Module Overview

This module introduces the trainee to the basic terminology and equipment used in the heavy equipment trade. The trainee will learn what to expect from an apprenticeship program in heavy equipment, what makes a good operator, and the importance of safety.

Objectives

Upon completion of this module, the trainee will be able to do the following:

1. Explain the basic terminology, types, and uses of equipment.
2. Identify career opportunities available to heavy equipment operators and explain the purpose and objectives of an apprentice training program.
3. Explain the responsibilities and characteristics of a good operator.
4. Explain the importance of heavy equipment safety.

Performance Tasks

This is a knowledge-based module. There are no performance tasks.

Materials and Equipment

Markers/chalk
Pencils and scratch paper
Whiteboard/chalkboard
*PowerPoint® Presentation Slides

Multimedia projector and screen
Computer
Appropriate personal protective equipment
Trade Terms Quiz*
Module Examinations**

* Located at the back of the Trainee Guide module
** Single-module AIG purchases include the printed exam. If you have purchased the perfect-bound version of this title, download these materials from the IRC using your access code.

Safety Considerations

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. Review safety guidelines associated with working on or around heavy equipment. Emphasize the importance of proper housekeeping.

Additional Resources

This module presents thorough resources for task training. The following resource material is suggested for further study.

Teaching Time for This Module

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2 1/2 hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 5 hours are suggested to cover Orientation to the Trade. You will need to adjust the time required for hands-on activity and testing based on your class size and resources.

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<td>F. Module Examination</td>
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<tr>
<td>1. Trainees must score 70% or higher to receive recognition from NCCER.</td>
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<tr>
<td>2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.</td>
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</table>
Module Overview

This module introduces the trainee to working around heavy equipment in a safe and responsible manner. The trainee will learn how to use personal protective equipment, set up barricades and barriers, and use flags and paddles to control traffic. This module also covers trenching and excavation safety precautions.

Objectives

Upon completion of this module, the trainee will be able to do the following:

1. Explain the importance of safety when working with heavy equipment.
2. State the purposes of signs, tags, barricades, and lockout/tagout devices used on construction sites.
3. Describe the long- and short-term health effects, first-aid measures, handling and storage, and/or required personal protective equipment (PPE) for a chemical using a material data safety sheet (MSDS).
4. Identify safeguards used in a highway construction work zone.
5. State general guidelines for safe operation, maintenance, and transportation of heavy equipment.
6. Explain the dangers of working around an excavation area with heavy equipment.

Performance Tasks

Under the supervision of the instructor, the trainee should be able to do the following:

1. Demonstrate how to use various types of personal protective equipment (PPE):
   - Hard hat
   - Safety glasses
   - Ear protection
   - Gloves
   - Safety harness
   - Reflective safety vest
2. Place barricades and temporary traffic control devices for a highway construction zone.
3. Demonstrate how to use flags or paddles to control traffic.

Materials and Equipment

| Markers/chalk | Temporary traffic control devices |
| Pencils and scratch paper | Flags and paddles |
| Whiteboard/chalkboard | Personal protective equipment (PPE), including: |
| Heavy Equipment Operations Level One | Hard hat |
| PowerPoint® Presentation Slides | Safety glasses |
| Multimedia projector and screen | Gloves |
| Computer | Safety harness |
| Appropriate personal protective equipment | Samples of various soil types |
| Copy of the MUTCD | Trade Terms Quiz* |
| Several different respirator cartridges | Module Examinations** |
| Barricades | Performance Profile Sheets** |

* Located at the back of the Trainee Guide module
** Single-module AIG purchases include the printed exam and performance task sheet. If you have purchased the perfect-bound version of this title, download these materials from the IRC using your access code.
Safety Considerations

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. Review safety guidelines associated with working on or around heavy equipment. Emphasize the importance of proper housekeeping.

Additional Resources

This module presents thorough resources for task training. The following resource material is suggested for further study.


*HazCom for Construction*. DVD. DuPont Sustainable Solutions – Training Solutions. Virginia Beach, VA.


