Application of Employee Appraisal Forms to Facilitate Assessment of Student Outcomes in the Engineering Capstone Course (Work-In-Progress)

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Abstract

A critical component of educating civil engineering students and preparing graduates to enter professional practice is the engineering capstone course. This paper describes a work-in-progress to evaluate the use of employee appraisal forms to facilitate self-reflection and counseling as a metacognitive strategy in engineering education. The authors have developed a "capstone support form" that mimics an employee evaluation report support form commonly used by a major employer of graduates from its academic program. Students are required to indicate their major performance objectives at the beginning of the capstone course and list their significant contributions and accomplishments throughout the duration of the course. Dividing the form into sections based on student objectives causes students to reflect upon their learning, specifically their goals and developmental growth in each outcome assessed. Individual counseling sessions between the student and instructor at the beginning, midpoint, and/or end of the course requires students to communicate results of their metacognition and receive direct feedback on their level of achievement in each student outcome. This tool will be of use to engineering educators looking to continuously improve their assessment and evaluation to which student outcomes are being obtained within the capstone course. This paper is a work-in-progress that presents a literature review, a proposed research methodology, and hypothesized results regarding the andragogical value of using employee appraisal forms to assess attainment of student outcomes within engineering capstone courses.

Introduction

Performance appraisals are defined as "a process involving deliberate stock taking of the success, which an individual or organization has achieved in performing assigned tasks or meeting set goals over a period of time" [1]. A performance appraisal can be used for various reasons to include communicating employee strengths and weakness, identifying employee training needs, identifying gaps in employee performance, and reducing the grievances of employees [2]. There are three general types of appraisals: confidential, open, and semi-open / semi-secret. A confidential appraisal does not include the appraised employee in the appraisal process [3]. For an open appraisal, the appraised employee achieves self-awareness by being made aware of strengths, weaknesses, contributions, and shortcomings. This method of appraisal is reflective and involves the establishment of a plan of action [3]. A semi-open / semi-secret appraisal includes the appraised employee at the beginning of the process and later removes their participation until they receive their final rating [3].

The appraised employee receives the greatest benefits from an effective employee appraisal system. An appraisal should not only provide a rating to the employee but should provide training opportunities and motivation to reach greater potential. One of the most important

benefits of conducting an employee appraisal is the coaching and counseling that an employee receives from their superior [3]. In terms of executing an effective performance appraisal, communication is key. Without communicating established performance standards, it is difficult for the employee to know what is expected of them. Furthermore, without continuous communication throughout the rating period, an employee does not know what improvements they should make [3]. Immediate and continuous counseling addressing strengths and weaknesses, training needs, and gaps in an employee's performance, all of which are necessary for an employee to set and meet their personal and professional goals. [2].

The employee is not the only beneficiary of an effective employee appraisal system. Effective appraisals also facilitate the achievement of organizational goals [2]. To be an effective appraisal, the organization must establish standards and communicate those standards upfront to their employees [2]. The established standards should include both objective and subjective measurements of success. It can be difficult for an appraiser to assess performance subjectively, but this is often accomplished by assigning a numerical score to represent perceived performance [2]. After standards have been clearly established and communicated, the supervisor assists the employee in nesting their personal and professional goals within the organization's goals, thereby facilitating mutual benefits for both the individual and the organization [2].

There are many methods for conducting performance appraisals. One method that is especially useful with new and younger employees is the "tell and sell method" [3]. The tell and sell method allows the rater to provide feedback to the employee while also allowing the employee to reflect on and accept the feedback provided. This method is successful with new employees because it allows inexperienced employees to receive constructive criticism and take ownership of their own growth and development following the advice from an experienced rater. Through this process, the employee develops self-awareness of their strengths, weakness, contributions, and failures. This forces the employee to be more reflective about themself and their future contributions while developing clear objectives [3]. Performance appraisals focused on reflection push employees towards a better understanding of themselves and an ability to use metacognition to grow and develop.

