

PHYS 4900 Student-Mentor Agreement

Student: _____ A#: _____

Mentor: _____ Dept. _____

Semester/Year: _____ Credits: _____

Guidelines

Success in PHYS 4900 requires substantial effort on the part of the student and faculty mentor. The following guidelines are designed to help both the student and mentor understand and manage expectations for the course.

- **Initial Steps:** The student must first find a faculty mentor that is willing to mentor the student in research. The undertaken research project may be part of the faculty member's overall research program, or it may be an independent project that is of interest to the student. After a suitable research project has been agreed upon, the topic to be studied and the goals of the research are recorded in the Agreement Section of this document (see below).
- **Time Commitment:** The student should spend approximately 45 hours of work on the project for each credit hour over the semester. For example,
 - 1 credit = ~ 45 hours (~ 3 hours per week),
 - 2 credits = ~ 90 hours (~ 6 hours per week),
 - 3 credits = ~ 135 hours (~ 9 hours per week).

It is highly recommended that the student document the time spent on the project, so that the student can assess whether or not sufficient time is being put towards the course.

A research project can extend over more than one semester. The student shall register for PHYS 4900 in each semester that they are working on the project, subject to mutual agreement with the mentor. A new contract is not required for each semester (unless the student changes their research mentor).

- **Mentorship:** The mentor shall be available to guide the student as needed throughout the semester. To this end, the student and mentor shall meet

regularly – at least once per week – to discuss progress on the research and adjust (as needed) the project’s trajectory as the research progresses.

- **Assessment:** Assessment shall be judged relative to the achievement of goals set out near the beginning of the course (and documented below). The quality of the written report and public presentation shall also be used for assessment by the faculty mentor. Effort by the student may also be taken into account.

As PHYS 4900 is based in research, and as one never quite knows where research will lead, the student and mentor understand that the goals might need to be modified as the project is carried out. If the goals change, then this should be indicated in an addendum to the agreement below, and signed by both the student and mentor.

- **Final Report:** At the completion of the PHYS 4900 project (which might take more than one semester), a report shall be submitted to the mentor for evaluation. This report should follow the [American Institute of Physics Style Manual](#) or other suitable style guide. The report should include
 - an abstract summarizing the project and results,
 - an introduction with relevant background information,
 - a section describing the methods used in the research,
 - a results section detailing what has been accomplished,
 - a conclusion with possible suggestions for future work,
 - descriptive captions for all figures and tables should be included, and
 - proper citation of previously published work.

If the completed research is of interest to the broader physics community, then the Final Report may be placed in USU’s Digital Commons (or perhaps even submitted to a research journal). If this is undertaken, then the student must take care to ensure that the Final Report meets all the criteria for professional publication. (The mentor should help in making this assessment.) Written public dissemination of the research is not a requirement of the course.

- **Public Presentation:** A public presentation of the results of the research is required. This can be done via either an oral presentation or a poster presentation. The USU Student Research Symposium or a professional conference are both appropriate settings for the presentation.
- **Grading:** A final grade is determined by the faculty mentor, who shall judge performance in the course based on the criteria outlined in the Assessment Section above. A passing grade cannot be obtained without submission of the written report and completion of the public presentation.

Agreement (attach additional pages if more space is required)

- **The topic / problem to be studied in this project is:**

- **Goals for the research project:**

Signed _____ Date _____
(Student)

Signed _____ Date _____
(Faculty Mentor)