

# FTI International: Crane Signalperson Training

This course for the Finishing Trades Institute (FTI) International was intended to provide a comprehensive and immersive introduction to the FTI Crane Signalperson Program required by any signalperson on work sites. It included e-learning (with audio/video signaling practice), prework for the classroom, and an interactive practice experience in which learners could virtually practice signals with various types of cranes through typical movements to perfect signals before field training.

*Audience:* Adults seeking certification as a crane signalperson

*Development tools:* Captivate, Audacity, Photoshop

*Activities:* Instructional design, e-learning development, script writing, storyboarding (Captivate and virtual reality), assessment writing, QA, project management, directing photo shoots and voiceover recording.



# FTI: Crane Signalperson Training

Course Links for Review

## Module 01: Introduction

- [Lesson 01: Introduction](#) | January 31, 2017

## Module 02: Basic Crane Knowledge

- [Lesson 01: Crane Types and Configurations](#) | March 03, 2017
- [Lesson 02: Principles of Crane Operations](#) | March 08, 2017
- [Lesson 03: Quadrants of Crane Operations](#) | March 17, 2017
- [Lesson 04: Crane Load Charts](#) | March 20, 2017
- [Lesson 05: Crane Capacity Factors](#) | May 12, 2017

## Module 03: Hand Signals

- [Lesson 01: General Requirements](#) | May 12, 2017
- [Lesson 02: Signals for Mobile Cranes](#) | May 12, 2017
- [Lesson 03: Signals for Tower Cranes](#) | May 12, 2017

## Module 04: Voice Commands

- [Lesson 01: Voice Commands](#) | February 23, 2017

## Module 05: Safety Standards and Regulations

- [Lesson 01: Key Safe Work Practices](#) | February 03, 2017
- [Lesson 02: People and Power](#) | February 17, 2017



## Objectives

- Recall why ignoring crane safety requirements leads to injuries or fatalities.
- Recognize common causes of crane incidents from OSHA studies and how results influence signalperson competency requirements.
- Explain the purpose of the NCCCO Signalperson Certification program.
- Describe components of the Crane Signalperson Training Program and how it prepares a candidate for NCCCO certification.



## Module Objectives

### MODULE

#### BASIC CRANE KNOWLEDGE

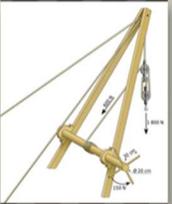
### LESSON

#### CRANE TYPES & CONFIGURATIONS

- Identify different types of cranes and basic configurations.
- Outline various principles of crane operations.
- Define the 4 quadrants of crane operations.
- Describe the reasoning behind crane load charts and their usage on job sites.
- Explain crane capacity factors on a job site and their significance to overall crane operations.



## CRANES THROUGHOUT HISTORY

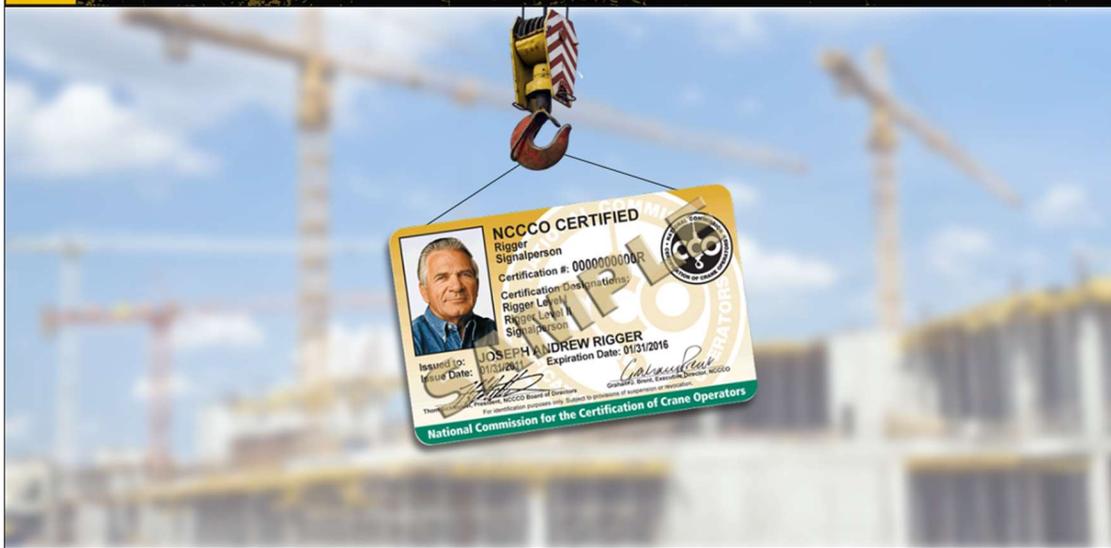
Greeks	Romans	Medieval	Renaissance	Modern
				
