



DEPARTMENT OF  
HIGHER EDUCATION &  
WORKFORCE DEVELOPMENT

## New Program Report

**Date Submitted:**

10/24/2023

**Institution**

Ozarks Technical Community College

**Site Information**

**Implementation Date:**

7/1/2024 12:00:00 AM

**Added Site(s):**

**Selected Site(s):**

Ozarks Technical Community College, 1001 E. Chestnut Expressway, Springfield, MO, 65802

**CIP Information**

**CIP Code:**

460503

**CIP Description:**

A program that prepares individuals to practice as licensed plumbers by applying technical knowledge and skills to lay out, assemble, install, and maintain piping fixtures and systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems in home and business environments. Includes instruction in source determination, water distribution, waster removal, pressure adjustment, basic physics, technical mathematics, blueprint reading, pipe installation, pumps, welding and soldering, plumbing inspection, and applicable codes and standards.

**CIP Program Title:**

Plumbing Technology/Plumber

**Institution Program Title:**

Plumbing Technology Certificate

**Degree Level/Type**

**Degree Level:**

Certificate >= 1 Year but < 2 Year

**Degree Type:**

Certificate 1

**Options Added:**

Collaborative Program:

N

**Mode of Delivery**

Current Mode of Delivery

Classroom

**Student Preparation**

Special Admissions Procedure or Student Qualifications required:

N/A



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## New Program Report

Specific Population Characteristics to be served:

n/a

### Faculty Characteristics

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

Associates degree, industry recognized credential, or equivalent in the field of instruction. In some programs, 5 years of industry experience is required

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

Estimated percentage of credit hours that will be assigned to full time faculty is 60%.

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

Faculty members are required to document twenty hours of professional development on an annual basis. Faculty members assist with student advisement.

### Student Enrollment Projections Year One-Five

<b>Year 1</b>	<b>Full Time: 17</b>	<b>Part Time: 9</b>	
<b>Year 2</b>	<b>Full Time: 16</b>	<b>Part Time: 13</b>	
<b>Year 3</b>	<b>Full Time: 18</b>	<b>Part Time: 12</b>	<b>Number of Graduates: 20</b>
<b>Year 4</b>	<b>Full Time: 19</b>	<b>Part Time: 15</b>	
<b>Year 5</b>	<b>Full Time: 20</b>	<b>Part Time: 16</b>	<b>Number of Graduates: 24</b>

### Percentage Statement:

n/a

### Program Accreditation

Institutional Plans for Accreditation:

There are no plans to seek individual accreditation for this program at this time. Current institutional accreditor status is adequate.

### Program Structure

#### Total Credits:

33

#### Residency Requirements:

9 credit hours

#### General Education Total Credits:

0

#### Major Requirements Total Credits:

33

#### Course(s) Added

COURSE NUMBER	CREDITS	COURSE TITLE
PLM 124	2	Fixtures, Valves & Water Heat
PLM 130	2	Size & Protect Water Supply



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## New Program Report

PLM 140	2	Plumbing Codes & Application
PLM 142	2	Service Plumbing & Basic Elec
PLM 144	3	Sewage & Sump, Indirect Waste
PLM 114	3	Plumbing Fittings
PLM 112	2	Plumbing Drawings & Fixtures
PLM 122	2	Install, Test DWV& Water Heat
PLM 110	1	Intro Plumbing Safety & Tools
PLM 126	2	Fuel Gas & Fuel Oil Systems
PLM 134	2	Venting for Plumbing
PLM 146	1	Pvt Water, Well & Waste Disp
PLM 116	2	Drain, Waste, Vent/Water Dist
PLM 136	2	DWV & Storm Systems/Drains
PLM 132	2	Potable Water Supply Systems
PLM 120	3	Math for Plumbing

**Free Elective Credits:**

0

**Internship or other Capstone Experience:**

N/A

**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 or CBHE-approved off-site location.

I certify that the program will not unnecessarily duplicate an existing program of another Missouri institution in accordance with 6 CSR 10-4.010, subsection (9)(C) Submission of Academic Information, Data and New Programs.

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.