Scholars have defined metacognition in a variety of ways [4]. Flavell is credited with coining the term "metacognition" in the 1970s and describing it as "cognition about cognitive phenomena" [5]. Akturk and Sahin Wellman cite both Wellman's description of metacognition as "thinking about thinking" and Ayersman's explanation that it "occurs as a result of one's individual evaluation and observation of their cognitive behavior in a learning environment" [4]. In explaining the importance of metacognition to critical reading, Baker and Brown state that "effective learning requires an active monitoring of one's own cognitive activities" [6]. Across the various descriptions of metacognition, the recurring theme is of learners being consciously aware of, and taking responsibility for, their learning. Vos and de Graff argue that active learning in engineering (ALE) experiences like project work and problem-based learning, e.g., the activities we undertake in engineering capstone design courses, require clear developmental objectives [7]. They propose that the construct of metacognition may provide a coherent theoretical basis to explain the learning mechanisms that make ALE effective and make the

succinct description that *cognition* is concerned with what someone knows, whereas *metacognition* is concerned with what people know about their knowledge [7]. Vos and de Graff propose that teachers should "let the students formulate their own learning objectives within the scope of the course" [7].

Flavell identified three major categories of metacognitive knowledge: person, task, and strategy [5]. The person category includes a learner's beliefs about how they learn best or how someone else is able to process information. The task category involves thoughts on learned content and its organization, relevance, one's level of interest, etc. The strategy category involves the perceived effectiveness of methods for achieving goals in cognitive undertakings, like a good way to learn is by writing things down. As Flavell explains, "cognitive strategies are invoked to make cognitive progress, metacognitive strategies to monitor it" [5].

The authors look to allow the students to formulate their own learning objectives specifically in regard to ABET Criterion 3, Student Outcomes in the capstone design course. Criterion 3, Student Outcomes prepares graduates to enter the professional practice of engineering with seven required outcomes that can briefly be articulated as an ability to solve, design, communicate, recognize ethical and professional responsibilities, function effectively on a team, conduct experiments using data, and acquire/apply new knowledge [8]. Students use the framework of an employee appraisal form to formulate goals for each of the seven required outcomes. Throughout the duration of the project, the student and their faculty advisor return to the form to assess their strengths, weakness, and individual contributions to the project. ABET Criterion 4, Continuous Improvement requires academic programs to assess and evaluate the level to which the student outcomes in Criterion 3 are being obtained [8]. The use of an employee performance evaluation form facilitates assessment of the individual student outcomes and provides a new tool to evaluate the level to which these outcomes are being obtained. The authors propose that in letting students formulate their own learning objectives, as categorized within the defined student outcomes, they are enabled to consider how they best learn and can contribute (person category), focus on the elements of the design project they are most passionate about (task category), and assess how well they have been able to achieve their identified goals using the approaches they took (strategy category).

In addition to addressing ABET Criterion 3, the use of an employee appraisal form assists in satisfying the American Society of Civil Engineers' Program Criteria for Civil Engineering Programs effective for the 2024-2025 accreditation cycle. This Program Criteria requires curriculum to include "explanation of professional attitudes and responsibilities of civil engineers" [8]. Ninety-three percent of companies in the United States conduct, at a minimum, an annual employee performance evaluation, and twenty-eight percent of companies conduct a quarterly assessment [9]. One of the challenges with completing these assessments is the lack of quantifiable outcomes, especially for qualitative attributes like competence and leadership. The use of an employee appraisal form in an engineering capstone course better prepares the student to establish goals and articulate contributions during their future in the profession.

Purpose of the Study

The aim of this work is to examine the usefulness of applying a commonly used professional assessment tool as a means of facilitating student metacognition on their educational development, specifically within the engineering capstone course. Overall goals of this effort include:

- creating a framework for faculty and students to discuss individual contribution, achievement, and development within each student outcome assessed within the capstone course;
- inspiring students to engage in meaningful metacognition about their learning;
- providing faculty with greater clarity on how each student may have individually contributed toward an overall group effort;
- nudging faculty to consider program accreditation requirements as they advise and shape student efforts within the capstone course;
- contributing to the professional development of faculty in conducting one-on-one counseling;
- contributing to the professional development of students in learning how to write objectives and accomplishments as part of performance evaluations.

