

TIDEE

Transferable Integrated Design Engineering Education



UNIT 4: Multi-week Engineering Design Project

Session 9: Presentation and Analysis

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Announcements and Objectives for the Day (5 minutes)

- a. Give presentations and provide peer assessment of presentations.
- b. Perform a self-assessment of the skills and knowledge gained during the quarter.

Presentation of Team's Design and Design Process (75 minutes)

Each team will have a maximum of 15 minutes to present their project. This format models the ASME International Old Guard Oral Presentations when students present their senior capstone design projects.

Assessing Individual Development of the TIDEE Competencies (7 minutes)

Assess each item on the TIDEE competency list to report your accomplishments during your team experience within this class. It is to be scored on a +, 0, - scale where:

- + I feel that I have significantly developed this competency during my second team experience in this class.
- 0 I have worked on this skill but have not become more competent in it.
- I have not worked on this skill.

Reflectors Report

Session Overview

Concluding the Project

This is the last day of the unit. Today, your team will give the oral presentation. The goal is to draw upon each of your team member's expertise to support the collaborative effort required during the presentation. Use your collective strengths to deliver an exemplary oral presentation that shows each member of the team understands and can articulate the design process.

Your *procedural knowledge* of the development of the prototype is critical to be able to apply what you know to future applications of the team-based engineering design.

The instructor will assign a team presentation grade at the same time other teams provide a peer review of their classmate's presentations.

Each person will have the opportunity to complete their individual assessment of developing TIDEE engineering design competencies for this team experience.

The final activity will be a team exit meeting with the instructor (to be scheduled) in which team and/or individual grades will be awarded.

Evaluation Criteria for Final Presentation

Presenting Team _____

Assessing Team _____

Evaluate each item below:

1. Score each item as: **Poor, Okay, Good, Very Good, Excellent**
2. For each item state why you selected the score.
3. Then provide an insight on how to improve the presentation to achieve an **Excellent** score.

Content

_____ Design process was discussed including strengths, areas for improvement and insights.

_____ Performance of the design product was discussed, including lessons learned.

_____ Team performance was discussed (e.g., division of labor, teamwork, and communication), including strengths, areas for improvement and insights.

Technique

_____ Each team member was easy to hear and understand. Each used eye contact, gestures, and body language to connect with the audience. The flow of information was smooth. All team members participated. The presentation ended within the time limit.

Visual Aids

_____ Visual aids were creative, legible, understandable, and well organized.

Comments

Transferable Integrated Design Engineering Education Competencies Required During the First Two Years of Engineering

TEAMWORK

- Individuals understand their own and other member's styles of thinking and how they affect teamwork
- Individuals understand the different roles included in effective teamwork and responsibilities of each role
- Individuals use effective group communication skills: listening, speaking, visual communication
- Individuals cooperate to support effective teamwork

INFORMATION GATHERING

- Individuals use important visual and oral techniques (questioning, observing) for information gathering
- Individuals use library resources effectively in accessing relevant information

PROBLEM DEFINITION

- Individuals understand the open-ended nature of problems
- Individuals develop specific goal statements after gathering information about a problem
- Individuals recognize the importance of problem definition for development of an appropriate design
- Individuals develop problem definitions with specific criteria and constraints

IDEA GENERATION

- Teams and individuals identify and utilize environments that support idea generation
- Teams brainstorm effectively
- Individuals apply effective techniques in their own idea generation
- Teams use techniques that synthesize ideas to increase overall idea generation

EVALUATION AND DECISION MAKING

- Teams follow an iterative approach that employs evaluation repeatedly in their design process
- Teams and individuals apply simple matrix techniques for evaluating proposed solutions

IMPLEMENTATION

- Teams manage time and other resources as required to complete their project
- Team members follow instructions provided by others in implementation

COMMUNICATION

- Individuals practice effective listening skills for receiving information accurately
- Individuals exhibit appropriate nonverbal mannerisms (e.g., eye contact) in interpersonal communication
- Individuals give and receive constructive criticism and suggestions
- Individuals record group activities and outcomes, ideas, date, etc. in personal design journals
- Individuals produce technical papers and memos in acceptable style and format
- Teams present design information in group oral presentations
- Individuals communicate geometric relationships using drawings and sketches

Activity: Improving the Evaluation Sheet

Objective: To Make the Evaluation Sheet a More Effective Tool

Tasks

1. Discuss the usefulness and effectiveness of the evaluation sheet to create feedback.
2. Does the sheet measure the appropriate items?
3. Determine if items are missing from the evaluation sheet. If so, what should be included?
4. Determine what wording could be used to improve the evaluation sheet.

Deliverables

- Team reporter prepared to present a brief statement on transparency of suggestions that will improve the evaluation sheet.
- Team reflector prepared to give a reflector's report that describes what effect an improved evaluation sheet might have on providing better poster presentations.

Criteria for Success

- The class comes to a consensus on what will become a more effective evaluation sheet.
- Team members perform their roles effectively.
- Suggestions are supportive and positive.
- The revised sheet will be more useful for evaluating presentations.

Resources

- Team knowledge of the evaluation process.
- Additional evaluation sheet.
- Ten minutes of team work time.