

Honors Research I
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Instructional Goals

Scientific research satisfies the natural curiosity to understand. Our strong honors science program involves many gifted students. They have the natural curiosity to understand science and have demonstrated a strong aptitude in their science courses in which they learned the facts and skills of science. In Honors Research I, the science department will provide an opportunity for students to explore science in an open-ended “what if?” approach that will be driven by the student’s curiosity. Our science department has many teachers with experience in research that have felt the spark and excitement of research. We wish to share this appreciation with our strongest science students. Grant-writing, literature searches, designing and completing experiments, technical writing and presentations, and competition for science-based scholarships are the instructional goals of this honors-level pilot course.

Materials

Composition notebook
Calculator
Safety goggles

Fees

A fee of \$15 is charged to all students enrolled in this course. This fee will cover the cost of some of the consumable materials necessary for lab activities. It is the student’s responsibility to pay for any broken glassware or equipment that he/she breaks.

Instructional Organization

Each student will work independently on his or her own research. However, group discussions and cooperation in difficult tasks will be encouraged for optimal use of lab time. The instructor will act as a guide and consultant, and must approve all proposals for experiments.

Grading Policies and Procedures

Lab/daily grade: Students will be evaluated daily on effective use of time and will receive feedback when time is not used effectively. (30% of grade)

Technical Reports/ Presentations: Each interim, students will submit reports on the work they have completed. These will include reports on literature searches, research proposal, grant application(s), experimental results, final presentation, applications for scholarships and competitions. (70% of grade)

Homework: If class time is used efficiently, it is a goal of this course for the students to have no assigned homework.

Syllabus

First Quarter

Literature search, research proposal, grant applications

Second Quarter

Begin experiments, technical reports (2 or more).
Semester exam will be a formal presentation of experimental results.

Third Quarter

More experiments, technical reports (2 or more), scholarship/competition application.

Fourth Quarter

Complete experiments, final research report, scholarship/competition applications completed by respective deadlines. Final exam will be a series of formal presentations of all results.