Proposed Methodology

The Civil Engineering Program at the United States Military Academy uses the engineering capstone course to, in part, assess ABET Student Outcomes 1, 2, 3, 5, and 7 (see Table 1). The words in caps and bold are used by the program as shorthand to refer to each outcome by context as opposed to number. It is often difficult to assess each of the ABET Student Outcomes for an individual student working on a group project. The use of an employee appraisal form provides an opportunity for the faculty advisor to communicate their observations of the student performance, as well as an opportunity for each student to reflect upon and communicate their individual contributions.

Table 1: ABET Student Outcomes, Engineering Accreditation Commission, 2024-2025 [8]

By the time of graduation, students are expected to have:	
1.	an ability to identify, formulate, and **SOLVE** complex engineering problems by applying principles of engineering, science, and mathematics
2.	an ability to apply engineering **DESIGN** to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3.	an ability to **COMMUNICATE** effectively with a range of audiences
4.	an ability to recognize **ETHIC**al and **PROFESSION**al responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5.	an ability to function effectively on a **TEAM** whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6.	an ability to develop and conduct appropriate **EXPERIMENT**ation, analyze and interpret **DATA**, and use engineering judgment to draw conclusions
7.	an ability to acquire and apply **NEW KNOWLEDGE** as needed, using appropriate learning strategies.

The authors developed the employee appraisal form using the Department of the Army Officer Evaluation Report (OER) Support Form as a model. Part one and two of the OER support form are focused on administrative data about both the employee and the rater. Part three of the OER support form provides an area to document the date of when face-to-face counseling was completed. Small modifications were made to parts one through three to better reflect the use in an academic course. Part four of the OER support form is focused on the duties and responsibilities of the rated officer as shown in Figure 1. The students used this part of the form to define what they saw as their individual role and responsibilities as a member of the team. The authors modified this part of the form to include a portion to list team goals. The purpose of including team goals was to encourage the students to reflect on what they wanted to achieve as a team and ensure that students nested their individual goals within their organizational goals. Part five of the OER support form is broken down into six subsections. Each of the subjections focuses one of the six Army leadership attributes and competencies. For each attribute and competency there is a place for the rated officer to list their performance objectives and a second space to list their significant contributions and accomplishments. For use in the capstone course, the authors replaced the six attributes and competencies with the five ABET student outcomes that are assessed in the capstone course, breaking communication down into written and oral communication separately.

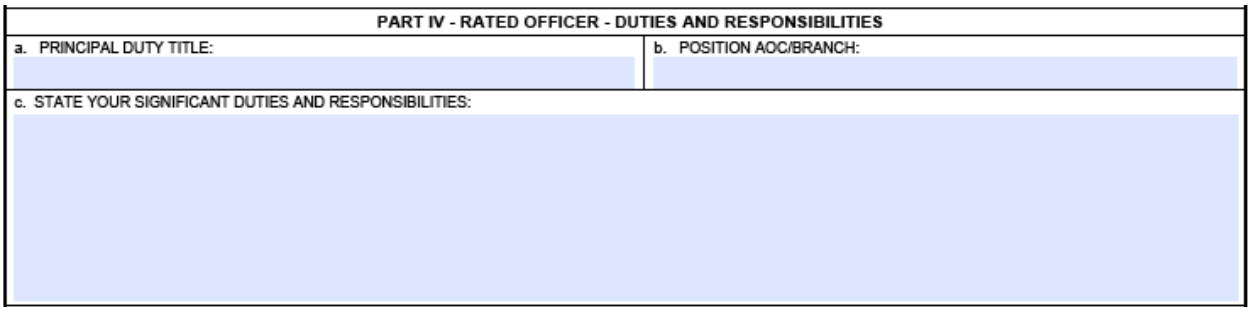

Figure 1. Part four of the OER Support Form

Students were asked to establish their major performance objectives for each ABET student outcome adopting guidance from the Department of Defense (DoD) Performance Management and Appraisal Program. The DoD Performance Management and Appraisal Program states that performance standards should be written using the modified "SMART" criteria displayed in Table 2. SMART provides a framework for developing effective goals and expectations by answering questions associated with each criterion. It is important to note that not every performance standard will lend itself to utilizing all five of the SMART criteria, so judgement is required when writing each objective. Due to the open ended and ill-defined nature of capstone projects, it can be challenging to create goals upfront that will carry throughout the duration of the project. The faculty advisors meet with each student individually at the start of the first semester to discuss and agree upon their individual performance objectives. At the start of the second semester, the student and faculty advisor meet again to ensure that the performance objectives are still applicable now that the scope of the project is more defined.