## **New Program Report**

### Contact Information

First and Last Name: RENEE  
GRAVES

Email: [gravesr@otc.edu](mailto:gravesr@otc.edu)

Phone: 417-447-8115

Student ID: \_\_\_\_\_  
 Student Name: \_\_\_\_\_  
 Navigator Name: \_\_\_\_\_

Catalog: 2024-2025 Academic Catalog and Student Handbook  
 Program: Plumbing Technology Certificate

## Plumbing Technology Certificate

### Certificate: 33 Hours

Plumbing technicians install, service and repair the piping required to maintain a safe and sanitary plumbing system. Students in this program will learn to identify and understand the components of the plumbing system and how they work. Students will gain the knowledge and ability necessary to succeed in the plumbing industry while placing an emphasis on safe work practices and critical thinking skills.

### Plumbing Level I

Course Name	Credits:	Semester Completed	Grade	CORE 42
PLM-110 Intro to Plumb, Safety, Tools	Credits: 1			
PLM-112 Plumbing Drawings & Fixtures	Credits: 2			
PLM-114 Plumbing Fittings	Credits: 3			
PLM-116 Drain, Waste, Vent/Water Dist	Credits: 2			

### Plumbing Level II

Course Name	Credits:	Semester Completed	Grade	CORE 42
PLM-120 Math for Plumbing	Credits: 3			
PLM-122 Install, Test DWV & Water Pip	Credits: 2			
PLM-124 Fixtures, Valves & Water Heat	Credits: 2			
PLM-126 Fuel Gas & Fuel Oil Systems	Credits: 2			

### Plumbing Level III

Course Name	Credits:	Semester Completed	Grade	CORE 42
PLM-130 Size & Protect Water Supply <i>Prerequisite(s):</i> PLM 110, PLM 112, PLM 114, PLM 116, PLM 120, PLM 122, PLM 124, PLM 126.	Credits: 2			
PLM-132 Potable Water Supply Systems <i>Prerequisite(s):</i> PLM 130 or concurrent enrollment.	Credits: 2			
PLM-134 Venting for Plumbing <i>Prerequisite(s):</i> PLM 132 or concurrent enrollment.	Credits: 2			
PLM-136 DWV & Storm Systems/Drains <i>Prerequisite(s):</i> PLM 134 or concurrent enrollment.	Credits: 2			

### Plumbing Level IV

Course Name	Credits:	Semester Completed	Grade	CORE 42
PLM-140 Plumbing Codes & Application <i>Prerequisite(s):</i> PLM 136 or concurrent enrollment.	Credits: 2			
PLM-142 Service Plumbing & Basic Elec <i>Prerequisite(s):</i> PLM 140 or concurrent enrollment.	Credits: 2			
PLM-144 Sewage & Sump, Indirect Waste <i>Prerequisite(s):</i> PLM 142 or concurrent enrollment.	Credits: 3			
PLM-146 Pvt Water, Well & Waste Disp <i>Prerequisite(s):</i> PLM 144 or concurrent enrollment.	Credits: 1			

#### Notes:



October 18, 2022

Missouri Department of Economic Development  
301 W. High St.  
Jefferson City, MO 65101

Review Committee:

The recent changes in the US economy have made finding skilled employees an increasing challenge. As a local employer, I am excited to partner with Ozarks Technical Community College (OTC) on their grant to support the development of plumbing programs to help meet the employment gap in our industry.

Lorenz Plumbing Heating & Air Conditioning has been in business for more than 40 years in Springfield. Over the past five years, we have expanded our company to more than 70 employees to serve additional areas in Southwest Missouri. Like many business owners, one of our biggest challenges is finding motivated candidates and introducing them to our rewarding industry. We feel our partnership with OTC and its programs offers a critical role in our success by making connections with dynamic candidates who may not realize the satisfying potential of the plumbing industry. As a graduate of a Vocational Technical Program like OTC, I recognize the impact that a program like this can provide. I learned the plumbing profession and it made a huge impact on my career that led me to run Lorenz Plumbing Heating and Air Conditioning today.

As an advising business, I commit to the following to help this new program thrive:

- Serve on OTC's Plumbing Advisory Committee;
- Provide practical and technical advice during the development of the program curriculum and course content;
- Provide employment and hands-on opportunities to students completing the program;
- Support students who are employed at my company while they complete the program.

Construction and infrastructure are the cornerstones of our economy. To build a stronger Southwest Missouri, we need a workforce trained to meet the future needs of our growing region. Please consider the application from Ozarks Technical Community College to support the next generation of plumbers in the Ozarks.

