

WORK PROCESSES:

1. The apprentice shall receive the necessary instruction and experience to become a journey-level worker versed in the theory and practice of the occupation. (See ORS 660.155 / ORS 660.157 / OAR 839-011-0360)
2. The following is a condensed schedule of work experience that every apprentice shall follow as closely as conditions will permit. (See ORS 660.126 (1c) OAR 839-011-0360; OAR 839-011-0140)

NOTE: In licensed occupations apprentices must complete the minimum required total hours prior to being referred to the license examination.

NOTE 1: An apprentice shall elect a major course of advanced progress in the program prior to advancement to second period

- **Heavy Equipment Operator with Advanced Grade and Excavation Skills : MAJOR 1**
- **Heavy Equipment Operator with Advanced Paving Skills: MAJOR 2**
- **Heavy Equipment Operator with Advanced Crane Operation Skills : MAJOR 3**

The major course declaration shall be considered by the Committee not more than 60 days subsequent to notice of election by the apprentice. The declaration of a major will be accepted by the Committee based upon its policies and implementing procedures.

NOTE 2: Safety, Site Layout, Materials Handling, Equipment Placement, Lubrication, Orientation to attachments and support equipment and Preventative Maintenance are integrated in all phases of every work process.

Note 3: Completion requirements:

- **Heavy Equipment Operator with Advanced Grade and Excavation Skills**
Apprentices must meet or exceed program certification requirements for at least 4 equipment categories, not to include Lift Equipment
- **Heavy Equipment Operator with Advanced Crane Operation Skills and Heavy Equipment Operator with Advanced Crane Operation Skills**

Apprentices must meet or exceed program certification requirements for at least 3 equipment categories.

Work Processes	Approximate Hours
Basic Heavy Equipment Operator Skills:	
Trade Specific Safety Experience (Mandatory all Majors) <ul style="list-style-type: none"> ▪ Confined Space Safety ▪ Flagging, signing, and traffic safety awareness ▪ Hazard Material Recognition ▪ Trenching and site excavation safety 	250
Utility/Laborer hours	0-500
Grade and Plane Checking <ul style="list-style-type: none"> • Apprentices in the advanced Crane Operation and Advanced Paving Skills majors may substitute work experience specific to their major area of concentration • Apprentices in the Advanced Grade and Excavation major will achieve at least 500 hours in this category 	250-500
Basic Portable & Ancillary Equipment * Distribution in each component required with a minimum 1,000 hours for apprentices in the Advanced Grade and Excavation major * Apprentices in the Advanced Crane Operations and Advanced Paving Skills majors may substitute work experience specific to their major area of concentration <ul style="list-style-type: none"> ▪ Pavement Equipment, Breaker & Saws ▪ Concrete Equipment, including Pumps & Saws ▪ Compactors and Lift Equipment [not more that 1,000 hours creditable to completion] ▪ Generators, Compressors & Pumps ▪ Skid Steer 	0-1,500

Subtotal	500-2,250
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Heavy Equipment Operator with Advanced Grade & Excavation Skills : MAJOR 1	
Experience distribution required in each equipment category:	
<ul style="list-style-type: none"> ▪ Backhoe (Rear bucket and implements) ▪ Dozer ▪ Off-road Dump Truck ▪ Excavator ▪ Grader/Rock Spreader ▪ Loader (including front loader, skid steer loader, and backhoe loader) [Maximum 2,000 hours credible to completion] ▪ Scraper ▪ Skid Steer ▪ Miscellaneous Equipment [Maximum 500 total hours creditable to completion] <ul style="list-style-type: none"> ○ Drilling Machine ○ Trenching Machines ○ Rubber Tired Tractor ○ Guardrail Punch ○ Crusher (including conveyors) ○ Screening Plant 	
Basic Heavy Equipment Operator Skills	1,750-2,750
Advanced Grade and Excavation Major Hours	5,250-6,500
Total	8,000

Heavy Equipment Operator with Advanced Paving Skills : MAJOR 2	
An individual must have at least 500 hours OJT in each category; at least 2,000 hours OJT in two categories.	
Paving Operations (Concrete & Asphalt) <ul style="list-style-type: none"> ▪ Roller ▪ Screed Operator / Assistant to Operator (including Raker) ▪ Sweeper ▪ Paving Machine Operator ▪ Bidwell Operator ▪ Tiner Operator ▪ Oiler ▪ Crusher / Plant Operations ▪ Crusher Operator / Assistant to the Operator ▪ Hot Plant Operator / Assistant to the Operator ▪ Concrete Plant Operator / Assistant to the Operator Miscellaneous Operations: Loader, Hoe, Dozer, Grader Loader with Attachments Haul Road Truck Guardrail Punch Concrete Pump(s)	
Basic Heavy Equipment Operator Skills Hours	250-1,000
Advanced Paving Skills Major Hours	7,000-7,500
Total	8,000

Heavy Equipment Operator with Advanced Crane Operation Skills : MAJOR 3	
<p>An individual must have at least 1,000 hours OJT in the categories of Assistant to the Operator and Material Handling and Rigging and Communications Work Processes. All other OJT hours for graduation from the program may be obtained in the remaining work process categories. Nor more that 500 hours OJT credit each for forklift and elevator operations will be credited towards completion of the major.</p> <p>Assistant to the operator:</p> <ul style="list-style-type: none"> ▪ Hydro < 50 Tons ▪ Hydro > 50 Tons ▪ Conventional Crane ▪ Lattice Boom Crane ▪ Tower Crane ▪ Whirley Crane ▪ Drill Helper <p>Material Handling, Rigging and Communications:</p> <ul style="list-style-type: none"> ▪ Forklift ▪ Elevator ▪ Wire Rope and other attachments for lifting ▪ Radio Communications ▪ Hand Signals ▪ Crane Operation ▪ Hydro < 50 Tons ▪ Hydro > 50 Tons ▪ Conventional Crane ▪ Lattice Boom Crane ▪ Boom Truck ▪ Drill Operator <p>Dredging / Floating Crane Operations:</p> <ul style="list-style-type: none"> ▪ Deckhand ▪ Deck Engineer ▪ Assistant to the Deck Engineer ▪ Fireman ▪ Work Boat Operator ▪ Diesel & Electric Engineer ▪ Floating Clamshell Operator ▪ Floating Crane Operator ▪ Piledriver Operator ▪ Welding & Repair Maintenance ▪ Winch Operator ▪ Fuel & Servicing 	
Basic Heavy Equipment Operator Skills Hours	250-1,000
Advanced Crane Operation Major Hours	7,000-7,500
Total	8,000

Note: The committee realizes that the completion of 8,000 hours of on-the-job training is the ideal, but recognizes that most apprentices will not be able to fulfill the total amount of hours specified in every work process set forth in the standard. When an apprentice is unable to fulfill the total work hours in each work process the committee will evaluate the apprentice's knowledge, skills and ability in each work process. The evaluation and summary of the additional instruction will be noted in the apprentice's file.