	58	58	58				
General Education		30	30	24	24	30	33				
Please List Below Any Applicable Program Criteria:		Is Program Criteria Requirement Met? YES or NO									
Math through Diff. Equations		Y	Y	Y	Y	Y	Y				
Calculus Based Physics		Y	Y	Y	Y	Y	Y				
Chemistry		Y	Y	Y	Y	Y	Y				
One additional basic Science		Y	Y	Y	Y	Y	Y				
Apply probability and statistics to address uncertainty		Y	Y	Y	Y	Y	Y				
Conduct experiments in 2 areas of CE; analyze and interpret data		Y	Y	Y	Y	Y	Y				
Design a system, component or process in 2 CE contexts		Y	Y	Y	Y	Y	Y				
Include sustainability in design		Y	Y	Y	Y	Y	Y				
Explain concepts of project management, business, public policy and leadership		Y	Y	Y	Y	Y	Y				
Analyze issues in professional ethics		Y	Y	Y	Y	Y	Y				
Explain the importance of licensure		Y	Y	Y	Y	Y	Y				
Analyze issue in prof. ethics		Y	Y	Y	Y	Y	Y				
Explain the importance of licensure		Y	Y	Y	Y	Y	Y				

\* Computed as in curriculum analysis table.

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**TRANSCRIPT ANALYSIS for MASTER'S LEVEL PROGRAM**

Institution  [as shown on the RFE]  Program  [as shown on the RFE]

PLEASE COMPLETE TWO DRAFT COPIES OF THIS WORKSHEET PRIOR TO YOUR ARRIVAL AT THE INSTITUTION AND PROVIDE ONE COPY TO YOUR TEAM CHAIR AT THE START OF THE VISIT. PLEASE INCLUDE A COPY IN YOUR REPORT, REVISED IF NECESSARY TO REFLECT YOUR ANALYSIS OF ACTUAL COURSE CONTENT.

ABET Curricular Category	ABET Criteria Requirement	Number of Credits*									
		Credits Actually Earned by Student Number									
		1	2	3	4	5	6	7	8	9	10
College-level Mathematics and Basic Sciences*	one year*										
Engineering Topics*	one-and-one-half years*										
30 semester hours or equivalent beyond baccalaureate program											
Other Criteria:		Is Criteria Requirement Met? YES or NO									
Curricular components of the baccalaureate level program criteria relevant to the master's level program name											
Mastery of a specific field of study or area of professional practice consistent with the master's program name and at a level beyond the minimum requirements of baccalaureate level programs											

\*If the student has graduated from an EAC of ABET accredited baccalaureate program, the presumption is that these items have been satisfied.

## RECOMMENDED ACCREDITATION ACTION FORM

**Institution** State University **Program** Civil Engineering

**Evaluator** Jane Smit

- NGR This action indicates that the program has no Deficiencies or Weaknesses. This action is taken only after a Comprehensive General Review and has a typical duration of six years.
- RE This action indicates that satisfactory remedial action has been taken by the institution with respect to Weaknesses identified in the prior IR action. This action is taken only after an IR review. This action extends accreditation to the next General Review and has a typical duration of either two or four years.
- VE This action indicates that satisfactory remedial action has been taken by the institution with respect to Weaknesses identified in the prior IV action. This action is taken only after an IV review. This action extends accreditation to the next General Review and has a typical duration of either two or four years.
- SE This action indicates that satisfactory remedial action has been taken by the institution with respect to all Deficiencies and Weaknesses identified in the prior SC action. This action is taken only after either a SCR or SCV review. This action typically extends accreditation to the next General Review and has a typical duration of either two or four years.
- IR This action indicates that the program has no Deficiencies but has one or more Weaknesses. The Weaknesses are such that a progress report will be required to evaluate the remedial actions taken by the institution. This action has a typical duration of two years.
- IV This action indicates that the program has no Deficiencies but has one or more Weaknesses. The Weaknesses are such that an on-site review will be required to evaluate the remedial actions taken by the institution. This action has a typical duration of two years.
- SCR This action indicates that a currently accredited program has one or more Deficiencies. The Deficiencies are such that a progress report will be required to evaluate the remedial actions taken by the institution. This action has a typical duration of two years. This action cannot follow a previous SC action for the same Deficiency(s).
- SCV This action indicates that a currently accredited program has one or more Deficiencies. The Deficiencies are such that an on-site review will be required to evaluate the remedial actions taken by the institution. This action has a typical duration of two years. This action cannot follow a previous SC action for the same Deficiency(s).
- NA This action indicates that the program has Deficiencies such that the program is not in compliance with the applicable criteria. This action is usually taken only after a SCR or SCV review, or the review of a previously unaccredited program. Accreditation is not extended as a result of this action.

If this is a **new program**, indicate the date at which accreditation is to begin. Normally accreditation is retroactive for one year such that it applies to all students who graduated after October 1 of the year preceding the on-site review (see the “retroactive year” column in the Program Information section of the Request for Evaluation Form and section I.E.6 of the Accreditation Policy and Procedure Manual).

**Initial Accreditation Date:** \_\_\_\_\_

## EXIT STATEMENT TO THE INSTITUTION

### INSTRUCTIONS (NOT to be read at exit meeting)

The sample exit statement that follows should be used as a template for the overall outline and formatting for a general review of baccalaureate level program, but the wording should represent the Program Evaluator's findings for the current visit relative to the applicable General Criteria, Program Criteria, and Accreditation Policy and Procedure Manual (APPM). For an interim review, please follow the outline and format found in E411- Sample IV Statement. For a master's level general review, please follow the outline and format found in E451 – Sample Masters Level Statement, based on the Master's Level Criteria.

