



Industrial Ergonomic Evaluator Certification Course

Jim Mecham, MSIE, OTR/L, CPE

Day 1 – Basic Ergonomic Principles

Time	Subject	Content	Method of Instruction
7:45 – 8:15	Registration	Receive your course materials	
8:15 – 8:30	Introduction	Tour of facility, attendee/instructor introductions, certification and course overview	Lecture, Tour, Power Point
8:30 – 9:15	Introduction to Ergonomics	Definitions of ergonomics, history, OSHA standards, present research and establishing a good ergonomic foundation	Lecture, Power Point
9:15 – 10:00	OSHA approved Injury Prevention Program and Developing an Ergonomics Program	Learn how to successfully implement an OSHA approved injury prevention program. market and sell your services to companies, form a successful ergonomics committee, implement participatory ergonomics programs and what data is needed to demonstrate success	Lecture, Power Point and real world experience
Break 10:00 – 10:15			
10:15 – 11:00	Anthropometrics	Discuss the use of Anthropometrics ,anthropometric approaches and design principles	Lecture, Power Point, Handouts
10:00 – 11:00	Ergonomic Analysis overview	Understand the basic concepts of Job Site Analysis, Job Demands Analysis and the types of Ergonomic Analysis as well as look at various ergonomic assessment tools	Lecture, Power Point, Handouts
11:00 – 12:00	Identifying Ergonomic Risk Factors	Identification of risk factors – Physical, Environmental, Psycho-Physical and Psycho-Social	Lecture, Power Point, Handouts
Lunch 12:00 – 1:00			
1:00 – 2:00	Ergonomic Controls	Overview of engineering controls, administrative controls, work practice, training and medical management	Lecture, Power Point
2:00 – 3:00	Job Modification	Making job modification recommendations, ergonomic cost benefit analysis.	Lecture, Power Point, Handouts
Break 3:00 – 3:15			
3:15 – 4:15	Job Demands Analysis and Job Safety Analysis	Perform a Job Demands Analysis and Job Safety Analysis through video	Lecture, Power Point, Handouts
4:15 – 4:45	Day 1 Certification Quiz	Take 20 question quiz to work towards your Certified Industrial Ergonomic Evaluator certification	Quiz
4:45 – 5:00	Day 1 wrap up	Day 1 review - Day 2 overview	Lecture



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Day 2 – Low Back Ergonomics

Time	Subject	Content	Method of Instruction
8:00 – 9:30	Low Back Ergonomics	Low back pain, biomechanical basis for injury, epidemiological studies, risk factors and prevention	Lecture, Power Point, Hands-On Practice
9:30 – 10:00	Manual Material Handling Controls	Overview of controls and recommendations for manual material handling	Lecture, Power Point, Hands-On
Break 10:00 – 10:15			
10:15 – 10:45	Manual Material Handling Work Practice Control?	Does Lifting Technique Really Matter?	Lecture, Power Point Discussion
10:45 – 11:00	Push, Pull and Carry Ergonomics	Discuss Risk Factor and controls associated with Push, Pull and Carry	Lecture, Power Point Discussion
11:00 – 11:30	Sitting and Standing Ergonomics	Discuss Risk Factor and controls associated with sitting and standing	Lecture, Power Point Discussion
11:30 – 12:00	Lower Extremity Ergonomics	Biomechanical basis for injury, epidemiological studies, risk factors back belts, and preventative approaches	Lecture, Power Point Hands on Practice
Lunch 12:00 – 1:00			
1:00 – 1:15	OSHA Checklists	Discuss and practice using the OSHA checklists	Lecture, Power Point, Handouts, Video, Hands-On
1:15 – 1:45	Whole Body Ergonomic Analysis Tools	Discuss and practice using the REBA (Rapid Entire Body Assessment	Lecture, Power Point, Handouts, Video, Hands-On
1:45 – 2:15	Lift, Carry, Push, and Pull Ergonomic Analysis Tools	Snook/Cirello/Liberty Mutual Lift, Carry, Push, Pull, Washington State Lifting Calculator	Lecture, Power Point, Handouts, Video, Hands-On
2:15 – 2:30	Manual Material Handling Ergonomic Analysis Tool	ACGIH Lifting TLVs and Washington State Lift Calculator	Lecture, Power Point, Handouts, Video, Hands-On
Break 2:30 – 3:00			
3:00 – 3:45	Low Back Ergonomic Analysis Tools	Revised NIOSH Lifting	Lecture, Power Point, Handouts, Video, Hands-On
3:45 – 4:45	Low Back Ergo Certification Practicum	Perform an ergonomic evaluation on a manual materials handling job using the NIOSH Lifting guidelines and one other ergonomic evaluation tool of your choice to work towards CIEE I Certification	Hands-On Ergonomic Practicum/Quiz
4:45 – 5:00	Day 2 Wrap Up	Summarize day 2 and discuss Day 3	Lecture



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Day 3 – Upper Extremity Ergonomics

Time	Subject	Content	Method of Instruction
8:00 – 10:00	Distal Upper Extremity Ergonomics	Distal Upper Extremity ergonomic risk factors, epidemiological studies, controls and job modification	Lecture, Power Point, Video, Hands-On,
Break 10:00 – 10:15			
10:15 – 11:00	Upper Extremity Ergonomics	UE /shoulder disorders, common risk factors, epidemiological studies, controls and job modification	Lecture, Power Point, Video, Hands-On,
11:00 – 11:30	Upper Extremity Ergonomic Checklists	Discuss and learn how to use the Washington State Checklist	Lecture, Power Point, Handouts, Video, Hands-On
11:30 – 12:00	Semi Quantitative Upper Extremity Ergonomic Tools	Discuss and learn how to use the RULA – Rapid Upper Limb Assessment	Lecture, Power Point, Handouts, Video, Hands-On
Lunch 12:00 – 1:00			
1:00 – 1:30	ACGIH TLV for Hand Activity distal upper extremity tool	Discuss and learn how to use the ACGIH TLV for Hand Activity	Lecture, Power Point, Handouts, Video, Hands-On
1:30 – 2:30	Strain Index Distal Upper Extremity Tool	Discuss and learn how to use the Strain Index	
Break 2:30 – 2:45			
2:45 – 3:45	Upper Extremity Ergo Certification Practicum	Perform an ergonomic evaluation on a job with upper extremity ergonomic risk factors using the Strain Index and one other ergonomic evaluation tool of your choice to work towards CIEE I Certification.	Lecture, Power Point, Handouts
3:45 – 4:15	Certification Presentation/ Closing Comments/Wrap up	Present course attendees Certified Industrial Ergonomic Evaluator I certification, complete course feedback and summarize all three days	Lecture