

Principles of Optimization – Spring 2018

Collaborative Project Details

This document clarifies the expectations and requirements for the collaborative project portion of Principles of Optimization. The course is listed as MATH364 at Washington State University and MATH490 at Lewis-Clark State College. All correspondence should be directed to *both* Dr. Heather Moon (hamoon@lsc.edu) and Dr. Tom Asaki (tasaki@wsu.edu).

Project Concept. Optimization projects are intended to give students the opportunity to apply their accumulated skills and knowledge to a non-trivial optimization task, build collaborative skills, research and explore a realistic (or real) optimization scenario, demonstrate proficiency in mathematical writing. The project will give you an opportunity to accomplish an optimization task beyond (in size, depth of exploration, time commitment and experience) that of the standard textbook problem.

Tasks. Students are expected to complete three joint tasks a Project Design Proposal, a Draft Project Report and a Final Project Report.

Grade Basis. The Project Design Proposal, effectiveness of collaboration, Draft Project Report and Final Project Report will be worth 10%, 10%, 10% and 20% of your course grade, respectively. Note that this breakdown is different than stated in the original course syllabi. We have made this change in order to better assess your work.

Project Design Proposal

Due Date: March 15, 10:00PM, by email to both professors. Please feel free to submit at any earlier day or time. Late submissions may incur *significant* score reduction at the discretion of the instructors.

Format: Typeset using L^AT_EX report document class – no exceptions.

Requirements: The proposal should be a concise semi-technical discussion of your team project plan. It is expected that a good proposal might be written in one page. However, submissions up to three pages are acceptable. There is considerable freedom in the formatting, content and discussion. It is expected that the proposal will include the following.

1. Team members and project title.
2. Project synopsis.
3. Discussion on the history and/or motivation of the project.
4. Expected subtasks, estimated timeline and team member roles.
5. Clear and measureable goal statements.
6. Expected outcomes.

Score Basis: Your score will be based on how well the proposal meets the following criteria.

1. Adherence to the Project Concept.
2. Inclusion of required elements (see above).
3. Proper use of both English and mathematical language.
4. Clarity in document formatting.
5. Clarity of exposition.

Response: By Monday, March 19, you will receive a response consisting of

1. Assignment score.
2. List of required modifications to your proposal (if any). The intent of any modifications is to help make your project both manageable and challenging.
3. List of additional questions and areas of interest to us.

A well thought out and well written proposal is not likely to need modifications.

Effectiveness of Collaboration

Your collaboration score will be determined after the submission of the final project report. Each team member will receive an individual score. It will be based on effective teamwork skills and practices such as:

1. Active participation in completing assigned project tasks.
2. Encouraging and allowing others to complete their assigned tasks.
3. Regular communication among team members and with both professors.
4. Collaborative problem solving.
5. Team time management.

The main assessment tool will be your regular communication with both professors.

To assist in collaboration, you may wish to consider using Overleaf (overleaf.com) for writing tasks.

Draft Project Report

Due Date: April 23, 10:00PM, by email to both professors. Please feel free to submit at any earlier day or time. Late submissions may incur *significant* score reduction at the discretion of the instructors.

More details coming soon!

Final Project Report

Due Date: May 3, 10:00PM, by email to both professors. Please feel free to submit at any earlier day or time. **Late submissions will not be accepted.**

More details coming soon.