



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Advanced Topics in Biomechanics and Musculoskeletal Disorders: Spine Biomechanics

ISE 7610

Credit Hours:

3.00 - 3.00

Course Levels:

Graduate (5000-8000 level)

Course Components:

Lecture

Course Description:

Advanced readings course of papers on occupational epidemiology, physiology, work-related musculoskeletal disorders, pathophysiology, biomechanics, anthropometry, electromyography, imaging, and modeling as related to spine biomechanics.

Prerequisites and Co-requisites:

Prereq: 5600 (660), or permission of instructor.

Course Goals / Objectives:

- Provide students with an opportunity to review portions of the literature concerning the upper extremity, with regards to work-related musculoskeletal disorders and biomechanics
 - Develop and enhance students' abilities to critically review papers describing original research or reviews of such research
 - Develop and enhance students' understanding of how to conduct high-quality research and describe that research in a paper suitable for publication in a peer-reviewed journal
 - Provide students with opportunities to practice conceptualizing and developing research ideas
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Course Topics:

- Research methods
 - Epidemiology
 - Anatomy, function and biomechanics
 - Pathophysiology
 - Measurement methods and instrumentation
 - Models
 - Psychosocial factors
 - Intervention research
 - Current topics
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Designation:

Elective