



## New Program Report

**Date Submitted:**

08/31/2020

**Institution**

State Technical College of Missouri

**Site Information**

**Implementation Date:**

8/24/2021 12:00:00 AM

**Added Site(s):**

**Selected Site(s):**

State Technical College of Missouri, One Technology Drive, Linn, MO, 65051

**CIP Information**

**CIP Code:**

460412

**CIP Description:**

A program that prepares individuals to supervise, manage, and inspect construction sites, buildings, and associated facilities. Includes instruction in site safety, personnel supervision, labor relations, diversity training, construction documentation, scheduling, resource and cost control, bid strategies, rework prevention, construction insurance and bonding, accident management and investigation, applicable law and regulations, and communication skills.

**CIP Program Title:**

Building/Construction Site Management/Manager

**Institution Program Title:**

Civil Construction Technology

**Degree Level/Type**

**Degree Level:**

Associate Degree

**Degree Type:**

Associate in Applied Science

**Options Added:**

Collaborative Program:

N

**Mode of Delivery**

Current Mode of Delivery

Classroom

**Student Preparation**

Special Admissions Procedure or Student Qualifications required:

Students admitted to this program will have completed State Tech's Heavy Equipment Operations One-Year Certificate.



## New Program Report

### Specific Population Characteristics to be served:

The target population to be served is Heavy Equipment Operations Certificate graduates who want to earn an Associate in Applied Science degree to gain additional career options and improve their opportunities for career advancement before entering the work force.

### Faculty Characteristics

#### Special Requirements for Assignment of Teaching for this Degree/Certificate:

State Tech's Board of Regents Employment Policies state that, "Technical faculty requirements are a minimum of a bachelor's degree in an appropriate area and three years of appropriate business/industrial experience."

Technical faculty members are also required to obtain and maintain Career & Technical Educator certification by the Missouri Department of Elementary & Secondary Education.

#### Estimate Percentage of Credit Hours that will be assigned to full time faculty:

The estimated percentage of credit hours that will be taught by full-time faculty is 62%, which is based on the plan for 45 credits of 72 total program credits to be taught by current full-time instructors.

#### Expectations for professional activities, special student contact, teaching/learning innovation:

Some instructors are certified by the National Center for Construction Education & Research. NCCER has developed the Instructor Certification Training Program (ICTP) as part of the accreditation process. Some instructors are Associated General Contractors members.

Students will benefit from membership in State Tech's AGC Student Chapter that is sponsored by at least one instructor and allows them to observe and develop their skills with current industry leaders.

### Student Enrollment Projections Year One-Five

<b>Year 1</b>	<b>Full Time: 17</b>	<b>Part Time: 4</b>	
<b>Year 2</b>	<b>Full Time: 18</b>	<b>Part Time: 5</b>	
<b>Year 3</b>	<b>Full Time: 20</b>	<b>Part Time: 5</b>	<b>Number of Graduates: 18</b>
<b>Year 4</b>	<b>Full Time: 22</b>	<b>Part Time: 5</b>	
<b>Year 5</b>	<b>Full Time: 24</b>	<b>Part Time: 6</b>	<b>Number of Graduates: 21</b>

### Percentage Statement:

100.00

### Program Accreditation

#### Institutional Plans for Accreditation:

The program will be seeking accreditation by the Association of Technology, Management, and Applied Engineering (<https://www.atmae.org/page/Accreditation>) and/or the National Center for Construction Education & Research (<https://www.nccer.org/get-involved/organizations/accreditation-process>).

Because the final decision has not been reached regarding which accreditation(s) are most appropriate for the proposed program, an accreditation timeline has not been developed.

### Program Structure

#### Total Credits:

72



DEPARTMENT OF  
HIGHER EDUCATION &  
WORKFORCE DEVELOPMENT

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**Residency Requirements:**

The State Tech 2020-21 College Catalog states that, "To graduate from State Technical College of Missouri with an A.A.S. degree, a student is required to have earned a minimum of 32 credit hours in technical education from State Technical College of Missouri. The 32 credit hours in technical education must meet the requirements of the degree being sought."

**General Education Total Credits:**

19

**Major Requirements Total Credits:**

53

**Course(s) Added**

COURSE NUMBER	CREDITS	COURSE TITLE
HEO 147	4	Dozer, Scraper, and Compaction Equipment
HEO 108	1	Introduction to OSHA Regulations
HEO 148	4	Loader
HEO 122	3	Applied Measurements In Construction
HEO 139	2	Grade Operations
CVT 150	3	Construction Estimating I
HEO 131	3	Heavy Equipment Operations Internship
CVT 120	3	Engineering Documents
HEO 138	1	Advanced Operating Techniques
HEO 146	4	Backhoe and Excavator
HEO 100	1	First Aid and Safety
CVT 110	5	Materials Testing
HEO 150	4	Commercial Driver's License
HEO 121	1	Environmental Compliance
HEO 105	1	Orientation to the Trade
HEO 149	4	Motor Grader and Skid Steer
HEO 106	1	Introduction to Heavy Equipment Operations
HEO 102	1	Basics of Heavy Equipment Operation
CVT 250	3	Construction Management
COM 125	1	Job Search Strategies
HEO 134	3	Safety and Loss Control

**Free Elective Credits:**

0



## New Program Report

### **Internship or other Capstone Experience:**

One of the existing courses that is included in the proposed program is the HEO 131 Heavy Equipment Operations Internship course. Its course description reads, "The Heavy Equipment Operations Internship is comprised of on-the-job training provided by employers on actual construction sites. A training agreement specifies the tasks the student will be expected to perform."

