EE P 598 Syllabus, Summer 2021

Course Number and Title: EE P 598 - Engineering Project Management and Reporting

Instructor: Alexander Mamishev

Credits: 4

Course Overview

The purpose of this course is to refine the project management and collaborative skills of electrical engineering graduate students and industry professionals. The course teaches students how to lead and manage a team to meet tight deadlines, effectively collaborate with senior and junior project staff, and to optimize the team effort to meet project milestones. The course has extensive hands-on exercises with modern software tools and in-class discussions about project failures and successes, partly based on student experience at their workplaces. Understanding how to lead a quality team builds an excellent foundation for career advancement.

The following four areas of effective project collaboration will be covered throughout the course: (1) communication, (2) organization, (3) software, and (4) process review. This course will give students the tools to appropriately lead and manage a small project team, with an emphasis on product quality and time efficiency to meet relevant project deadlines and milestones. The skills and concepts covered in this course apply to all forms of project management, although emphasis will be placed on engineering projects.

Sequence of Material:

Project Initiation
- Identifying Key Stakeholders
- Defining Project Goals and Constraints
- Formal Authorization
- Kick-off

Project Planning:
- Scope, Schedule, and Cost
- Communication and Project Management Tools
- Stakeholder Engagement
- Project Leadership

Project Execution
- In-person and Remote Project Work
- Monitoring of Progress
- Documentation
- Risk Management
- Gamification
- Creativity
- Motivation
- Addressing Problems

Project Closure
- Delivering the Scope
- Reflection and Analysis

Learning Goals and Objectives:
Upon completion of the course, students will be able to:
- Lead teams and assign tasks to meet project deadlines.
- Capitalize on advantages and offset the drawbacks of remote work
- Communicate with external personnel to obtain important project materials.
- Prepare and publish technical documents in a collaborative, deadline-focused environment, where the real-time editing features of software like Office 365 are required.
- Use communication software like Slack to follow up on a team's status, thus avoiding less efficient tools like email or phone.
- Use Kanban Boards and other organizational spreadsheets to quantify projects and to see the big picture, as well as to assign individualized, time-sensitive tasks to team members.
- Conduct an internal feedback review after project completion to identify weaknesses of the team and strategies to solve or adapt to these weaknesses.
- Get the most out of new project staff via effective training strategies.

Evaluation and Grading:
Grades will be based on homework assignments, quizzes, a midterm, and a group paper. A breakdown of the grade distribution appears below:

Class Participation:	10%
Homework:	35%
Midterm:	30%
Final Group Project:	25%

Email: mamishev@uw.edu

Authors of selected reports will be given an opportunity to present their report in front of the class. Class time will be taken to critique and analyze the subject of the paper and the presentation itself. Extra credit will be assigned based on the presentations and class participation.

Grading is on the curve. There will be no Final Exam.

Lecture Logistics:
Lecture attendance is mostly not required. It is entirely possible to satisfy class participation requirements in an asynchronous mode. That said, attendance is, of course, encouraged.