Undergraduate Research

Catalog Description - Provides an opportunity for undergraduate students to work in research or areas of special interest such as design problems and economic studies under the direction of a faculty member. Written report and oral presentation in covering work required. Approval of written application. Maximum of 3 credits per semester. May be repeated for a maximum of 6 credits.

Prerequisites – consent of instructor and department head.

Textbook - none

Objectives

• articulate a clear research question or problem and formulate a hypothesis
• identify and demonstrate appropriate research methodologies
• define, articulate, and use appropriate terminology, concepts, and theory
• use library and other tools to search for existing body of research relevant to their topic
• know existing body of research relevant to their topic and explain how their project fits
• identify and practice research ethics and responsible conduct in research
• know and apply problem solving skills to constructively address research setbacks
• work collaboratively with other researchers, using listening and communication skills
• work autonomously in an effective manner, setting and meeting deadlines
• reflect on own research, identifying lessons learned, strengths, and ways to improve
• communicate confidently and constructively with graduate students, other researchers, and faculty
• explain research to others in the field and to broader audiences through presentations
• articulate the relevance of their research to their coursework and professional future, synthesizing their research, academic, and professional interests and goals

Reporting Requirement

A written research report is required. Reports must conform to the standards of the writing guide as described in the CHME Common Syllabus Addendum (http://chme.nmsu.edu/academics/syllabi/). Document structure (including section headings) should follow the guidelines of Chapter 6, “Writing an Engineering Report.”

Class/Lab Schedule – schedule established with faculty advisor.