Table 2: SMART Criteria for Performance Appraisals [10], [11]

Specific	What needs to be accomplished? The performance objective (goal) should be stated as clearly as possible.
Measurable	What is a quantifiable target? This serves as a gauge for assessing the level of accomplishment of the identified objective and identifies how progress should be measured.
Achievable	Can the objective be accomplished with the resources (time, funding, personnel, etc.) available? Each goal should be sufficiently challenging but not unrealistic.
Relevant	Why is the objective important? Each objective should support the overall project's intent and the team's success.
Timely	When will the objective be met? The timeline should nest with the overall project's timeline.

The employee appraisal process being used is an open appraisal, which means the faculty advisor needs to meet with the student at least one additional time to discuss their progress towards achieving established goals. Two-way communication is imperative for effectiveness of the appraisal process. The faculty advisor expects the student to have conducted metacognition by reflecting upon their individual contributions and coming to this meeting with their learning achievements listed on the support form under the applicable student outcome category. Together, the faculty advisor and student discuss each of the ABET Student Outcomes identifying strengths, weaknesses, contributions, and failures. The student and faculty advisor

end the meeting with a shared understanding of the student's individual contributions and a plan of action for the student to further grow and develop throughout the remainder of the project. At the conclusion of the project, the support form provides documentation for student performance evaluation and overall academic program assessment.

Assessment Strategy

With the use of an employee appraisal system taking away from time that students are actively working on completing their capstone project, the most important question is: what are the qualitative and quantitative benefits of incorporating employee appraisal forms to assess student outcomes supported by the engineering design capstone course? To answer this question, the authors have developed a survey for both the students and the faculty advisors. Each year, approximately 35 students are enrolled in the Civil Engineering Design Capstone I & II courses with approximately 15 faculty advisors. The survey will be administered during the second (spring) semester of the capstone course and again the following fall to allow for feedback from two groups of students and two groups of faculty advisors across two separate academic years. The surveys aim to receive both qualitative and quantitative feedback on the effectiveness of using the employee appraisal form. Qualitatively, the authors look to identify the student and advisor perception on **how/if** the appraisal support form and advisor counseling helped. Quantitatively, the authors look to measure student perceptions of **how much** the appraisal form and advisor counseling aided in their level of achievement within identified student outcomes and measure advisor perceptions of **how much** the appraisal form and advisor counseling improved student development within identified student outcomes. The surveys will be completed on a voluntary basis and used to determine if the appraisal support forms should continue to be used in the capstone course based on their effectiveness in facilitating student metacognition.

