Complex Analysis Course Project

In this course, you are being asked to complete a course project. I expect the quality of your work to be commensurate with a 300-level Mathematics course. This handout details the information you need to complete the project successfully.

The primary goal of this project is for you to demonstrate your interest in and understanding of a concept, topic or application of Complex Analysis. The secondary goal is for you to demonstrate both your written and oral communication skills in mathematics. The project is worth 15% of your final course grade. Please treat it accordingly and budget enough time to produce something you (and I) will both be proud of. I want to be impressed.

Project Description: The idea is basically for you to find some aspect of *Complex Analysis* that is interesting enough to you that you want to explore further and spend significant time understanding thoroughly and presenting to me. Obviously, many topics in *Complex Analysis* have interesting visual descriptions and geometric interpretations. I also want the project to reflect the individual student's interest so I am trying to be as flexible as possible in what your project "product" can be, although I would like it to be something that can be archived and maintained for future students to enjoy and be impressed by. (There is a list of previous student's projects available on the Course Website on the Term Project page.

Project Criteria: The project will be assessed using five (equally weighted) criteria: *Mathematical Content*,*Effort*,*Comprehensibility*, *Degree of Difficulty*, and *Style and Presentation*,

Project Timeline: Your project has several deadlines associated with it. Although the majority of your project grade will be based on the final product (i.e. a paper, program or presentation) failure to fully complete a step by the deadline will result in at least a 10 point deduction off your final project grade. The project is worth a total of 200 points

1. **Project Proposal: Monday March 21st** [*25 points*] On this day you will turn in a short project proposal that is no more than one page typed and double spaced. It should include a title and abstract of your project and include the names of your project partner if you intend to work on your project as a pair. If you are proposing a group project, you should also detail how each member plans to contribute. You only need to include one copy of the proposal, but it should be signed by both members. The maximum size of a group is two.
2. **Rough Draft and/or Progress report: Friday, April 8th:** [*25 points*] In order to make sure you are on your way to successfully completing your project you must turn in a rough draft of your project paper by Friday, April 18th at 5 p.m. It is fine to turn in your rough draft early. If what you are doing for your project does not work as a paper then you should present a short description of the progress you have made so far included with some evidence of this progress, and a detailed plan of how you intend to complete the project by the final deadline.
3. **Oral Presentation: Friday April 22, Monday April 26 or Wednesday April 28:** [*50 points*] Each project will have 4 to 6 minutes of time to give an oral presentation describing their project during the last three class days of the semester. Solo projects have 4 minutes while pairs have 6 minutes.
4. **Final Deadline: Wednesday April 27th.** [*100 points*] Your project products will be due at 5pm on the last full day of class. Your project product could be a link to a web page, a Mathematica or Geogebra animation, the submission of a computer program (with documentation telling me how to run it) or something else. Surprise me!

Project Grade: 200 points total

March 21, 2016 Project Proposal (1 pager): 25 Points.
April 8, 2016 Rough Draft or Progress Report (1 pager): 25 Points.
April 20-27, 2016 Short Oral Presentation: 50 Points.
April 27, 2016 Final Product: 100 points.