BTS
Training & Consultancy

Contact us

Website: https://btsconsultant.com/

Email: info@btsconsultant.com

UAE office Tel: +971 26446633

Egypt Office Tel: +2 0502308081

Fundamentals of Occupational Ergonomics

Duration: 5 Days

Introduction:

Ergonomics, as defined by the Board of Certification for Professional Ergonomists (BCPE), "is a body of knowledge about human abilities, human limitations and human characteristics that are relevant to design. Ergonomic design is the application of this body of knowledge to the design of tools, machines, systems, tasks, jobs, and environments for safe, comfortable and effective human use" (BCPE, 1993). Ergonomics is comprised of practicing and academic engineers, safety professionals, industrial hygienists, physical therapists, occupational therapists, nurse practitioners, chiropractors, and occupational medicine physicians. Ergonomics is an applied science which emphasizes the importance of designing workstations, so the workstation is appropriate to the individual worker. The objective is to "design out" as many ergonomic risk factors as possible in an effort to reduce musculoskeletal disorders (MSD). This course emphasizes recognition of musculoskeletal disorders in institutional, office, and industrial settings. Topics include anthropometry, working postures, task analysis, manual materials handling and environmental factors.

Upon completion, participants should be able to recognize ergonomic problems and recommend appropriate control measures

Who Should Attend?

Team Leaders, Managers, Line Managers, Supervisors, Team Leaders, Project Managers, Control Center Operators and Supervisors, Emergency Dispatchers, Security Personnel and CCTV Operators, HSE Officers, HSE Personnel, HSE Professionals, Emergency Response Team Members, HSE Managers and Auditors, Health & Safety and Environmental Professionals, Coordinators, Specialists and other full-time safety practitioners, Fire Officers, Loss Control Managers, Security Directors and Managers, Security Supervisors, Facilities Directors and Managers, HR and Administrative Managers

Course Objectives:

By the end of this course delegates will be able to:

- Identify signs and symptoms of ergonomic ailments
- Identify industries and processes at high risk for cumulative trauma disorders
- Conduct ergonomic analysis of work place tasks
- Apply principles of universal and ergonomic design at a basic level
- Implement administrative and engineering controls for ergonomic problems
- Identify ergonomic stresses associated with video display terminals
- Use anthropometric tables to understand design parameters

Course Outline:

Ergonomic Ailments and Their Causes:

- Anatomy basics
- Cumulative trauma disorders
- Hand-/arm vibration syndrome
- Other human factor problems
- At- risk industries
- At -risk processes

Identification and Control of Ergonomic Stresses

- Injuries and other indicators of ergonomic problems
- Biomechanics
- Major risk factors: repetition, force, position
- Other factors: vibration, cold, sharp edges, production pressure, environment
- Ergonomically neutral positions
- Ergonomic task analysis
- Control of ergonomic stresses: administrative, engineering, personal protection
- Tool and task design

Cognitive Ergonomics and Universal Design

- Cognitive errors
- Design techniques for error reduction: standardization, stereotypes, redundancy, feedback
- Universal design

- Anthropometry
- Statistical measures
- Anthropometry tables
- Application
- Displays, Controls and Video Display Terminals (VDT's)
- Displays and controls
- Anthropometric issues
- Cumulative trauma disorders and VDT's
- Eye-strain
- Psychological stress and production issues
- Controls for VDT -related stresses

Quantitative Methods and Materials Handling

- Scope of injuries due to manual materials handling
- Risk factors for back injuries due to lifting
- Evaluation of lifting risks, lifting tables
- Redesigning lifting tasks

Lifting techniques, training, and aids