

Policy for Project-Based Culminating Activity

Masters of Engineering in Mechanical Engineering at Boise State University

Overview: The project-based culminating activity (PBCA) is an alternative to the traditional exam-based culminating activity given to Masters of Engineering students near the completion of their degree. The goal of the PBCA is for students to demonstrate mastery of mechanical engineering concepts through real-world application. This project is supervised by a two-person committee and includes a proposal and report.

Committee: The committee for the PBCA will be the ME graduate coordinator and one additional ME graduate faculty member selected by the student and approved by the graduate coordinator. This faculty member should have relevant expertise to the project of interest.

Proposal: A proposal will be submitted to the committee for approval. This proposal will consist of a written summary (1-2 pages) and a short oral presentation (12-15 minute talk, followed by Q&A). The written summary should be sent no later than 3 days before the talk.

- Overview of the proposed project. Include information about the organization and project advisor, if applicable.
- Clear definitions of learning objectives (goals)
- Explain how learning objectives align with the organization (or career goals).
- Explain how learning objectives will reinforce graduate coursework. At a minimum, the project should incorporate concepts/topics from at least two graduate courses.

Timeline: The proposal should occur 3-6 months before the final report is submitted.

Report: At the end of the project, the student will submit a written report (Single-spaced, 12 pt font, 1" margins, 10-15 pages). This report should include the following:

- Background, motivation, and learning objectives for the proposed project.
- Approach used to accomplish learning objectives. Link to coursework.
- Data analysis. Demonstrate technical expertise. Link to coursework.
- Presentation of results. Demonstrate ability to communicate technical information with figures, tables etc.
- Interpretation of results. Relevance of results to learning objectives. Impact of results on the student, the organization, and society.
- Reflection. How has the project and grad school affected growth (personal and career).

Timeline: The report should be submitted in the student's final semester of graduate study.

Evaluation: After submission of the report, the committee will give either a Pass or Incomplete. If given an Incomplete, the student can meet with their committee to receive feedback, and the student may then revise and resubmit the report. Upon resubmission of the report, the student will receive either a Pass or Fail (no further resubmissions will be allowed). Note: If the committee has a split vote, the department chair will cast the tie-breaking vote.