



## Department-Approved Course Requirements: 1-Hour Ergonomics

<b>Course Required for:</b>	<input checked="" type="checkbox"/> <b>Worker Training</b>
<b>Purpose:</b>	This course is a specialized elective course that can help fulfill the requirement for an individual applying for a Site Safety Training Card. <b>THIS IS AN AWARENESS-LEVEL TRAINING ONLY and does not provide any other qualification or authorization outside of the Site Safety Training Card.</b>
<b>Duration:</b>	1 Hour of instructional time, excluding breaks
<b>Class Size:</b>	<b>1-40 Trainees</b>
<b>NYC Requirement:</b>	In order to continue to operate in the City of New York, the designated construction worker is required to complete a minimum number of hours of approved site safety training and to carry site safety identification cards as proof of completion of the training (As per New York City Local Law 196 of 2017 also known as 'LL196' or 'Local Law'). This course provides one hour towards the satisfaction of that requirement.
<b>Facility Requirements:</b>	<p>The Training Facility used by the Course Provider must:</p> <ul style="list-style-type: none"><li>• Have sufficient room to accommodate all expected attendees and the equipment needed to perform hands-on exercises where required as part of the course.</li><li>• Make provisions for the presentation of training material in all media types (computer, projectors, video/DVD players, etc.); and</li><li>• Comply with all applicable laws, rules and regulations relating to occupancy, zoning, egress, fire detection, fire suppression, light, ventilation, cleanliness, sanitary facilities, emergency notification and evacuation procedures.</li></ul> <p>Training may be held at construction sites, provided the above requirements are met.</p>
<b>Instructor Requirement:</b>	<p>To deliver this course the instructor(s) must demonstrate that he or she is credentialed or trained in instructional methods and learning processes. The instructor(s) must also successfully demonstrate his or her ability to solve or resolve problems relating to the subject matter by possession of a recognized degree, certificate, licensure or professional standing, or by extensive knowledge, training, and experience, in the subject matter being taught. To the extent that the course instructor(s) holds, or has held, a trade license issued by the Department, it must be in good standing and not be surrendered to, suspended by or revoked by the Department.</p> <p>The instructor(s) must also be authorized by the Occupational Safety and Health Administration ('OSHA') as a trainer(s) for its Construction and Outreach Program.</p>
<b>Curriculum Requirement:</b>	All <b>topics</b> listed under <b>Course Content Outline</b> must be covered using the listed <b>Instructional Delivery Method</b> . The time dedicated to each outline topic should be appropriate for the course content and can vary depending on the trade or job performed by the trainee. The <b>Instructional Delivery Materials</b> used in this course must contain all current applicable NYC Construction Code references, current rules, policies and bulletins.

**Course Curriculum  
Proposal Package  
Review:**

A comprehensive review will be performed by the **Department of Buildings** to determine compliance with these Course Curriculum Requirements.

**Instruction Delivery Method**

**Media:** Lecture/Discussion, Slide Presentation

**Handouts:** Slides, references and handbook

**Guided Learning:** Trainees will utilize a hierarchy of controls (see engineering controls below) to change an existing task or process that they are familiar with on construction sites.

**Course Content Outline**

1. Introduction
  - a. Instructor introduces topic and describes their qualifications and relevant experience for training this module.
  - b. Establish that all trainees can hear and fully understand you i.e. 'raise your hand if you fully understand me' or 'clap your hands if you fully understand me'
  - c. State basic classroom rules, bearings and decorum
    - i. Inform trainees of duration or training and breaks (if any)
    - ii. Remind trainees about limiting distractions (phone use, texting, sidebar conversations)
    - iii. Emergency procedures (location and means of egress, exits or other contingencies)
    - iv. Location of restrooms
  - d. Training Objectives and Expectations:
    - i. Trainees will become generally familiar with how the human body interfaces with and use equipment, moves material and performs tasks.
    - ii. Trainees will be able to recognize when ergonomic hazards become likely and how to avoid becoming injured.
    - iii. Trainees will be able to avoid risk of muscle
2. Explain what is meant by ergonomics
  - a. Explain potential injuries and physical damage from overexertion, fatigue and repetitive motions.
  - b. Provide statistical data from the Bureau of Labor Statistics (BLS), which typically records that approximately 25% of all workplace injuries in construction are caused by musculoskeletal disorders including repetitive motions. Source: Bureau of Labor Statistics (BLS)
  - c. Provide examples of ergonomics and musculoskeletal disorders
  - d. Explain that drug use can sometimes start from the temporary or chronic treatment of musculoskeletal disorders.
  - e. Explain Muscle Metabolism
3. Ergonomics: Effective Workplace Practices and Programs
  - a. First seek prevention controls (engineering controls)
  - b. Seek help (buddy system)
  - c. Know your own physical limitations
  - d. Learn how to handle materials
  - e. Utilizing the National Institute of Occupational Safety and Health (NIOSH) Lifting Equation

- f. Variable Lifting Index (NIOSH)
  - g. Utilizing proper posture and lifting techniques
  - h. Utilizing lifting equipment
  - i. Vibration avoidance and hand tool use
  - j. Warm-up before strenuous activity
4. Know How You are increasing your Risk Factors
- a. Overexertion by excessive lifting, pushing, pulling, holding, carrying, or throwing
  - b. Extended periods of time in contorted positions i.e. kneeling, twisting, bent over
  - c. Lack of conditioning for strenuous work
  - d. Awkward postures and work positions
  - e. Repetition of movement or sequences of movements
  - f. Excessive Force upon joints or connective tissues
  - g. Static posture
  - h. Vibration
  - i. Poorly Designed Tools
  - j. Extreme temperatures
  - k. Poor work organization
5. Provide interventions to reduce risk factors that can control repetitive and musculoskeletal related disorders.
- a. Process management (mixing tasks)
    - i. Job rotation
    - ii. Plan the work ahead of time
    - iii. Deliver materials close to where they will be used
    - iv. work at waist level whenever possible
    - v. Use the buddy system – get help
  - b. Know your body's limitations
  - c. Fitness for Duty
  - d. Utilize other people 'buddy system'
  - e. Vibration controls
  - f. Shoulder pads
  - g. Knee pads
  - h. Frequent breaks
  - i. Warming up and stretching muscles to prevent pull and strains
  - j. Use powered tools instead of hand tools
  - k. Work at waist level whenever possible
6. Resources:
- a. NIOSH Easy Ergonomics: A Guide to Selecting Non-Powered Hand Tools
  - b. Worker's Rights (See OSHA: <https://www.osha.gov/Publications/OSHA3146.pdf>)
  - c. OSHA Regional Map: <https://www.osha.gov/html/RAmap.html>
7. Debriefing (Informal evaluation)
- a. Guided by instructor, trainees, in a class discussion talk about the course's content and means of delivery and provide verbal feedback to the instructor.

- b. Instructor takes notes (either committing them to writing during discussion or ascribing them later into noted-comments).
  - c. Instructor applies lessons learned from debriefing to future trainings.
8. Written (Multiple Choice) Assessment