The general outline for all statements is: 1) General Description of the Program, 2) Strengths (if applicable), 3) Shortcomings and 4) Observations.

1) **General Description of the Program** This normally includes information about the program's administrative location at the institution, its enrollment and faculty size, and number of recent graduates. For new programs, the General Description also includes information on the launch date of the program and the date of its initial graduates.

2) **Strengths** (if applicable) Each program strength should have three components: a) the observed facts that represent the strength, b) what makes it stand out above the norm, and c) what positive effect it has on the program.

3) **Shortcomings** These sections should be in order of 1) Deficiencies, 2) Weaknesses and 3) Concerns, and a section should exist only if one or more Criteria or APPM elements have that type of shortcoming. For a GR, include all shortcomings for one Criterion under the most stringent shortcoming. For example, if a program has a Weakness and a Concern in Criterion 3, then include the descriptions for both the Weakness and the Concern in the Weaknesses section, identified as Criterion 3. APPM elements that have different types of shortcomings should be cited separately in the appropriate shortcoming category. In describing specific deficiencies, weaknesses, or concerns, use the exact language from the criteria where possible. For an IV, the shortcomings should be listed at the level from the previous review (with any new shortcomings inserted into the appropriate section).

Please ensure that any shortcoming relates directly to the Criteria or APPM. Each shortcoming should have three components: a) the applicable part of the criterion, using the exact language from the Criteria or APPM where possible, b) the observed facts that are inconsistent or potentially inconsistent with the stated criterion or APPM element, and c) the negative impact on the program of the inconsistencies or potential inconsistencies. It is essential that all deficiencies and/or weaknesses identified on the Program Audit Form, which could lead to an action different than NGR, be discussed in this statement exactly as they are discussed in the Program Audit Form.

While there are no institutional shortcomings, to save time during the Exit Meeting, the Team Chair may read the citations for any of shortcomings common to all of the programs that were evaluated, first explaining that they were common to all programs. However, the shortcoming(s) will be cited in each program section in the Draft and Final Statements as applicable.

4) **Observations** Observations do not relate to findings relative to the Criteria or APPM. They may include suggestions based on the Program Evaluator's experience, and are provided in the interest of general program improvement. They must not appear prescriptive, and have no consequence relative to accreditation if ignored by the institution.



## PROGRAM EXIT STATEMENT

(TO BE READ AT EXIT MEETING – DO NOT LEAVE A COPY WITH THE INSTITUTION)

*Note: The header (first three lines with text) should be included in the copy given to the TC, but should not be read during the exit statement; i.e., start reading with the introduction paragraph*

### **Civil Engineering BS Program**

#### Program Criteria for Civil and Similarly Named Engineering Programs

##### Introduction

The civil engineering BS program is the oldest and largest engineering program in the college. The program has 224 students, 20 faculty members, four adjunct faculty members, and two professional staff members who advise students from their sophomore year through graduation. The program awarded 47 bachelor's degrees in the 2018-19 academic year. Almost 60 percent of the civil engineering students participate in the cooperative education program.

##### Program Strengths

1. The program has an outstanding faculty that is committed to developing a high-quality undergraduate program. Several faculty members have published textbooks that are widely used in widget engineering curricula across the country. The faculty also demonstrates significant engagement in contemporary teaching methods in the classroom. Multimedia presentations are common in the widget engineering courses. These various teaching strategies enhance learning opportunities for all students since students have different learning styles.
2. The program has a large endowment that provides discretionary funds for curriculum and research development both for department faculty members and for visiting scholars. A portion of this endowment has been used to support the Civil Engineering Undergraduate Research Program through the purchase of research equipment and for financial support of the student and faculty participants. This endowment has contributed to student participation in research.

## Program Weaknesses

1. Criterion 2. Program Educational Objectives This criterion requires the program to have published program educational objectives that are consistent with the mission of the institution, the needs of the program's various constituencies, and the engineering accreditation criteria. It further requires that there 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 the engineering accreditation criteria. It was not clear from the documentation provided that the program educational objectives are consistent with the needs of the constituencies of the program. The program lists its students, faculty, industrial advisory board, major employers, and alumni as constituencies. There is no evidence that any of these groups, aside from the faculty members, participated in the periodic review of the program educational objectives. Without involvement on the part of the program constituents in reviewing the program educational objectives, the program is unable to ensure its program educational objectives are consistent with the needs of its various constituencies. Thus, strength of compliance with this criterion is lacking.
2. Accreditation Policy and Procedure Manual The Accreditation Policy and Procedure Manual (APPM) Section I.A.4 requires that programs represent their accreditation status accurately and without ambiguity. The statement on the departmental website is inconsistent with that contained in Section I.A.6 of the APPM and is associated with multiple programs offered by the department that are not accredited by the EAC. Review of the current university catalog indicates that publication of accreditation status found in that document is in compliance with Section I.A.6. By not appropriately and consistently identifying the accreditation status of the program in all of its publications as accredited by the EAC of ABET as required by the APPM, the program is unable to clearly represent its accreditation status accurately and without ambiguity. Thus, strength of compliance with this policy is lacking.

## Program Concern

1. Criterion 8. Institutional Support This criterion requires that resources must be sufficient to acquire, maintain, and operate infrastructures, facilities, and equipment appropriate for the

program. Equipment maintenance and modernization do not appear to be accomplished on a routine and proactive basis. As a result, laboratory facilities are not always functional. Students often work in laboratory teams that may be too large for each student to have a consistently meaningful hands-on learning experience. Although it appears that the criterion is currently satisfied, there is the potential that laboratory facilities may degrade so that future compliance with the criterion may be jeopardized.