

These are instructions that are distributed to, and filled out by, evaluators of the posters, not by the students. However, they are being furnished to students so that they understand the various aspects that the poster should cover.

Outcomes: 2, 3, 4, 5, 11

Evaluator: _____

Date: _____

Projects

Evaluated:

Project Number	WIP or Final Results	Project Name

Instructions

Please fill out the following rubrics for each project by giving 0, 1, 2 or 3 points. You will have to read and familiarize yourself with the form prior to the presentations, as it is rather verbose. If you are unable to judge a project on a criteria, enter "N." Not all projects are required to consider all outcomes. For example, some projects needs to consider engineering standards, while others do not. For the latter just enter "N." However, it is your responsibility as a judge to evaluate if the project topic involves engineering standards. If the project should have considered engineering standards, but the poster or presentation does not address it, the right grade is 0, not "N."

The purpose of the form is to evaluate the teaching of the department, not to evaluate individual students. The evaluation will not influence the students' grades, which are determined by the faculty advisors. The evaluation will be used in the ABET process to improve the teaching of the department.

In addition to the form, you can enter comments on the project below. These will be shared with the project team.

The EE and CENG curricula have objectives and outcomes listed at <http://www.ee.hawaii.edu/content.php?pag=5>. EE 496 posters should cover outcomes 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11.

Outcomes: 2, 3, 4, 5, 11

Outcome 2. Demonstrated an ability to design and conduct experiments, as well as to analyze and interpret data.

Topic (Weight)	Unacceptable (0)	Marginal (1)	Acceptable (2)	Excellent (3)	Project Number & Score				
Experimental Design	No knowledge of scientific methods and procedures. Incapable of designing or evaluating experiments.	Knows proper scientific methods and procedures, but is unable to properly implement them. Can design and evaluate experiments only with assistance.	Understands and uses proper scientific methods and procedures. Can design and evaluate simple experiments.	Understands and uses proper scientific methods and procedures. Can design and evaluate more complex experiments.					
Knowledge of theory, of the testing methods, and the experimental protocols	Does not understand the theory behind the experiment, cannot use the testing methods appropriately, and collects measures randomly.	Knows some of the theory, but fails to see the connection with the experiment; knows how to use the methods only by following detailed descriptions, and strictly follows directions of the handouts.	Understands well the theory and its connection with the experiments. Knows how to use the testing methods appropriately (filling in details if necessary), and understands the meaning of most protocols' directions.	Has perfect knowledge of the theory and can anticipate the most likely outcome of the experiment; knows all the details of the methods she uses and is able to provide full justification of the protocols used.					
Data Collection, Analysis, Representation, and Interpretation	Left to herself, cannot gather any meaningful data. Is unaware of the concept of inaccuracy. Sees no need for data analysis or interpretation. Reports purely unprocessed data, where clearly spurious results are never recognized.	Only the most basic data are collected. Is aware of inaccuracies, but can deal with it only occasionally. Applies data analysis only if instructed. Some significant errors in data analysis and interpretation. Charts data sporadically. Occasionally identifies some artifacts/errors due to assumptions, but does not know how to deal with them.	Most data are collected appropriately. Is aware of inaccuracy, and in most cases is able to identify it and quantify it. Knows how to apply data analysis techniques. Often uses appropriate mathematical and charting tools to analyze and represent data. Significant level of interpretation attempted and most interpretations appropriate. Typically identifies artifacts/errors due to assumptions, reports them and sometimes finds appropriate explanations.	All required data are collected and correctly reported. Always identifies and quantifies causes of inaccuracy. Has a deep knowledge of data analysis techniques and applies it appropriately. Always uses mathematical and charting tools to analyze and represent data. Always recognizes and isolates experimental artifacts and errors due assumptions and constraints, explains them, and suggests solutions. Accurate and appropriate interpretation of data. Not under- or over-interpreted.					

Outcome 3. Demonstrated an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

Topic (Weight)	Novice, Unacceptable (0)	Developing, Marginal (1)	Proficient (2)	Exemplary (3)	Project Number & Score				
Design Strategy	No design strategy	Can follow a provided design strategy	Can develop and follow a design strategy to meet a specified need with guidance	Can develop and follow a design strategy to meet a specified need with little or no guidance					
Design Constraints	Disregards or does not understand design objectives and constraints	Can identify and meet some of the design constraints with guidance.	Can identify and meet all of the design constraints with guidance.	Can identify and meet all of the design constraints with little or no guidance.					
Quality of Design	Cannot create a design	A design is obtained but not checked for quality	Multiple designs are obtained but the optimal one is not identified	Multiple designs are obtained and the optimal design is identified and adequately justified.					
Engineering Standards	Unaware of any standards	Can identify some standards relevant to the design problem with guidance	Can identify and apply all standards relevant to the design problem with guidance	Can identify and apply all standards relevant to the design problem with little or no guidance					

Outcome 4. Demonstrated an ability to function on multidisciplinary teams.

Performance (Weight)	Unsatisfactory (0)	Developing (1)	Satisfactory (2)	Exemplary (3)	Project Number & Score				
Fulfill team role's duties	Does not perform any duties of assigned team role	Performs very little duties	Performs nearly all duties	Performs all duties of assigned team role					
Share equally	Always relies on others to do the work	Rarely does assigned work—often needs reminding	Usually does the assigned work—rarely needs reminding	Always does the assigned work without having to be reminded					
Listen to other teammates	Is always talking—never allows anyone else to speak	Usually doing most of the talking—rarely allows others to speak	Listens, but sometimes talks too much	Listens and speaks a fair amount					

Outcome 5. Demonstrated an ability to identify, formulate, and solve electrical engineering problems.

Topic (Weight)	Unacceptable (0)	Marginal (1)	Acceptable (2)	Excellent (3)	Project Number & Score				
Solution Strategy	Has no solution strategy.	Can formulate some solution strategies but requires guidance to find strategies and solutions.	Develops and follows acceptable solution strategies. Able to solve moderately difficult engineering problems	Develops and follows efficient strategy leading to correct solutions. Able to solve difficult engineering problems.					
Applying Theoretical Concepts	Cannot apply theoretical concepts to EE problem solving	Can apply at least some of the theoretical concepts to EE problem solving.	Applies most of the theoretical concepts to EE problem solving	Applies all of the theoretical concepts to EE problem solving.					
Identify	Unable to identify EE problems in an assignment or project.	Can identify and formulate at least half of the EE problems in an assignment or project.	Can identify and formulate all of the EE problems in an assignment or project.	Can identify and formulate all of the EE problems in an assignment or project, and can integrate their solutions effectively.					

Outcome 11. Demonstrated an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Topic (Weight)	Unacceptable (0)	Marginal (1)	Acceptable (2)	Excellent (3)	Project Number & Score				
Research Resources	Does not show any interest in outside sources.	Able to use the Internet and library resources to gather some information towards an assignment.	Able to use the Internet and library resources to find information to adequately complete an assignment but misses some key references.	Able to use the Internet and library resources to complete an assignment.					
Software Design Tools, e.g., CAD, Matlab, Excel	Cannot use software tools	Able to do simple tasks with software tools	Able to do moderately difficult design tasks with software tools	Able to do complicated design tasks with software tools					

Project Number/ Project Name	Comments