Thank you,

Mike Polino  
President  
Lorenz Plumbing Heating & Air Conditioning

1429 N. Cedarbrook  
Springfield MO 65802  
417-863-1122  
LorenzPHAC.com

**CAPITOL OFFICE**

State Capitol  
201 West Capitol Avenue, Room 116-1  
Jefferson City, MO 65101-6806  
Tele: (573) 751-2210  
E-Mail: Alex.Riley@house.mo.gov



**COMMITTEES**

**Chairman:**  
Joint Committee on Administrative Rules  
**Vice-Chairman:**  
General Laws  
**Member:**  
Budget  
Subcommittee on Federal Spending  
Subcommittee on Appropriations –  
Health, Mental Health, and Senior Services  
Professional Registration and Licensing  
Special Committee on Litigation Reform

**MISSOURI HOUSE OF REPRESENTATIVES**

**Alex Riley**

State Representative  
District 134

October 20, 2022

Missouri Department of Economic Development  
301 W. High St.  
Jefferson City, MO 65101

Review Committee:

As a representative of southwest Missouri in our state's legislature, I firmly believe that ensuring the future of the economy, especially in the wake of the pandemic, is a top priority. Trades like plumbing, form the foundation of this future. With an aging workforce and current training programs already filled to capacity, there is a significant need to train the next generation of plumbers.

Ozarks Technical Community College's (OTC) has a reputation for serving as the community's expert in training the future workforce. I provide my support for their application for funding to develop a plumber training program. Utilizing OTC's knowledge and resources to meet the region's need for plumbing training is a natural fit for southwest Missouri.

Construction and infrastructure are the cornerstone of our economy. To build a stronger southwest Missouri, we need a workforce trained to meet the future needs of our growing region. Please consider the application from Ozarks Technical Community College to support the next generation of plumbers in southwest Missouri.

Sincerely,

A handwritten signature in cursive script that reads "Alex C. Riley". The signature is written in black ink and is positioned below the word "Sincerely,".

Alex Riley Missouri State Representative - 134th District

Bob Dixon  
*Presiding Commissioner*

Rusty MacLachlan  
*1<sup>st</sup> District Commissioner*

John C. Russell  
*2<sup>nd</sup> District Commissioner*



Shane Schoeller  
*Clerk of the Commission*

Christopher J. Coulter, AICP  
*County Administrator*

Megan Applegate  
*Executive Assistant*

**COUNTY COMMISSION**  
**Greene County, Missouri**  
**(417) 868-4112**

October 28, 2022

Missouri Department of Economic Development  
301 W. High St.  
Jefferson City, MO 65101

Review Committee:

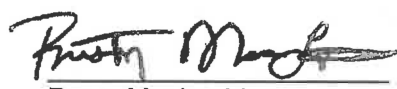
As leaders in southwest Missouri, we know the importance of a strong economy and workforce. In our role as the Commission of Greene County, ensuring the future of the economy, especially in the wake of the pandemic, is a top priority. Trades like plumbing, form the foundation of this future. With an aging workforce and current training programs already filled to capacity, there is a significant need to train the next generation of plumbers.

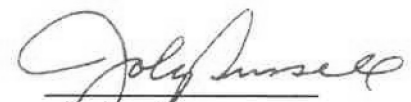
Ozarks Technical Community College's (OTC) has a reputation for serving as the community's expert in training the future workforce. I provide my support for their application for funding to develop a plumber training program. Utilizing OTC's knowledge and resources to meet the region's need for plumbing training is a natural fit for southwest Missouri.

Construction and infrastructure are the cornerstone of our economy. To build a stronger southwest Missouri, we need a workforce trained to meet the future needs of our growing region. Please consider the application from Ozarks Technical Community College to support the next generation of plumbers in southwest Missouri.

Sincerely,

  
Bob Dixon  
Presiding Commissioner

  
Rusty MacLachlan  
Commissioner Dist. 1

  
John C. Russell  
Commissioner Dist.2



October 21, 2022

Department of Economic Development  
301 W. High Street  
Jefferson City, MO 65101

To Whom It May Concern:

This letter is to inform you of the City of Springfield's support for Ozarks Technical Community College (OTC), and their efforts to develop a plumber training program.