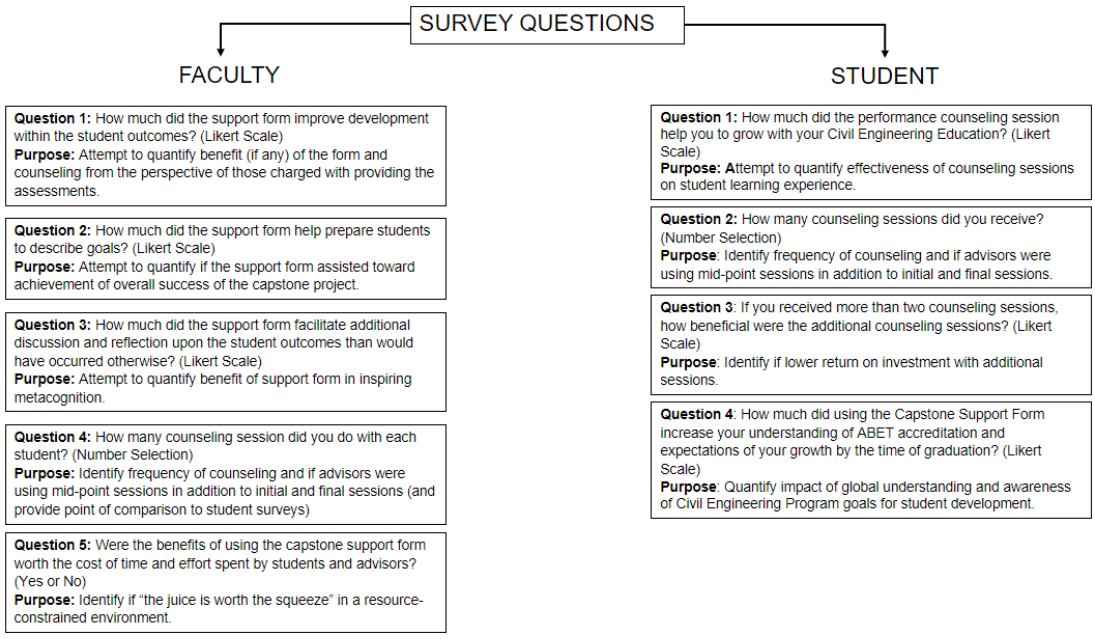

Figure 2: Survey questions to faculty and students

Anticipated Results

Students do not have previous experience completing employee appraisal forms and establishing goals in the context of ABET Student Outcomes. It is anticipated that there will be a learning curve initially as faculty advisors work with students to develop SMART goals and communicate their individual contributions to their project. It is likely the faculty will also experience a learning curve as they have never mentored students in this manner before. However, it is believed the amount of time that is required to overcome the learning curve and develop SMART goals with measurable outcomes will pay off as the students have the opportunity to develop a more clear understanding of the advisor's intent for their contributions and the faculty will have a more clear understanding of what each student accomplished in terms of contributions to group work and level of achievement in each student outcome assessed.

Conclusion

As presented in the introduction, an employee appraisal form using the open method benefits both the individual employee and the organization. The use of the open appraisal method requires the employee to reflect on individual performance and set individual goals. When integrated into an engineering capstone design course, the use of an employee appraisal form may potentially lead to increased metacognition as students formulate their own learning objectives. With effective communication between the student and the advisor, using the employee appraisal form to evaluate the ABET student outcomes can likely benefit both the individual student and the program. The faculty advisor can mentor the student in developing SMART goals and a plan of action for meeting those goals, which will help the student to improve, which in turn will improve the program's effectiveness in achieving the ABET Student Outcomes.

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Disclaimer

The views expressed in this work are those of the authors and do not necessarily reflect the official policy or position of the United States Military Academy, Department of the Army, DoD, or U.S. Government. Reference to any commercial product, process, or service by trade name, trademark, manufacturer, or otherwise neither constitutes nor implies endorsement, recommendation, or favor.

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Appendix A: Example Capstone ABET Student Outcome Support Form

CAPSTONE ABET OUTCOME SUPPORT FORM

PART I - ADMINISTRATIVE (Rated Cadet)

a. NAME *(Last, First, Middle Initial)*

g. CAPSTONE TEAM

j. RATED CADET'S EMAIL ADDRESS *(.gov or .mil)*

PART II - AUTHENTICATION

a1. NAME OF HEAD ADVISOR *(Last, First, Middle Initial)*	RANK	EMAIL ADDRESS *(@westpoint.edu)*
b1. NAME OF CO-ADVISOR *(Last, First,Middle Initial)*	RANK	EMAIL ADDRESS *(@westpoint.edu)*
c1. NAME OF CO-ADVISOR *(Last, First,Middle Initial)*	RANK	EMAIL ADDRESS *(@westpoint.edu)*

PART III - VERIFICATION OF FACE - TO - FACE DISCUSSION

CADET/ADVISOR INITIAL FACE-TO-FACE COUNSELING ON DUTIES, RESPONSIBILITIES AND PERFORMANCE OBJECTIVES FOR THE CURRENT RATING PERIOD TOOK PLACE ON (DATE) _____ CADET INITIALS _____ ADVISOR INITIALS _____

PERIODIC CADET/ADVISOR FOLLOW-UP FACE-TO-FACE COUNSELINGS:

DATE_____ CADET INITIALS _____ ADVISOR INITIALS_____

DATE_____ CADET INITIALS _____ ADVISOR INITIALS_____

DATE_____ CADET INITIALS _____ ADVISOR INITIALS_____

PART IV - RATED OFFICER - DUTIES AND RESPONSIBILITIES

a. PRINCIPAL DUTY TITLE:	b. ADDITIONAL DUTY TITLE:

c. LIST THE CAPSTONE TEAM GOALS

d. STATE YOUR SIGNIFICANT DUTIES AND RESPONSIBILITIES:

PART V – ABET STUDENT OUTCOMES AND ACCOMPLISHMENTS

a. INDICATE YOUR MAJOR PERFORMANCE OBJECTIVES:	b. LIST SIGNIFICANT CONTRIBUTIONS AND ACCOMPLISHMENTS:

PART V -ABET STUDENT OUTCOMES AND ACCOMPLISHMENTS CONTINUED

A. SOLVE - an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

INDICATE YOUR MAJOR PERFORMANCE OBJECTIVES:

LIST SIGNIFICANT CONTRIBUTIONS AND ACCOMPLISHMENTS:

B. DESIGN - apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

INDICATE YOUR MAJOR PERFORMANCE OBJECTIVES:

LIST SIGNIFICANT CONTRIBUTIONS AND ACCOMPLISHMENTS:

C. WRITTEN COMMUNICATION - communicate effectively with a range of audiences (based on West Point Writing Program).

INDICATE YOUR MAJOR PERFORMANCE OBJECTIVES:

LIST SIGNIFICANT CONTRIBUTIONS AND ACCOMPLISHMENTS:

D. ORAL COMMUNICATION - communicate effectively with a range of audiences.

INDICATE YOUR MAJOR PERFORMANCE OBJECTIVES:

LIST SIGNIFICANT CONTRIBUTIONS AND ACCOMPLISHMENTS:

E. TEAMWORK - an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

INDICATE YOUR MAJOR PERFORMANCE OBJECTIVES:

LIST SIGNIFICANT CONTRIBUTIONS AND ACCOMPLISHMENTS:

F. APPLY NEW KNOWLEDGE - acquire and apply new knowledge as needed, using appropriate learning strategies.

INDICATE YOUR MAJOR PERFORMANCE OBJECTIVES:

LIST SIGNIFICANT CONTRIBUTIONS AND ACCOMPLISHMENTS:

PART VI – ADVISOR COMMENTS

CADET -SIGNATURE AND DATE:

Continuation Section

PARTS I-IV INSTRUCTIONS.

Some key **requirements: The advisor will –**

a. Discuss the scope of the rated cadet's duty description with him or her within 1 week of the capstone teams contract being due. This counseling will include, as a minimum, the rated cadet's duty description and the performance objectives to attain. The discussion will also include the relationship of the duty description and objectives with the team's mission, problems, priorities, and similar matters.

b. Advisors will conduct follow-up counseling sessions to discuss performance, update and/or revise developmental tasks, as required, and assess developmental progress. Summary or key comments will be recorded.

The rated cadet plays a significant role in counseling sessions and the evaluation process throughout the semester.

PART V INSTRUCTIONS: ICW ADRP 6-22 and ADP 6-0 rated officer performance objectives will align with the attributes and competencies required for all officers. The overall definition of each attribute and competency is addressed in the base support form. Key points:

