



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Biomechanics Research Practicum: Experience in Upper Extremity Biomechanics

ISE 7625

Credit Hours:

3.00 - 3.00

Course Levels:

Graduate

Course Components:

Lecture

Lab

Course Description:

Builds upon theoretical information developed in ISE 7620. Provides link between theory and laboratory measurement in assessment of biomechanical issues for occupational upper extremity disorders.

Prerequisites and Co-requisites:

Prereq: 7610 or 7620 or 7630 or permission of instructor.

Course Goals / Objectives:

- Review of the relevant literature for background and research methods in particular areas of ergonomics and biomechanics
 - Designing an experiment that fills a void; determining appropriate independent and dependent variables, subject sample size, experimental design strategies, etc.
 - Human subjects protection
 - Use of laboratory instrumentation to gather relevant information on the effects of the independent variables under investigation. Equipment includes electromyography, force/pressure transducers, goniometry, analog to digital converters, etc.
 - Collecting and qualitatively assessing the data gathered in the data collection phase of the project
 - Quantitatively interpreting the data using appropriate statistical analysis procedures
 - Preparing a manuscript documenting the results of the study in the form required by a scientific journal. If appropriate, submitting the manuscript to a journal or for presentation at a professional conference
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Course Topics:

- Research discussion, design, experimentation, analysis, and writing
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Designation:

Elective