Title: Physics Honors Capstone Course

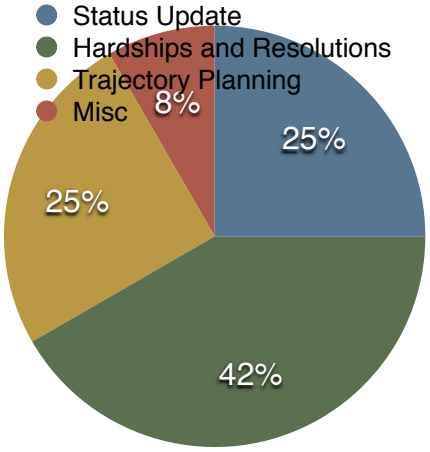
Student: Yi Jin(Steven)

Professor/Advisor: Walter Freeman

Number of Credits Requested: 2

Objectives: In this honors capstone course, Steven's will complete a draft of his in-progress capstone project: "Gravity" using OpenGL and GLUT. Following completion of his capstone project, He will switch focus to learning and studying the analysis of waves and signals. He will then apply the wave/signal analysis concepts that he learned to "Gravity"; using and adding on to it to detect and analyze physical phenomena.

Procedures of study: Steven will have biweekly hour long* one to one sessions with Professor Freeman. During these biweekly meetings, Steven will give an update on his current status, discuss encountered difficulties, possible resolutions to said difficulties and plan the trajectory for the next two weeks.



Prior to the meetings, Steven will complete an informal one page report detailing the progress of his project/studies. (This ensures that Steven will be well prepared with discussion material and topics for each meeting). One page reports will be available to read online. Professor Freeman is free to check these but it is not mandatory.

Halfway into the semester, Steven will complete a comprehensive midterm progress report (3 pages min) detailing his accomplishments and what he learned. At the end of the semester, Steven will turn in a final report that is similar to the midterm report but covers everything he was accomplished and learned from the capstone course itself.

* The length of these meetings may be shortened or extended depending on volume of material of that needs to gone over. Should the meetings need to go over the allotted hour, Steven must notify Professor Freeman a minimum of 3 days in advance.

Nature of contact: Biweekly meetings, and emails.

Evaluation and Grading:
Steven will be primarily evaluated on successful completion of his capstone project: Does it accomplish everything that was planned? And towards the end of the semester Does it demonstrate an understanding of wave processing and analysis? To a lesser extent, Steven will also be evaluated based on his midterm/final reports and preparation prior to meetings.

Current Calendar/Scheduled Objectives:

February 7th — Rudimentary Draft: “Gravity” will have a working WAV input and can manipulate visual elements based on the input

February 7th - February 20th — Refine project and begin studying wave processing/analysis

February 21st — Have a more complete draft of the project to submit to reader

February 21st - March 28th —Continued Revisions and analysis and work on draft of Executive summary/Midterm Report

March 29th —Hand in completed summary to reader / Completed Midterm Report

March 29th - April 4th — Continued Revisions and Analysis and refinement of summary

April 5th — Have a submittable version of the project

April 30th — Submit Final Project and Final Paper to Professor Freeman