

**Course Required for:** Worker Training

**Purpose:** This course is a requirement for an individual who is not employed by a licensed rigger to perform rigging or signaling work in conjunction with the hoisting or lowering of articles on the outside of a building with hoisting equipment.

In lieu of completing this course, an individual may instead possess a Department-approved national rigging certification. (NCCCO Rigger Level I)

**Duration:** 16 Hours of instructional time, excluding breaks and meals

A single session may not exceed 9 1/2 hours, including breaks and meals. If two or more sessions are delivered the same day to the same student roster, a break must be scheduled between the sessions.

**Class Size:** 1 – 30 Trainees

**NYC Requirement:** **Per 2022 NYC Building Code §3316.9.2 Certification or training.**

**All members of the rigging crew** engaged in the hoisting or lowering of any suspended article on the outside of any building in the city, the supervisor of such individuals, and signalpersons communicating with such individuals, shall either:

- Possess a valid certification for both rigging and signaling. The certification shall be acceptable to the commissioner and issued by a rigging and signaling certification program that is accredited by the National Commission for Certifying Agencies (NCCA) or the American National Standards Institute (ANSI). The certification shall be valid for a term of no more than five years before it has to be renewed and shall cover areas including, but not limited to, the inspection and use of rigging hardware, basic rigging techniques, signaling, and hazards associated with rigging. The certification for a supervisor shall, in addition to the foregoing, include calculations and problem solving with respect to rigging; or
- **Have completed an initial department-approved training course, and four years following the completion of the initial training course, and every four years thereafter, complete a department-approved refresher course. The courses shall be in accordance with the following:**
  - **The initial training course for members of the rigging crew, including signalpersons communicating with such crew, shall be, at a minimum, 16 hours long, with the refresher course, at a minimum, 8 hours long.** The initial training course for a supervisor shall be, at a minimum, 32 hours long, with the refresher course, at a minimum, 16 hours long.

**Delivery Requirements:** **This course contains:**

- **Demonstration(s):** shows how something is done while emphasizing its merits. The demonstration may be delivered either by a person or a video. Video Demonstrations may be delivered by a virtual live classroom; however, on-demand self-study modules are not permissible.
- **Classroom Lecture/Discussion w A/V (Audio-Visual):** oral presentation by an instructor to present information or teach students about a particular subject. The instruction may be delivered by a virtual live classroom; however, on-demand self-study modules are not permissible.
- **Hands-On:** the instruction must be delivered onsite and in person. The students must physically handle the items. The procedure being instructed must be demonstrated and explained to the students first.
- **Handouts**
- **In-class Written Assessment**

**Delivery Requirements:**  
 (cont'd)

**This course may be delivered:**

- **In-Person:** gathers participants in the same physical location at the same time. Provides face-to-face interaction with the opportunity for participants to share and discuss what they are learning. Allows Hands-On practical exercises.
- **Hybrid:** a combination of In-Person and Virtual Live sessions. Virtual Live sessions are a shared online space where learners and trainers work together simultaneously. Usually, these interactions take place through a videoconferencing platform (ex. Zoom, Microsoft Teams). Lectures/ Demonstrations may be delivered in a Virtual Live Classroom; however, the Hands-On portions must be delivered In-Person.

**This course may NOT be delivered:**

- **Virtual Live only:** a shared online space where learners and trainers work together simultaneously. Usually, these interactions take place through a videoconferencing platform (ex. Zoom, Microsoft Teams).
- **On-Demand:** self-paced and can be taken anytime and anywhere from a device with internet access. No live instructor needed. On-Demand is only acceptable for courses that are SST only.

**Hybrid Training must comply with the following:**

- The course must be approved by the Department.
- The provider must confirm the identification of the individual taking Virtual Live training by adhering to the actively proctored online format requirements:
  - The provider must confirm the identification of the individual prior to providing secure access to the online training.
  - The individual must attest that they are the individual who received the online access and will complete the training without assistance. The online program must have secure access and monitor participation during the course of training to ensure that the individual receiving the training is present for the entirety of the training.
- The provider must ensure that participants have their web-cameras activated and are on-camera for the duration of class.
- For courses that include Hands-On training, providers may deliver the Hands-On portion of the training in-person and the remaining portion through either a live virtual classroom or live webinar.
- The provider must notify the Department when the Hands-On portion of the course/class is scheduled.
- All students must be scheduled at the same time to receive the Hands-On training.

**Facility Requirements:**

**Per 1 RCNY §105-03 (d) (4) Course Facilities:**

**The course facilities must:**

- Have sufficient room to accommodate all expected attendees and the equipment needed to perform Hands-On exercises, where required as part of the course.
- Make provisions for the presentation of training material in all media types (computer, projector, video/ DVD player, etc.) and
- 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.

Training may be held at construction sites, provided the above requirements are met.

<b>Instructor Requirements:</b>	<p><b>Per 1 RCNY §105-03 (e) Course Instructors:</b></p> <p><b>Course providers must require that course instructor(s):</b></p> <ul style="list-style-type: none"> <li>• Demonstrate that they are credentialed or trained in instructional methods and learning processes.</li> <li>• Successfully demonstrate their 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.</li> <li>• 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.</li> <li>• Comply with all applicable Federal, State, and local laws, rules, and regulations,</li> <li>• Be in compliance with the Department’s Industry Code of Conduct.</li> </ul> <p><b>In addition, course providers must require that course instructors:</b></p> <ul style="list-style-type: none"> <li>• Be an OSHA-authorized trainer for the Construction Industry Outreach Program.</li> </ul>
<b>Course Requirements:</b>	<p>Each section of the Course Content Requirements must be covered using its designated Instructional Delivery Method. 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 licensee.</p> <p>The Instructional Materials used in this course must contain all current applicable NYC Construction Code references, current rules, policies, and bulletins.</p> <p>All statistics referenced should reflect the latest publicly available statistics. The selection of Case Studies should prioritize incidents in NYC since the prior renewal period and contain relevant and illustrative photos where available.</p> <p>Refresher or Renewal Courses should focus on the updates since the prior renewal period.</p>