### **Assurances**

I certify that the program is clearly within the institution's CBHE-approved mission. The proposed new program must be consistent with the institutional mission, as well as the principal planning priorities of the public institution, as set forth in the public institution's approved plan or plan update.

I certify that the program will be offered within the proposing institution's main campus, CBHE-approved service region or CBHE-approved off-site location.

I certify that the program will not unnecessarily duplicate an existing program within the geographically applicable area.

I certify that the program will build upon existing programs and faculty expertise.

I certify that the program can be launched with minimal expense and falls within the institution's current operating budget.

I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.

### Contact Information

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## CIVIL CONSTRUCTION TECHNOLOGY

*Classification of Instructional Programs – 46.0412*

### *Associate of Applied Science Degree*

<b>CORE CURRICULUM</b>			<b>Credit Hours</b>
HEO	100	First Aid and Safety	1
HEO	102	Basics of Heavy Equipment Operation	1
HEO	105	Orientation to the Trade	1
HEO	106	Introduction to Heavy Equipment Operations	1
HEO	108	Introduction to OSHA Regulations	1
HEO	121	Environmental Compliance	1
HEO	122	Applied Measurements In Construction	3
HEO	131	Heavy Equipment Operations Internship	3
HEO	134	Safety and Loss Control	3
HEO	138	Advanced Operating Techniques	1
HEO	139	Grade Operations	2
HEO	146	Backhoe and Excavator	4
HEO	147	Dozer, Scraper, and Compaction Equipment	4
HEO	148	Loader	4
HEO	149	Motor Grader and Skid Steer	4
HEO	150	Commercial Driver’s License	4
CVT	110	Materials Testing	5
CVT	120	Engineering Documents	3
CVT	150	Construction Estimating I	3
CVT	250	Construction Management	3
<b>SUB-TOTAL</b>			<b>52</b>
<b>GENERAL EDUCATION REQUIREMENTS</b>			
		Written Communication	3
		Oral Communication	3
		Mathematics	3
		Science with Lab	4
		Social Science	3
		Technical Literacy	3
<b>SUB-TOTAL</b>			<b>19</b>
<b>GRADUATION REQUIREMENTS</b>			
COM	125	Job Search Strategies	1
<b>SUB-TOTAL</b>			<b>1</b>
<p>It is a graduation requirement of the Civil Construction Technology for students to: 1) earn a grade of “C” or better in all courses; due to state licensing requirements, students must earn a grade of “B” or better in the CDL class.</p>			
<b>PROGRAM TOTAL</b>			<b>72</b>

**CIVIL CONSTRUCTION TECHNOLOGY PROGRAM STRUCTURE**

The proposed Civil Construction Technology program is designed for graduates of State Tech's current Heavy Equipment Operations (HEO) one-year certificate program who want to complete an Associate of Applied Science (AAS) degree to gain additional career options and improve their opportunities for career advancement before entering the work force.

The Civil Construction Technology curriculum includes all of the course work from State Tech's existing HEO program, four courses from the existing Civil Engineering Technology program, a Job Search Strategies graduation requirement course, and the general education requirements for a State Tech AAS degree.

HEO graduates who are prepared for college-level mathematics and writing courses will complete 27 credits to earn their Civil Construction Technology AAS Degree.

## **CIVIL CONSTRUCTION TECHNOLOGY AAS DEGREE**

### **DEMAND AND NEED DOCUMENTATION**

**I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.**

#### Documentation:

1. Student demand – The proposed program is designed to serve graduates of State Tech’s current Heavy Equipment Operations (HEO) one-year certificate program who want to complete an Associate of Applied Science (AAS) degree to gain additional career options and improve their opportunities for career advancement before entering the work force.
2. Market demand – The Missouri Economic Research and Information Center (MERIC) projects statewide 12.65% employment growth from 2016 through 2026 with 923 annual job openings for SOC Code 47-1011 First-Line Supervisors of Construction Trades and Extraction Workers that cross-walks to CIP Code 46.0412.
3. Societal need – The Associated General Contractors website states, “Transportation infrastructure plays a critical part in supporting the nation's economy and the construction industry plays a key role in building, maintaining, and improving the systems. Annual public investment in highway infrastructure is approximately \$160 billion, transit infrastructure is approximately \$30 billion, and airport runway improvement \$7 billion. Railroad investment is largely from the private sector and is approximately \$30 billion per year. Despite these investment levels, transportation infrastructure investment is woefully inadequate”