

The Development and Implementation of a Senior Research Course

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Science

AAPT Summer 2014



Phys 490 – Senior Research

- Course was designed to consolidate student's practice of physics
 - With theoretical techniques
 - With experiential techniques
 - With computational techniques
- Student's choose their own project
 - With advice from instructor
- A student must complete three hours of credit for degree. Can be taken in one hour increments.

Student Deliverables

- The student chooses which deliverable (paper, poster, oral presentation) will go with techniques (theoretical, experimental or computational).
- Each deliverable has a draft and final turned in for grading.
- The graded is determined by using a rubric
 - Draft is scored at 50% of the final deliverable.
- Students create a schedule for completion for each deliverable.
- Students also produce weekly progress reports that are discussed with instructor.

A Sample Rubric

- It is a holistic rubric
- For the poster presentation
 - **Professional Presentation** (13 pts)
 - **Writing** (12 pts)
 - **Introduction** (19 pts)
 - **Materials and Methods** (19 pts)
 - **Results** (19 pts)
 - **Conclusions** (18 pts)

Time Lines and Progress Reports

- Student's must produce a time line for completion for each deliverable
- Student's submit weekly progress reports that are discussed at the weekly meetings
 - The report answers three questions.
 - What did you complete last week?
 - What you plan to complete this week?
 - Why did you not complete what you claimed and what can you do to change it?

Any Questions?

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- Documents and presentation can be found here: <http://bit.ly/1rw54vy>