**Course Content Requirements**

1. Introduction to Rigging – include instruction on:
  - Inspection
  - Maintenance
  - Repair
  - Use and installation of rigging equipment
  - Hazards associated with rigging
  - The relevant sections of the Building Code and industry practice with regard to rigging.
  - The definition of rigging and the traditional uses for rigging in the construction environment, including:
    - material hoisting,
    - suspended scaffolds, and
    - industrial rope access (IRA).
  - Course emphasis is on material hoisting; additional training is required for suspended scaffolds and IRA work.
  
2. Crane & Rigging Incidents
  - Common causes of incidents with cranes
  - Historical crane incidents in NYC and other major cities
  - Overview of rigging incident statistics for the most current 24-month period:
    - Failure; injury; death.
  - Close review of two failure scenarios with emphasis on what went wrong and how the incident could have been prevented.
  
3. CFR 29 OSHA 1926 Overview
  - Subparts:
    - M (Fall Protection)
    - CC (Cranes and Derricks in Construction)
  
4. NYC Construction Codes Overview- all applicable:
  - Code
  - Rules
  - Related Department policy statements,
  - Regulatory notices, bulletins, and memos, including:
    - 2022 Building Code
    - Chapter 33
    - 1 RCNY 3316-01 & 1 RCNY 3319-01
  
5. NYC Department of Buildings Overview – all applicable:
  - Administrative standard operating procedures,
  - Policy procedure notices
  - Permits/Department notifications
  - Forms
  - Filing and site documents
  - Plans
  - Inspection checklists/logs
  - Wind and weather advisories

**Instruction Delivery Method**

Classroom Lecture/Discussion w A/V

Classroom Lecture/Discussion w A/V

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Classroom Lecture/Discussion w A/V

## Course Content Requirements

## Instruction Delivery Method

### 6. Lifting & Lowering Load

- Overview of general practices involved with hoisting:
  - Steel
  - Concrete buckets
  - Rebar
  - Masonry
  - Curtain walls
  - Similar items commonly hoisted during construction
- Maneuvering and drifting loads
- Hazards of:
  - Operating in a dense urban environment
  - High winds
  - Effects of wind on rigging
  - Operating near power lines
- Prohibition against hoisting over:
  - Pedestrians
  - Traffic
  - Adjoining buildings
- Overhead protection/safety exclusion zones during rigging
- Hazard signage for:
  - Sidewalk sheds
  - Barriers
  - Flag persons
- Requirements for guardrails and safety netting
- Securing rigging platforms during the day and at the end of the shift
- When a licensed rigger or rigging foreman is required
- When a critical pick plan is required

Classroom Lecture/Discussion w A/V

### 7. Ropes, Knots & Hitches Overview

- Common types of ropes (wire and fiber)
- Grades of rope and their application
- Handling of ropes
- Common knots and hitches and their application
- Rope and knot strength
  - How hitches and angles impact rope strength
- Review of manufacturers' specifications & limitations for ropes

Classroom Lecture/Discussion w A/V

### 8. Rigging Equipment Overview

- Overview of common types of rigging equipment, their use, handling, strength, and application, including:
  - Fasteners
  - Hooks
  - Shackles
  - Thimbles
  - Eyes
  - Other connection & termination of ropes
  - Tackle blocks
  - Slings
  - Come-alongs
  - Pulleys
  - Chains
- Review of manufacturers' specifications & limitations for rigging equipment.

Classroom Lecture/Discussion w A/V

### 9. Inspection of Ropes & Rigging Equipment

- Inspection process & safety checklists, including what to inspect, how to inspect, and how frequently to inspect.
- Identification of wear, defects, and failure signs in all rigging equipment.
- Steps to take if a hazard is discovered.
- Maintenance, repair/replacement of rigging equipment, rope, rigging equipment, etc.

Hands-On

**Course Content Requirements**

**Instruction Delivery Method**

10. Crane and Hoisting Machine Overview
- Overview of common types of cranes, hoisting machines, and hazards associated with them, including:
    - Crush hazards
    - Struck by objects
    - Fall hazards
    - Electrical hazards
  - Overview of crane and hoisting machine setup, including:
    - Ground Conditions
    - Tiebacks for mini-cranes
    - Outrigger cribbing and placement

*NOTE: A licensed hoisting machine operator is required for most cranes and hoisting machines.*

11. Signaling: Communication between workers & supervisors while rigging
- Radios
  - Hand signals
  - Flags, etc.

12. General Principles of Fall Protection
- Fall Clearance
  - Total Fall Distance Calculations
  - Minimizing Fall Forces
  - Guarding Against Falling Objects

13. Personal Protective Equipment & Fall Arrest Systems
- Inspection Procedures
  - Donning & Doffing Harness & Equipment
  - Care of Equipment & Systems

14. General Construction Site Hazards

15. Handouts
- [NYC Buildings Unsafe Condition \(311\) Notification Procedure](#)
  - [NYC/DOI Buildings Integrity Training Contact Information Sheet](#)

16. Review All Training Topics

17. Written (Multiple Choice) Assessment

- Classroom Demonstration w A/V
- Hands-On
- Classroom Lecture/Discussion w A/V
- Hands-On Demonstration & Practice
- Classroom Lecture/Discussion w A/V
- Provide Copy to Trainee & Discuss
- Discussion with Questions & Answers
- Classroom