800s-500s BCE	100s BCE -400s CE	1200s-1500s CE	1400s-1700s CE	1700s-1900s CE



## Romans – 100s BCE through 400s CE

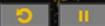


- Crane came from the original jibs appearance.
- Types
  - A-frame
  - Roman single masted
  - Human-treadmill



### KNOWLEDGE REVIEW





## WIRE ROPE INSPECTION

A.I.S.I. NUMBER	EQUIPMENT	NUMBER OF WIRING ROPES IN ONE ROPE LAY	BROKEN WIRES IN WIRING ROPES		
			IN ONE STRAND	IN ONE ROPE LAY	AT END CONNECTION
<b>Birdcaging</b>					
830.2	Overhead and Gantry Cranes	12	4	Not Specified	Not Specified
<b>Frayed/corroded wires</b>					
830.4	Portal, Tower and other Cranes	6	3	3	2
830.5	Overhead	6	3	3	2
830.7	Based Mounted	6	3	3	2
<b>Overlap</b>					
830.9	Hoisting Cranes	6	3	3	2
830.10	Hoisting Cranes	6	3	2"	2
830.6	Material Hoists	6	Not Specified	Not Specified	Not Specified



# WIRE ROPE INSPECTION



## Question 1

What factor does the location of the center of gravity of a mobile crane depend on?

- The tipping point
- The weight and location of its heaviest component
- The weight of the crane chassis
- How solid the crane's footing is

Review your report!



NEXT

KNOWLEDGE REVIEW



Question 1 of 5





SELECT MODE

IDENTIFY

HAND SIGNALS

VOICE COMMANDS

PRACTICE

FREEPLAY

VOICE SIGNAL TEST

CONTINUE

# SELECT CRANE TYPE



BACK

CONTINUE

0:05

0 / 10

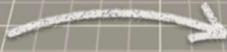
SIGNALPERSON PERFORMS SIGNALS HERE.



CRANE ACTIONS TAKE PLACE HERE.



REVIEW THIS SCREEN. WHEN YOU'RE READY TO START THE EXERCISE, CLICK BEGIN.



BEGIN

## HAND SIGNALS

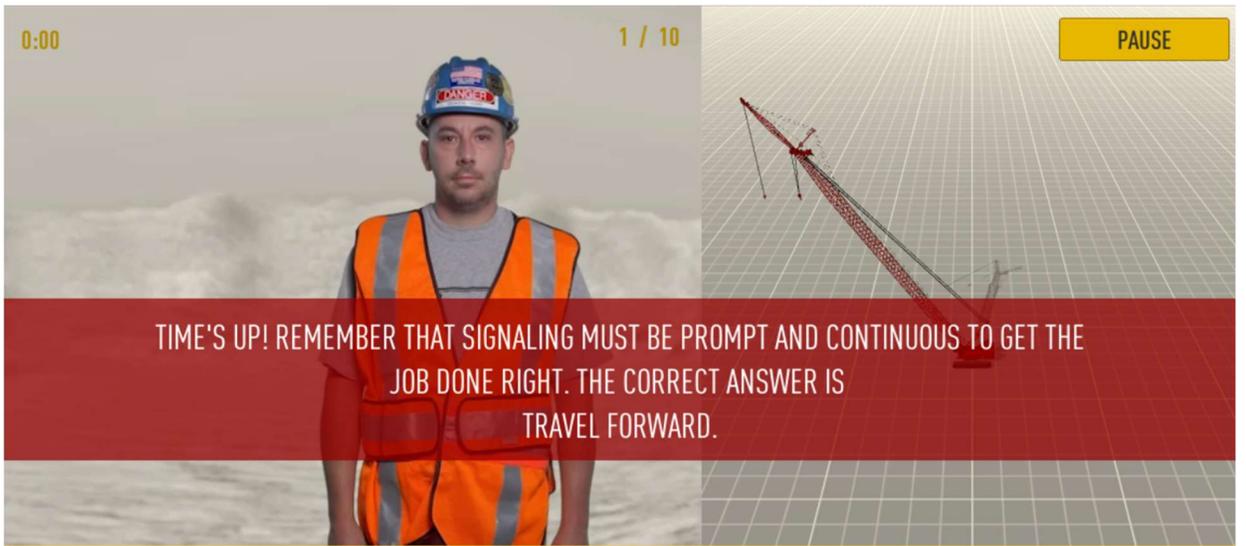
SELECT APPROPRIATE CRANE FUNCTIONS HERE





HAND SIGNALS

STOP	HOIST	BOOM UP	SWING LEFT	EXTEND BOOM	BOOM UP LOWER LOAD	TRAVEL FORWARD	LEFT TRACK FORWARD	RIGHT TRACK FORWARD	TROLLEY IN	MAIN LINE
	LOWER	BOOM DOWN	SWING RIGHT	RETRACT BOOM	BOOM DOWN HOIST LOAD	TRAVEL REVERSE	LEFT TRACK REVERSE	RIGHT TRACK REVERSE	TROLLEY OUT	WHIP LINE



HAND SIGNALS