	Civil Engineering Student Outcome	Outstanding (5)		Very Good (4)	Good (3)	Fair (2)	Poor (1)
		A+ (x >=96.67%)	A (93.33% <= x < 96.67%)	A- / B+ (86.67% <= x < 93.33%)	B / B- (80.00% <= x < 86.67%)	C+ / C / C- (70.00% <= x < 80.00%)	D / F (x < 70.00%)
SOLVE	**Identify, formulate, and SOLVE complex engineering problems by applying principles of engineering, science, and mathematics.**	Problem clearly identified with no assistance. Exceptional technical and creative solution. Engaged with and exceeded all project criteria. Professional standards exceeded in all areas.	Problem clearly identified with no assistance. Well above average technical and creative solution. Consistently engaged with and exceeded project criteria. Professional standards exceeded in most areas.	Problem clearly identified with some assistance. Strong technical and/or creative solution. Consistently engaged with project criteria. Professional standards exceeded in some areas.	Problem identified with some assistance. Average technical solution with minimal creativity. Met most of the project criteria. Professional standards met in all areas.	Problem identified with significant assistance. Marginal technical solution with very little creativity. Struggled to meet the project criteria. Professional standards not met in some areas.	Failed to identify problem effectively. Sub-standard technical solution with little to no creativity. Failed to meet the project criteria. Professional standards not met in most areas.
DESIGN	**Apply engineering DESIGN to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.**	Appropriately identified all areas of design needs/considerations. Produced solutions that met all identified areas. Solutions exhibited exceptional technical understanding and breadth.	Appropriately identified all areas of design needs/considerations. Produced solutions that met all identified areas. Solutions exhibited strong technical understanding.	Appropriately identified all areas of design needs/considerations. Produced solutions that met most areas. Solutions exhibited good technical understanding.	Appropriately identified most areas of design needs/considerations. Produced solutions that met most areas. Solutions exhibited average technical understanding.	Failed to identify some areas of design needs/considerations. Solutions did not meet all areas. Solutions exhibited limited technical understanding.	Failed to identify areas of design needs/considerations. Failed to produce solutions for most areas. Solutions exhibited little to no technical understanding.
COMMUNICATE	**(WRITTEN) COMMUNICATE effectively with a range of audiences. (based on the West Point Writing Program)**	*Exemplary* in all areas: 1. Substance 2. Organization 3. Style & Presentation 4. Mechanics & Correctness 5. Documentation	*Exemplary* in at least three areas and *Satisfactory* in all others: 1. Substance 2. Organization 3. Style & Presentation 4. Mechanics & Correctness 5. Documentation	*Exemplary* at least two areas and *Satisfactory* in all others: 1. Substance 2. Organization 3. Style & Presentation 4. Mechanics & Correctness 5. Documentation	*Satisfactory* or better all areas: 1. Substance 2. Organization 3. Style & Presentation 4. Mechanics & Correctness 5. Documentation	*Marginal* or better in all areas: 1. Substance 2. Organization 3. Style & Presentation 4. Mechanics & Correctness 5. Documentation	*Not Proficient* in at least one area: 1. Substance 2. Organization 3. Style & Presentation 4. Mechanics & Correctness 5. Documentation
	(ORAL) COMMUNICATE effectively with a range of audiences.	Well-rehearsed and professional presentation of technically exceptional content. Performed well above peer presentations	Well-rehearsed and professional presentation of technically rigorous content.	Above average professional presentation of technically strong content.	Average professional presentation of average technical content.	Below average presentation of average technical content.	Below average presentation of below average technical content.
TEAM	**An ability to function effectively on a TEAM whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives**	Exemplary in all areas: C – Contributing to the team's work I – Interacting with teammates K – Keeping the team on track E – Expecting Quality H – Having related knowledge, skills, and abilities	Exemplary in most areas: C – Contributing to the team's work I – Interacting with teammates K – Keeping the team on track E – Expecting Quality H – Having related knowledge, skills, and abilities	Exemplary in two areas and satisfactory in all others: C – Contributing to the team's work I – Interacting with teammates K – Keeping the team on track E – Expecting Quality H – Having related knowledge, skills, and abilities	Satisfactory or better all areas: C – Contributing to the team's work I – Interacting with teammates K – Keeping the team on track E – Expecting Quality H – Having related knowledge, skills, and abilities	Marginal or better in all areas: C – Contributing to the team's work I – Interacting with teammates K – Keeping the team on track E – Expecting Quality H – Having related knowledge, skills, and abilities	Not proficient in at least one area: C – Contributing to the team's work I – Interacting with teammates K – Keeping the team on track E – Expecting Quality H – Having related knowledge, skills, and abilities
NEW KNOWLEDGE	**Acquire and apply NEW KNOWLEDGE as needed, using appropriate learning strategies.**	Exceptionally detailed review of existing work is completed. Enthusiastically engaged in learning new material, beyond the scope of the project. Exceeded expectations and performed well above peers.	Detailed review of existing work is completed. Engaged in learning new material, beyond the scope of the project. Exceeded expectations.	A review of existing work is completed. Fully engaged in learning new material across required aspects of the project. Met expectations.	An incomplete review of existing work is completed. Struggled and/or unmotivated to pursue new material in major areas of the project. Marginally met expectations.	A review of existing work was not completed. Very limited pursuit of new material across the project and had detrimental impacts. Failed to meet expectations.	Failed in multiple regards to have the initiative and/or commitment to acquire and apply new knowledge.