

PLUMBING

Pathway: Construction, Maintenance & Utilities
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Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Plumbing* —(day only)	T002911C	A.S.	21*	45	3	48
Plumbing —(day only)	T021855D	C		45	3	48
Plumbing: Construction Tech* —(evening only)	T008484C	A.A.	21*	37	8	45
Plumbing: Construction Tech* —(evening only)	T021856D	C		37	8	45

At least 60 degree applicable units are required to earn an Associate degree.
 *This Associate Degree is eligible for a reduction of General Education requirements from 21 to 18 units; please consult with a counselor for more details.
 These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Plumbing Degree & Certificate are designed to prepare students for employment in the plumbing and related pipe industry.

Career opportunities for students completing this program of study include, but are not limited to:

- First-Line Sup/Mgrs of Construction Trades and Extraction Workers
- Helpers—Pipelayers, Plumbers, Pipefitters, and Steamfitters
- Pipelayers
- Plumbers, Pipefitters, and Steamfitters
- Septic Tank Servicers and Sewer Pipe Cleaners

By fulfilling the program requirements, students will have the necessary knowledge and skills for a career in residential, commercial, and industrial service and repair or construction plumbing. Reading of blueprints, layout, estimating, installation of piping systems and fixtures, repair of supply and waste water systems are just some of the skills that will be mastered during this program.

The coursework in this program meets the requirements for entry into the plumbing trade.

Note: Students enrolling in this program should be able to commit to full-time student status, which is approximately 24 hours per week. This time commitment is necessary to allow for hands-on training with the laboratory applications used during the course of instruction.

PLUMBING

Associate in Science Degree
Major Units: 48

Requirements for the Associate in Science degree in Plumbing may be met by completing 45 units of Required Courses and 3 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Demonstrate proper procedures and techniques required to construct a plumbing system, utilizing plumbing tools, in preparation for the Apprentice-level employment in the plumbing trade.
- Perform standard industry trade calculations and formulas including measurements to lay out to design a basic plumbing system..
- Recall, restate and apply current plumbing codes, industry rules, regulations, legal standards and procedures to the construction of an operable plumbing system following industry guidelines and restrictions according to the Uniform Plumbing Code for construction of commercial and residential.

REQUIRED COURSES

SEMESTER I	UNITS
PLUMBNG 111 Introduction to Plumbing	3
PLUMBNG 112 Fundamentals of Plumbing	3
PLUMBNG 113 Basic Plumbing Principles and Practices	6

SEMESTER II	UNITS
PLUMBNG 121 Working Drawings and Layout I	3
PLUMBNG 122 Plumbing Mathematics and Procedures II	3
PLUMBNG 123 Plumbing Practices and Installation	6

SEMESTER III	UNITS
PLUMBNG 131 Working Drawing II	3
PLUMBNG 132 Plumbing Calculations and Procedures II	3
PLUMBNG 133 Installation and Plumbing Fixtures	6

SEMESTER IV	UNITS
PLUMBNG 141 Advanced Layout and Procedures	3
PLUMBNG 142 Servicing of Plumbing Fixtures and Appliances	3
PLUMBNG 143 Plumbing Code I	3
ELECTIVE	3

MAJOR ELECTIVES

Select at least 3 units from the courses below	UNITS
BLDGCTQ 101 Contract's License Law	3
ECONMT 100 (O.S.H.A.) Safety Standards: Construction and Industry	2
PLUMBNG 026 Plumbing Layout and Estimating I	3
PLUMBNG 027 Plumbing Layout and Estimating II	3
PLUMBNG 028 Plumbing Code I	3
PLUMBNG 029 Plumbing Code II	3
PLUMBNG 031 Backflow Prevention Devices	3
PLUMBNG 033 Plumbing Code III	3
PLUMBNG 144 Special Purposes Installation	3
PLUMBNG 941 Cooperative Education-Plumbing	4

PLUMBING

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Plumbing may be earned by completing 45 units of Required Courses and 3 units of Electives listed under the Associate degree in Plumbing with a "C" or better in each course.

By fulfilling the program requirements, students will have the necessary knowledge and skills for a career in residential, commercial, and industrial service and repair or construction plumbing.

PLUMBING: CONSTRUCTION TECH

Associate in Arts Degree

Major Units: 45

Requirements for the Associate in Arts degree in Plumbing: Construction Tech may be met by completing 37 units of Required Courses and 8 units of Major Electives with a "C" or better along with General Education units.

By fulfilling the program requirements, students will have the necessary knowledge and skills for a career in Residential, Commercial, and Industrial Service and Repair or Construction Plumbing.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Use hand and power tools, testing equipment, and P.P.E required for performing work in the plumbing construction industry in accordance with industry standards.
- Perform plumbing operations using hand and power tools in accordance with industry plumbing practices.
- Perform trade calculations related to plumbing practices.

REQUIRED COURSES

SEMESTER I		UNITS
PLUMBNG 028	Plumbing Code I	3
PLUMBNG 112	Fundamentals of Plumbing	3
WELDG/E 201A	Welding-Gas and Electric IA	1
SEMESTER II		UNITS
PLUMBNG 026	Plumbing Layout and Estimating I	3
PLUMBNG 029	Plumbing Code II	3
WELDG/E 202B †	Welding – Gas and Electric II	1
SEMESTER III		UNITS
OPMAINT 228	Steam Plant Operation I	6
PLUMBNG 027	Plumbing Layout and Estimating II	3
PLUMBNG 033	Plumbing Code III	3
SEMESTER IV		UNITS
OPMAINT 229	Steam Plant Operation II	6
PLUMBNG 031	Backflow Prevention Devices	3
PLUMBNG 246	Principles and Practices of Plumbing Design	4

† Course currently unavailable

MAJOR ELECTIVES

Select at least 8 units from the courses below		UNITS
BLDGCTQ 101	Contract's License Law	3
ECONMT 181	Basic Wiring Practices	3
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
ENGLISH 101	College Reading and Composition I	3
LABR ST 115	Workplace Health and Safety	1
LABR ST 127	Worker's Compensation	1
MARKET 021	Principles of Marketing	3
MATH 115	Elementary Algebra	5
MATH 245	College Algebra	3
PLUMBNG 941	Cooperative Education- Plumbing	4

PLUMBING: CONSTRUCTION TECH

Certificate of Achievement

Major Units: 45

A Certificate of Achievement in Plumbing: Construction Tech may be earned by completing 37 units of Required Courses and 8 units of Major Electives listed under the Associate degree in Plumbing: Construction Tech with a "C" or better in each course.

USEFUL LATTC LINKS:

College Catalog: <http://college.lattc.edu/catalog/>
Financial Aid Office: <http://college.lattc.edu/financialaid/>
Counseling Department: <http://college.lattc.edu/counseling/>
General Education Information: <http://college.lattc.edu/catalog>
Construction, Maintenance & Utilities Pathway: <http://pathways.lattc.edu/catalog-programs/cmu/>

To register: <http://college.lattc.edu/student/new-students/register-now/>

For additional information consult a LATTC college counselor.