

COURSE SYLLABUS

E M 587

Course Name: Managing Human Factors for Safety and Productivity

Course Number: E M 587

Semester

Credits: 3

Instructor/Contact Information: David Paulus, PhD, PE, CHFEP, CQE

Email: david.paulus@wsu.edu

Office Hours: TBD

Meeting Time: Tuesdays, 6:15-8:45 Pacific

Prerequisites: None

Textbook: *Niebel's Methods, Standards, and Work Design, 13rd Ed, Andris Freivalds*
ISBN 978-0-07-337636-3 available through Bookie and Amazon.com

Course Description and Objectives: Managing Work Design for Safety and Productivity provides an integrated approach to time-and-motion studies, human factors, and ergonomics to design work that simultaneously improves both productivity and safety. This course teaches sound engineering methods using realistic standards to optimize work design.

Learning Outcomes:

- Students will design manual work and calculate recommended weight limits for lifting
- Students will perform time and motion studies and analyze the results
- Students will learn the causes of cumulative trauma disorders and explain methods to reduce them
- Students will calculate work environment levels relating to: illumination, noise, temperature, ventilation, and vibration and compare the results to standard limits
- Students will explain fundamental human factors including those related to human-computer interactions
- Students will design visual & auditory displays and processing
- Students will learn about risk, reliability, hazard control, and OSHA
- Students will apply the technical topics learned in the class as it relates to management, employee motivation, and human interactions