



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Biomechanics Research Practicum: Experience in Spine Biomechanics

ISE 7615

Credit Hours:

3.00 - 3.00

Course Levels:

Graduate

Course Components:

Lecture

Lab

Course Description:

Builds upon theoretical information developed in ISE 7610. Provides link between theory and laboratory measurement in assessment of biomechanical issues for occupational low back disorder.

Prerequisites and Co-requisites:

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

Course Goals / Objectives:

- Gain experience in each of the following areas
- Searching and reviewing 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 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

Course Topics:

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

Elective