

PROGRAM: Heavy Equipment Operations

**PROGRAM
CIP CODE:** 49.0200.00

DESCRIPTION: The **Heavy Equipment Operations** program prepares students to apply technical knowledge and skills to operate and maintain a variety of heavy equipment such as a crawler tractor, motor graders and scrapers, shovels, rigging devices, hoists, and jacks. Includes instruction in digging, ditching, sloping, stripping, grading and backfilling, clearing and excavating. The program is designed and delivered as a coherent sequence of experiences using technical instruction, academic foundations, experiential learning, supervised occupational experience and leadership and personal development through the Career and Technical Student Organization, SkillsUSA.

RECOMMENDED PROGRAM SEQUENCE OF COURSES:

**Career
Preparation** The following describes the recommended courses developed from industry-validated skills necessary for initial employment or continued related education.

49.0200.10 **Heavy Equipment Operations I:** This foundation course will prepare students to use a wide variety of construction tools and equipment and maintain a safe work environment. The student will develop an understanding of construction math, financial operations, reading blueprints, basic rigging and basic construction techniques. The student will develop skills in oral and written communication as they relate to the construction industry. This course is designed to help students develop an enhanced understanding of teamwork, employability skills and career opportunities in the construction field.

-and-

49.0200.20 **Heavy Equipment Operations II:** This course prepares the individual to apply and demonstrate advanced technical knowledge and skills in various types of construction. This lab based course will provide the students an opportunity to participate in the planning, design and completion of project based activities.

And program may elect to add:

49.0200.75 **Heavy Equipment Operations - Internship:** This course provides CTE students an opportunity to engage in learning through participation in a structured work experience that can either be paid or unpaid and does not necessarily require classroom instruction that involves the application of previously developed Heavy Equipment Operations knowledge and skills.

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49.0200.80 **Heavy Equipment Operations - Cooperative Education:** This course utilizes a cooperative education methodology to combine school-based and supervised work-based learning experiences, directly related to the standards identified for the Heavy Equipment Operations program.

TEACHER CERTIFICATION REQUIREMENTS FOR THE HEAVY EQUIPMENT OPERATIONS PROGRAM

CAREER PREPARATION: The instructor must be CTE certified according to the following table

Heavy Equipment Operations	CERTIFICATES
	Types: PCTI, PCTIEP, SCTI, SCTIEP
Note:	
<ul style="list-style-type: none"> ▪ Heavy Equipment Operations, 49.0200.70 may be a part of the sequence and the teacher must hold a Cooperative Education Endorsement (CEN). ▪ Teacher/Coordinator 49.0200.75 is not required to have a Cooperative Education Endorsement (CEN). ▪ Teacher/Coordinator 49.0200.80 is required to have a Cooperative Education Endorsement (CEN). 	

CERTIFICATE ABBREVIATIONS FOR THE HEAVY EQUIPMENT OPERATIONS PROGRAM

Certificate Types	
PCTI	Provisional Career and Technical Education Industrial Technology
PCTIEP	Provisional Career and Technical Education Industrial and Emerging Technologies
SCTI	Standard Career and Technical Education Industrial Technology
SCTIEP	Standard Career and Technical Education Industrial and Emerging Technologies