

## **PHCL 570 RESEARCH PROJECT (0+3)**

### **A. COURSE DESCRIPTION:**

This course is meant to allow the student to gain experience in research utilizing the principles and knowledge learned in PHCL 520, MATH 205, as well as undergraduate courses. The student must work closely with his advisor to select an appropriate project, design it, and carry it out. Since the course has no lectures nor rigid format, the student shall meet regularly with his advisor as often as necessary so that he does not fall behind in carrying out the project

After selecting, designing and refining an appropriate project, the student will complete it over the course of two semesters (1st and 2nd of 2nd year) receiving a grade of "incomplete" after the first semester. The final project must be presented in typewritten form, and of publishable quality

The completed project must be presented verbally to the faculty and defended. The course grade will be based on the quality of the scientific findings, quality of the final project, and on the oral presentation and defense

### **B. COURSE OBJECTIVES**

After completion of the course the student will be able to do the following

1. Identify a problem, new idea, or a new approach or method
2. Design a project to solve the problem or prove the method
3. Carry out the project to finality
  - a) Refine the project as necessary
  - b) Utilize current as well as secondary literature
  - c) Develop or utilize proper methodology
  - d) Collect data
  - e) Analyze data
  - f) Present findings
    - i) In proper written format
    - ii) In proper oral format
  - g) Define findings of the project and
  - h) Recognize limitations of the project and necessary additional research
4. Work independently, and with others
  - a) Pace self to finish a project within necessary time \_ limit
  - b) Recognize and utilize others assistance and criticism

### **C. COURSE FORMAT**

The student must utilize his time efficiently, working independently and with his advisor. He shall meet with his advisor as often as necessary, but at least twice per week

The student must select a project based on his future career goals, ability and time restraints; and secure his advisers' approval. He must submit a well-written, typed research protocol approved by his advisor to the department council for approval. This must be completed by the end of the first semester of the second year at the latest

The protocol should precisely define a specific area of interest such as a problem to be solved, a new idea, or a new approach or method. The project should include the evaluation of data; but even if the data collected is from published literature, it must follow scientific research design and format including the following

Introduction, methodology, findings, discussion  
significance, and future research needs

The student may take the first and second semesters of the second year to complete the course, but regularly scheduled deadlines must be established by him and his advisor, and the deadlines must be met. The purpose of the established deadlines are to insure the continuous progress of the project and prevent the student's falling behind