Teaching Time for This Module

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 10 hours are suggested to cover Heavy Equipment Safety. You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

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<th>Topic</th>
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<td>C. PT/Laboratory</td>
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<tr>
<td>1. Have the trainees place barricades and temporary traffic control devices for a highway construction zone. This laboratory corresponds to Performance Task 2.</td>
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<tr>
<td>2. Have the trainees demonstrate how to use flags or paddles to control traffic. This laboratory corresponds to Performance Task 3.</td>
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<tr>
<td>D. Hazard Communication</td>
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<td>1. Material Safety Data Sheets</td>
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<td>2. Noise</td>
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</table>
Session II. Heavy Equipment Safety

A. Heavy Equipment Safety
   1. Job-Site Safety
   2. Equipment Safety
   3. Personal Safety
   4. PT/Laboratory
      Have the trainees demonstrate how to use various types of personal protective equipment (PPE). This laboratory corresponds to Performance Task 1.
   5. Weather Hazards
   6. Moving Equipment Safely
   7. Heavy Equipment Maintenance

Session III. Trenching and Excavation Safety

A. Trenching and Excavation Safety
   1. Excavation Planning
   2. Trenching Hazards
   3. Trench Failure
   4. Soil Hazards
   5. Guidelines for Working Near a Trench
   6. Making the Trench Safe
   7. Personal Safety

Session IV. Review and Testing

A. Review

B. Module Examination
   1. Trainees must score 70% or higher to receive recognition from NCCER.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.

C. Performance Testing
   1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.
Module Overview

This module introduces the most commonly used heavy equipment machines, including dump trucks, backhoes, excavators, and dozers. It also provides an overview of heavy equipment used in the mining industry. Coverage of drive systems and hydraulic systems is included.

Objectives

Upon completion of this module, the trainee will be able to do the following:

1. Identify the various types of heavy equipment and explain their primary uses.
2. Identify and explain the systems that make up the drive system used on heavy equipment.
3. Explain the basics of a hydraulic system and identify hydraulic components.

Performance Tasks

Under the supervision of the instructor, the trainee should be able to do the following:

1. Identify the various types of heavy equipment and their uses.
2. Identify the basic parts of each type of equipment and explain the differences in models of type of equipment.

Materials and Equipment

Markers/chalk
Pencils and paper
Whiteboard/chalkboard
Heavy Equipment Operations Level One
  PowerPoint® Presentation Slides
Multimedia projector and screen
Computer

Appropriate personal protective equipment
Various pieces of heavy equipment
Sales brochures from heavy equipment distributors and manufacturers
Trade Terms Quiz*
Module Examinations**
Performance Profile Sheets**

* Located at the back of the Trainee Guide module
** Single-module AIG purchases include the printed exam and performance task sheet. If you have purchased the perfect-bound version of this title, download these materials from the IRC using your access code.

Safety Considerations

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. Review safety guidelines associated with working on or around heavy equipment. Emphasize the importance of proper housekeeping.

Additional Resources

This module presents thorough resources for task training. The following resource material is suggested for further study.

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 5 hours are suggested to cover Identification of Heavy Equipment. You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

<table>
<thead>
<tr>
<th>Topic</th>
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<td>C. Dump Trucks</td>
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<td>2. Belowground Mining Equipment</td>
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<tr>
<td>N. PT/Laboratory</td>
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</table>

Have trainees identify the various types of heavy equipment and their uses. This laboratory corresponds to Performance Task 1.
Session II. Vehicle Drive System; Hydraulic System; Review and Testing

A. Vehicle Drive System
   1. Engines
   2. Fuel System
   3. Exhaust System
   4. Cooling System
   5. Electrical System
   6. Lubrication System
   7. Air Filtration System

B. Hydraulic System
   1. Hydraulic Fundamentals
   2. Hydraulic Brakes and Clutches
   3. Hydraulic Power Couplers
   4. Hydraulic Pumps

C. PT/Laboratory
   Have trainees identify the basic parts of each type of equipment and explain the differences in models of type of equipment. This laboratory corresponds to Performance Task 2.

D. Review

E. Module Examination
   1. Trainees must score 70% or higher to receive recognition from NCCER.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.

F. Performance Testing
   1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.
Module Overview

In this module, the trainee will learn about the pre-operational checks and operator maintenance tasks for heavy equipment. The trainee will learn basic startup procedures and will be introduced to basic operation of the various heavy equipment machines. The purpose of the module is to provide the trainee with an opportunity for some hands-on time.

Objectives

Upon completion of this module, the trainee will be able to do the following:

1. Describe basic prestart activities for heavy equipment machinery.
2. Describe basic safety measures associated with operating heavy equipment.
3. Explain how to properly start, operate, and shut down the following types of heavy equipment: utility tractors, dozers, loaders, backhoes, excavators, compaction equipment, motor graders, scrapers, on-road dump trucks, off-road dump trucks, forklifts, skid steers, and trenchers.

