

Environmental Health Sciences 259a
Occupational Safety and Ergonomics
Spring, 2018, 6:00pm-8:50pm, Wednesdays, Public Health room 41-268

Description: Overview of most frequent and severe occupational injuries and illnesses – their distribution, causes, risk analysis methods and control approaches. Includes low back pain, falls, machine exposures, upper extremity musculoskeletal disorders, and selected ergonomic topics.

Course Director: Niklas Krause, MD, MPH, PhD, niklaskrause@ucla.edu, 310-825-2079

Instructor: George Brogmus, MS, CPE, MIEHF, GBrogmus@UCLA.edu 818-517-7997

Optional Texts: The Eastman Kodak Company, 2003. Kodak’s ergonomic design for people at work, 2nd Edition. Chengular SR, Rodgers SH, Bernard TE, editors. Hoboken: Wiley and Sons. Available from Amazon.com for about \$115. ISBN-13: 978-0471418634

Kroemer, K.H.E., 2009. Fitting the Human, Introduction to Ergonomics 6th Edition. Available from Amazon.com for about \$50. ISBN 13: 978-1-4200-5539-9 (hardcover)

ASSE 2008. The Safety Professional’s Handbook (2 volumes) Haight, J., Ed. Available from www.ASSE.org for ~\$200 ISBN 978-1-885581-52-5

Assignment: Write a paper on an **occupational safety or ergonomics** approved issue (cannot be a medical-only topic or a traditional IH issue like toxins, noise, radiation), to be presented (10 Min max) during one of the classes indicated below. Paper and presentation grading will be based on occupational relevance, inclusion of frequency and severity measures of the issue or other appropriate metrics, risk factors, a description of any relevant analysis/measurement methods (to assess risk), primary controls, description of at least one intervention example, being interesting, and at least two cited journal article sources. Paper as MS word document due May 16, 2018, through turnitin.com.

Date	Topic
April 4, 2018	Introduction to Occupational Safety and Ergonomics
April 11, 2018	Safety Standards, Metrics and Data Sources; Machine Safeguarding and Lockout
April 18, 2018	Fleet Safety, Same-Level Slips Trips and Falls Paper Topic Approval Deadline
April 25, 2018	Introduction to Ergonomics; The Aging Workforce, Adverse Work Schedules
May 2, 2018	Upper Extremity Musculoskeletal Disorders – Epidemiology, Risk Factors, Analysis Techniques, Controls
May 9, 2018	Low Back Pain – Epidemiology, Cost, Medical Cause Theories, Diagnosis, Treatment Efficacy
May 16, 2018	Low Back Pain – Occupational Risk Factors, Manual Handling Task Analysis Approaches, Controls Papers Due
May 23, 2018	No Class <i>(American Industrial Hygiene Conference and Exposition)</i>
May 30, 2018	Work Postures, Aerobic Workload, and Cardiovascular Health Student Presentations
June 6, 2018	Student Presentations & Review for Exam
June 13, 2018	Exam

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Grading: Exam 60%; Assignment – 25%; Presentation – 15%

Grading will be based on the following percentages (scores will be rounded to nearest whole number):

A+ 97-100
A 93-96
A- 90-92
B+ 87-89
B 83-86
B- 80-82
C+ 77-79
C 73-76
C- 70-72
D+ 67-69
D 63-66
D- 60-62
F Below 60