

Math 160S: Mathematical Numerical Analysis

Course Project: Description and Deadlines

Goal: To apply some of the techniques you have/will learn in class to a physical or theoretical problem, or to conduct an independent investigation on advanced numerical methods not discussed in class.

Format and Deadlines: The project will consist of three parts: *draft report*, *class presentation*, *final report*.

1. Groups: You will work in groups of ≤ 2 .

2. Project Proposal (Due Thursday, March 5th)

The project proposal will contain a one-page, typed description of the project and an outline of what you plan to do. Includes at least two references.

3. Draft Report (Due March 31st/April 2nd)

A *good* draft, 10-15 pages, double spaced.

4. Class Presentation (April)

Each group will give a 15–20 minute presentation in class.

5. Peer Reviews (Due April 21st) Each student will be asked to write reviews for one report and presentation. You may make comments in the margins, but should also include a one or two-page report that comments on the follows:

(a) Are the ideas clearly explained?

(b) Are you convinced that the team has made a good choice of numerical method(s)?

(c) Did you learn anything from the report?

(d) Organization: arrangement of ideas, coherence, inclusion of intro and conclusion?

(e) Grammar and style: are there any grammatical or spelling problems? Is the team's writing style clear?

Try to be as constructive and helpful as you can. Part of your project grade will be based on the quality of your reviews.

6. Final Report (Due Thursday, April 30) Based on comments from one of your peers and from me, you should revise and resubmit your report.

7. Computations: Each project should involve some computations. It could be the implementation of a novel numerical method, or the application of a numerical method to your choice of model problems.

8. Grade: The project counts for 15% of your course grade.