Evaluation of the paper will be based on the following set of expectations:

- **Organization of Paper.**
  - Title, author and a bibliography following a particular mathematics journal style.
  - Appropriate content.
  - An introduction written for a senior physics major clarifying the objectives and layout.
  - The body of the paper should focus on the main point(s) and there should be logical transitions between concepts.
  - The body of the paper should end with a conclusion that reviews the format of the paper and identifies any remaining questions and directions for future research.
  - Cite references throughout paper according to an accepted physics journal style.
- **Format**
  - Paper length: twelve-fifteen pages, typewritten using LaTeX.
  - Use good grammar, word usage, standard mathematical notation, layout, and style.
  - Avoid notation errors that can interfere with the clarity of the paper.
  - Figures and Tables numbered with captions.
  - Graphs should be labeled and labels and annotations should be readable.
  - Main equations numbered and referred to by number; e.g., Equation (1).
  - Equations should be punctuated.
- **Understanding of the Content.**
  - Communicate key definitions, experiments and/or results accurately.
  - Include appropriate examples to illustrate key ideas.
  - Demonstrate understanding how definitions and prior experiments/results are used.
  - Reproduce results, or examples, possibly with mathematics software.
- **Attention to Audience Level.**
  - Assume the reader has solid mathematical and physical reasoning skills.
  - Only assume a background of core coursework in the physics major (PHY 201-202, 321 and 335, calculus).
  - Distinguish between concepts and results known to readers versus those which require explanation.

Evaluation of the presentation will be based on these expectations:

- **Organization.**
  - Begin with an introduction, capture audience interest, and to make objectives clear.
  - Have an identifiable body of the talk, focusing on the main points and making logical transitions between them.
  - End with a conclusion, accentuating the talk layout and identifying related questions or directions for future study.
  - Adhere to the 30-35 minute time allotment.
- **Consideration of the Audience.**
  - Assume the reader has solid mathematical and physical reasoning skills.
  - Only assume a background of core coursework in the physics major (PHY 201-202, 321 and 335, calculus).
  - Distinguish between concepts and results known to readers versus those which require explanation.
  - Maintain eye contact during the presentation and include everyone in the audience.
  - Aim for audience understanding. What will they take away from your talk?
  - Respond appropriately to questions during the question and answer period.
  - Treat all questions and questioners with respect.
  - Do not read to the audience.
  - Dress appropriately.
- **Understanding of the Content.**
  - Communicate key definitions, experiments and/or results accurately.
  - Include appropriate examples to illustrate key ideas.
  - Demonstrate understanding how definitions and prior experiments/results are used.
  - Use software appropriately to reproduce results or examples.
- **Deliver a clear and professional talk.**
  - It is crucial that the audience understand the main points of the presentation. This is more important than coverage of a large amount of material from the paper.
  - Use good judgment in narrowing the scope of the presentation to achieve this purpose.
  - Use good judgment in deciding how to best present the ideas inherent in the presentation, and use forms of media support, including projected computer output, as appropriate. Weigh the advantages and disadvantages of using an overhead slide, a physical model, a computer presentation, etc.
  - Use of the blackboard, while not prohibited, should be kept to an absolute minimum.
  - Prepare presentations that
    - are easily read from any place in the room;
    - are simple, uncluttered and designed to help communicate, review and relate main points.
    - use good grammar, word usage, standard notation, layout, and style.
  - avoid notation errors that can interfere with the clarity of the paper.
  - Reference/Cite all content appropriately.

Evaluation of the poster will be based on these expectations:

- **Organization.**
  - Provide a title that is informative, inviting, and of adequate length.
  - Provide your name, your advisor's name, PHY 495 or PHY 499, possibly UNCW logo.
  - Begin with problem statement, capture audience interest, and make objectives clear.
  - Have an identifiable body of the poster, focusing on key points, methods, and results.
  - End with definite conclusions and provide references.
- **Layout.**
  - Use good fontsize, especially paying attention to captions and graph labels.
  - Do not crowd the poster with long sentences and paragraphs.
  - Use color schemes that are easy to read.
  - The poster should flow from problem statement on top left to conclusion and references on the bottom right.
  - Prepare posters that are easily read from several feet away;
    - are simple, uncluttered and designed to help communicate the main points.
    - use good grammar, word usage, standard notation, layout, and style.
    - avoid notation errors that can interfere with the clarity of the poster.
  - Use appropriate graphics effectively.
- **Content.**
  - Communicate key definitions, experiments and/or results accurately. Provide content suitable for experts and non-experts.
  - Provide sufficient scientific explanations, leaving some for the interviews.
  - Include appropriate examples to illustrate key ideas.
  - Clearly indicate what is your work and what is not.
- **Interviews.**
  - Be prepared with a short description of your work for non-physicists..
  - Be prepared to describe your work in under 10 minutes with the aid of just the poster.
  - Maintain eye contact during the interview and include present.
  - Aim for audience understanding. What will they take away from your poster?
  - Demonstrate understanding how definitions and prior experiments/results are used.
  - Respond appropriately to questions during the interview, treating all questions and questioners with respect.
  - Dress appropriately.