Performance Tasks

Under the supervision of the instructor, the trainee should be able to do the following:

1. Perform basic prestart inspection, startup, operational movement, and shutdown for the following types of heavy equipment:

   - Utility tractors
   - Dozers
   - Loaders
   - Backhoes
   - Excavators
   - Compaction equipment
   - Motor graders
   - Scrapers
   - On-road dump trucks
   - Off-road dump trucks
   - Forklifts
   - Skid steers
   - Trenchers

Materials and Equipment

- Markers/chalk
- Pencils and paper
- Whiteboard/chalkboard
- Multimedia projector and screen
- Computer
- Appropriate personal protective equipment
- Operator’s manuals
- Heavy equipment machines including:
  - Utility tractors
  - Dozers
  - Loaders
  - Backhoes
  - Excavators
  - Compaction equipment
  - Motor graders
  - Scrapers
  - On-road dump trucks
  - Off-road dump trucks
  - Forklifts
  - Skid steers
  - Trenchers

* Located at the back of the Trainee Guide module
** Single-module AIG purchases include the printed exam and performance task sheet. If you have purchased the perfect-bound version of this title, download these materials from the IRC using your access code.
Safety Considerations

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. Review safety guidelines associated with working on or around heavy equipment. Emphasize the importance of proper housekeeping.

Additional Resources

This module presents thorough resources for task training. The following resource material is suggested for further study.

- *HazCom for Construction*. DVD. DuPont Sustainable Solutions–Training Solutions. Virginia Beach, VA.

Teaching Time for This Module

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 27½ hours are suggested to cover Basic Operational Techniques. You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

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Session II. Startup Activities
A. Startup Activities
   1. Indicator Checks
   2. Starting Aids
   3. Starting
   4. Warmup

Sessions III–X. Equipment Operations; Shutdown Activities
A. Equipment Operations
   1. Construction and Steering
   2. Basic Operations
   3. Machine-Specific Operations
B. Shutdown Activities
C. PT/Laboratory
   Have trainees perform basic inspection, startup, operational movement, and shutdown of specified heavy equipment. This laboratory corresponds to Performance Task 1.

Session XI. Review and Testing
A. Review
B. Module Examination
   1. Trainees must score 70% or higher to receive recognition from NCCER.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.
C. Performance Testing
   1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.
Module Overview

This module describes the use of tractors in construction. It covers basic tractor operation, controls, attachments, maintenance, and safety guidelines.

Objectives

Upon completion of this module, the trainee will be able to do the following:

1. Identify the operating controls of a typical utility tractor.
2. Describe the different types of transmissions used on utility tractors.
3. Explain the safety measures necessary to operate utility tractors and hydraulic systems.
4. Describe the proper methods for operating a utility tractor on slopes and hills.
5. Explain the proper method for adjusting a drawbar.
6. Perform prestart inspection and maintenance procedures.
7. Start, warm up, and shut down a gasoline-powered and diesel-powered tractor engine.
8. Perform basic maneuvering with a tractor.
9. Attach implements to a drawbar, three-point hitch, or power takeoff.
10. Connect hydraulic-powered attachments to the tractor.

Performance Tasks

Under the supervision of the instructor, the trainee should be able to do the following:

1. Perform prestart inspection and maintenance procedures.
2. Properly start, warm up, and shut down a gasoline-powered and diesel-powered engine tractor.
3. Perform basic maneuvering with a tractor.
4. Attach implements to a drawbar and three-point hitch.
5. Attach and detach implements to a power takeoff.

Materials and Equipment

Markers/chalk
Pencils and paper
Whiteboard/chalkboard
Heavy Equipment Operations Level One PowerPoint Presentation Slides
Multimedia projector and screen
Computer
Appropriate personal protective equipment
Tractor

Attachments:
Drawbar/hitch types
PTO types
Tractor operator manual
Operator maintenance checklists
Manufacturer literature on tractor transmissions
AEM safety manual
Trade Terms Quiz*
Module Examinations**
Performance Profile Sheets**

* Located at the back of the Trainee Guide module
** Single-module AIG purchases include the printed exam and performance task sheet. If you have purchased the perfect-bound version of this title, download these materials from the IRC using your access code.
Safety Considerations

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. Review safety guidelines associated with working on or around heavy equipment. Emphasize the importance of proper housekeeping.

Additional Resources

This module presents thorough resources for task training. The following resource material is suggested for further study.

