



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Risk Assessment Tools for Occupational Musculoskeletal Disorders

ISE 5620

Credit Hours:

3.00 - 3.00

Course Levels:

Undergraduate (1000-5000 level)

Graduate

Course Components:

Lecture

Course Description:

Provides students with an understanding and working knowledge of tools used to assess risk of occupationally related musculoskeletal disorders.

Prerequisites and Co-requisites:

Prereq: 3600 or equiv.

Course Goals / Objectives:

- Become familiar with, utilize, and critically examine several tools developed to assist engineers in identifying work tasks or jobs that may put workers at risk for developing upper extremity musculoskeletal disorders
 - Provide students with an understanding and working knowledge of how to use the tools commonly employed for evaluating the risk of low back disorders (LBDs) in occupational settings
 - Develop and enhance students ability to critically review papers describing concepts and/or research conducted in developing or testing these tools
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Course Topics:

- Review and background: Measuring risk factors, Collecting and assessing data, Task analysis
 - RULA, REBA
 - PLIBEL
 - ACGIH-TLV
 - Strain Index
 - OCRA
 - ROGERS
 - QEC
 - PeCKS/K-PeCS
 - NIOSH Lifting Equation
 - Static Strength Prediction Program
 - Lumbar Motion Monitor
 - Psychosocial and ACGIH-TLV
 - Psychosocial
 - Physiological Assessment
 - Assessment of injured workers
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Designation:

Elective