The Ozarks Technical College plumber training program will provide needed training which is critical to foundational trades. OTC has a long history of serving our community's need for expert workforce training. Extending this expertise to the plumbing trade is a natural fit to meet Springfield's need for trained plumbers.

City Council and I have reviewed and support Ozarks Technical Community College's intent to develop a plumber training program.

Sincerely,



Ken McClure  
Mayor



1312 S. Scenic Ave  
Springfield, MO 65802  
417-883-3535 Office  
417-882-6669 Fax  
[www.delongplumbing.com](http://www.delongplumbing.com)

Missouri Department of Economic Development  
301 W. High St.  
Jefferson City, MO 65101  
Review Committee:

October 20<sup>th</sup> 2022

The recent changes in the US economy have made finding skilled employees an increasing challenge. As a local employer, I am excited to partner with Ozarks Technical Community College (OTC) on their grant to support the development of plumbing programs to help meet the employment gap in our industry

My company DeLong Plumbing Heating and Air has been in business since 1991. We are a second generation company that specializes in plumbing service and construction. I started helping my father when I was 10 years old. I worked nights and summers to help our family business. As I got older I saw the need for more help become a struggle in two ways, finding good help and finding qualified help. While those seem like the same thing I can assure you they are very different in our industry. Our company has seen great growth in our city and industry. In the last five years we have had more plumbers retire than I have experienced in my 30 years of being involved in this business. Construction as a whole has struggled recently finding new help and younger generations that are interested in the trades. We at DeLong have made a great effort to promote the trades and grow our company with great success. When I graduated college I came back to work with my father who at the time had a staff of 10 people. In 2008-2009 he grew that to 25 during a time of recession. We have since grown to over 50 employees with a desperate need for more trained and qualified people to fill the roles of the five people we have slated to retire over the next 18 months. This gap is going to continue to grow without having any good training facilities in place. We are committed as a company to offer scholarships to students who are going into the trades. This investment in our community is something we feel is necessary to continue to keep our business running.

As an advising business, I commit to the following to help this new program thrive:

- Serve on OTC's Plumbing Advisory Committee.
- Provide practical and technical advice during the development of program curriculum and course content.
- Provide employment and hands-on opportunities to students completing the program.
- Support students who are employed at my company while they complete the program.

Construction and infrastructure are the cornerstone of our economy. To build a stronger southwest Missouri, we need a workforce trained to meet the future needs of our growing region. Please consider the application from Ozarks Technical Community College to support the next generation of plumbers in southwest Missouri.

Thank you,

A handwritten signature in black ink that reads "John W. DeLong".

John W. DeLong  
President

DeLong Plumbing Two INC

***"Our Family Helping Your Family"***

**CAPITOL OFFICE**  
Missouri State Capitol  
201 West Capitol Avenue  
Room 204  
Jefferson City, MO 65101



**CAPITOL OFFICE**  
E-Mail:  
crystal.quade@house.mo.gov  
Tele:  
(573) 751-3795

State Representative  
**Crystal Quade**  
Minority Caucus Floor Leader  
District 132

October 19, 2022

Missouri Department of Economic Development  
301 W. High St.  
Jefferson City, MO 65101

To Whom It May Concern:

In the wake of the recent pandemic, it has become critical to rebuild our workforce. As a representative of southwest Missouri, providing opportunities for our citizens and ensuring the health of the region's economy is a priority to me. A cornerstone of that economic strength are foundational trades like plumbing. With an aging workforce and current training programs already filled to capacity, there is a significant need to train the next generation of plumbers.

I provide my support to Ozarks Technical Community College's (OTC) application for funding to develop a plumber training program. OTC has a long history of serving as our community's expert in training the future workforce. Extending this expertise to the plumbing trade is a natural fit to meet Springfield's need for trained plumbers.

The future economic growth of the region is dependent on the foundation of strong trades. To build a stronger southwest Missouri, we need a workforce trained to meet the future needs of our growing region. Please consider the application from Ozarks Technical Community College to support the next generation of plumbers in southwest Missouri.

Thank you in advance for your consideration.

Best Regards,

A handwritten signature in black ink, appearing to read "Crystal Quade", written over a horizontal line.

Crystal Quade  
Minority Caucus Floor Leader  
District 132

**COMMITTEES**

Ex-officio member of all committees  
of the  
Missouri House of Representatives