*Site Layout Levels 1 and 2, Latest edition. Alachua, FL: NCCER.*

Teaching Time for This Module

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 17½ hours are suggested to cover *Utility Tractors.* You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

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<td>A. Introduction</td>
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<td>B. Identification of Equipment</td>
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<td>3. Safety Rules for Operating a Tractor on Slopes or Hills</td>
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<td>4. Safety Rules for Operating the Hydraulic System</td>
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<td>2. Drawbar Adjustments</td>
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<td>3. Connecting an Attachment to the Drawbar</td>
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<td>4. Ballasting a Tractor</td>
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</tbody>
</table>
Session IV. Basic Preventive Maintenance and Operation

A. Basic Preventive Maintenance and Operation
   1. Servicing a Tractor
   2. Start, Warm Up, and Shut Down of a Gasoline- or Diesel-Powered Tractor
   3. Safely Stopping a Tractor
   4. Basic Tractor Operations
   5. Connecting an Attachment to a Three-Point Hitch
   6. Attaching a PTO
   7. Operating a PTO
   8. Connecting and Disconnecting Attachment Hydraulic Hoses

Sessions V and VI. PT/Laboratory

A. PT/Laboratory
   1. Have trainees perform prestart inspection and maintenance procedures. This task corresponds to Performance Task 1.
   2. Have trainees start, warm up, and shut down a gasoline-powered and diesel-powered engine tractor. This task corresponds to Performance Task 2.
   3. Have trainees perform basic maneuvering with a utility tractor. This task corresponds to Performance Task 3.
   4. Have trainees attach implements to a drawbar and three-point hitch. This task corresponds to Performance Task 4.
   5. Have trainees attach and detach implements to a power takeoff. This task corresponds to Performance Task 5.

Session VII. Review and Testing

A. Review

B. Module Examination
   1. Trainees must score 70% or higher to receive recognition from NCCER.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.

C. Performance Testing
   1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.
Module Overview

This module introduces the trainee to the basic concepts and procedures related to the use of heavy equipment to perform earthmoving work. It identifies the most appropriate types of equipment for a given task and describes the use of the equipment to perform the work.

Objectives

Upon completion of this module, the trainee will be able to do the following:

1. Identify and explain earthmoving terms and methods.
2. Describe how to safely set up and coordinate earthmoving operations.
3. Identify and explain earthmoving operations.
4. Identify and explain soil stabilization methods.
5. Identify the best equipment for performing a given earthmoving operation.
6. List, in the correct order, the steps involved in an earthmoving operation.

Performance Tasks

Under the supervision of the instructor, the trainee should be able to do the following:

1. Draw a plan for basic earthmoving operations:
   - Clearing and grubbing
   - Excavating the foundation
   - Constructing embankments
   - Backfilling
   - Compacting
2. Lay out a basic earthmoving operation.
3. Identify and select the proper equipment for a given earthmoving operation.

Materials and Equipment

- Markers/chalk
- Pencils and paper
- Whiteboard/chalkboard
- Multimedia projector and screen
- Computer
- Appropriate personal protective equipment
- Jars with different types of soil
- Set of site plans including excavation drawings
- Marked grade and finish stakes
- Example of an NPDES stormwater permit
- Trade Terms Quiz*
- Module Examinations**
- Performance Profile Sheets**

* Located at the back of the Trainee Guide module
** Single-module AIG purchases include the printed exam and performance task sheet. If you have purchased the perfect-bound version of this title, download these materials from the IRC using your access code.

Safety Considerations

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. Review safety guidelines associated with working on or around heavy equipment. Emphasize the importance of proper housekeeping.
Additional Resources

This module presents thorough resources for task training. The following resource material is suggested for further study.


United States Environmental Protection Agency (EPA) web site, National Pollutant Discharge Elimination System (NPDES): www.epa.gov.

Teaching Time for This Module

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 12½ hours are suggested to cover Introduction to Earthmoving. You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Planned Time</th>
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<tr>
<td>A. Introduction</td>
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<td>C. Earthmoving Operations</td>
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<td>Session III. Earthmoving Operations, Part Three; Stabilizing Soils; Safety Guidelines</td>
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<td>11. Fill and Embankment</td>
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<td>12. Compaction</td>
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<td>D. Stabilizing Soils</td>
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<td>1. Choosing a Binder</td>
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<td>2. Preparing the Subgrade</td>
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<td>3. Spreading the Binder</td>
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<td>5. Stabilizing</td>
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<td>7. Checking Quality</td>
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</table>
E. Safety Guidelines
   1. Personal Safety
   2. Safeguarding Property
   3. Underground Utilities

Session IV. PT/Laboratory
A. PT/Laboratory
   1. Have trainees draw a plan for basic earthmoving operations, including:
      • Clearing and grubbing
      • Excavating the foundation
      • Constructing embankments
      • Backfilling
      • Compacting
      This laboratory corresponds to Performance Task 1.
   2. Have trainees lay out a basic earthmoving operation. This laboratory corresponds to Performance Task 2.
   3. Have trainees identify and select the proper equipment for a given earthmoving operation. This laboratory corresponds to Performance Task 3.

Session V. Review and Testing
A. Review
B. Module Examination
   1. Trainees must score 70% or higher to receive recognition from NCCER.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.
C. Performance Testing
   1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
   2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.
Module Overview

This module introduces the concept of preparing graded surfaces using heavy equipment. It also covers identification and interpretation of construction stakes and describes the methods for grading slopes.

Objectives

Upon completion of this module, the trainee will be able to do the following:

1. Explain the terms used in grade work.
2. Identify types of stakes and explain markings on grade stakes and benchmark (BM) stakes.
3. Identify equipment used by operators to check stakes.
4. Explain different types of slopes and slope ratio.
5. Check horizontal and vertical distance of cut and fill slope stakes.
6. Check finish subgrade on a cross slope.

Performance Tasks

Under the supervision of the instructor, the trainee should be able to do the following:

1. Identify types of stakes and markings on stakes.
2. Check horizontal and vertical distances of cut and fill slope stakes.
3. Check finish subgrade on a cross slope.

Materials and Equipment

- Markers/chalk
- Pencils and scratch paper
- Whiteboard/chalkboard
- Multimedia projector and screen
- Computer
- Appropriate personal protective equipment
- Samples of marked surveyor stakes:
  - Center line stakes
  - Offset stakes
  - Grade stakes
  - Slope stakes
  - Edge of pavement stakes
- Construction plans including topographical and grade information
- Leveling rods
- Sight level
- Automatic level
- Laser level
- Tripod
- Pocket leveling rod
- Hand level
- Measuring tape
- 18" rulers
- String
- Trade Terms Quiz*
- Module Examinations**
- Performance Profile Sheets**

* Located at the back of the Trainee Guide module
** Single-module AIG purchases include the printed exam and performance task sheet. If you have purchased the perfect-bound version of this title, download these materials from the IRC using your access code.

Safety Considerations

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. Review safety guidelines associated with working on or around heavy equipment. Emphasize the importance of proper housekeeping.
**Additional Resources**

This module presents thorough resources for task training. The following resource material is suggested for further study.


**Teaching Time for This Module**

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 15 hours are suggested to cover Grades. You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

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<tr>
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<td>A. Introduction</td>
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<td>B. Planning Grades</td>
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<td>1. Profiles</td>
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<td>C. Site Layout</td>
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<td>1. Common Stake Markings</td>
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<td>2. Setting Stakes</td>
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<td>3. Slope Stake Interpretation</td>
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<td>D. PT/Laboratory</td>
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<tr>
<td>Have trainees identify types of stakes and markings on stakes. This laboratory corresponds to Performance Task 1.</td>
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<tr>
<td><strong>Sessions III and IV. Performing Site Measurements</strong></td>
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<tr>
<td>A. Performing Site Measurements</td>
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<td>1. Manual Equipment</td>
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<td>4. Stakeless Systems</td>
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<td>B. PT/Laboratory</td>
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<tr>
<td>Have trainees check horizontal and vertical distances of cut and fill slope stakes. This laboratory corresponds to Performance Task 2.</td>
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<td><strong>Session V. Finish Grades</strong></td>
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<td>A. Finish Grades</td>
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<td>1. Finish Grade Stakes</td>
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<td>2. Checking Grades</td>
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<tr>
<td>B. PT/Laboratory</td>
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<tr>
<td>Have trainees check finish subgrade on a cross slope. This laboratory corresponds to Performance Task 3.</td>
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</tbody>
</table>
Session VI. Review and Testing

A. Review

B. Module Examination

1. Trainees must score 70% or higher to receive recognition from NCCER.
2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.

C. Performance Testing

1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
2. Record the testing results on Training Report Form 200 and submit the results to the Training Program Sponsor.