



# CONSTRUCTION TRADES

## Technical Diploma Program Code: 30-475-1 Total Credits: 10

Mid-State's Construction Trades technical diploma provides the foundation knowledge and experience to get started in the construction, carpentry, plumbing, electrical, and pipefitting fields. Graduates understand the various components of building construction systems as well as proper and safe tool use and installation techniques for piping, heating, and electrical systems. Successful completion of the diploma prepares students for an entry-level position in the construction trades industry. The program includes work in an interactive hands-on lab and a year-round larger lab complete with an "indoor house." Through exposure to multiple fields and industries, graduates are prepared to enter the trade they choose.

**Estimated tuition and fees:** [mstc.edu/programcosts](https://mstc.edu/programcosts)

### ACADEMIC ADVISOR

To schedule an appointment with an academic advisor, call 715.422.5300. Academic advisors will travel to other campuses as necessary to accommodate student needs. For more information about advising, visit [mstc.edu/advising](https://mstc.edu/advising).

### NEW STUDENT CHECKLIST

Complete the following steps to prepare for your New Student Advising appointment with your academic advisor:

- ☐ Submit a Mid-State application at [mstc.edu/apply](https://mstc.edu/apply).
- ☐ Send official transcripts to:  
Mid-State Technical College  
Student Services  
1001 Centerpoint Drive  
Stevens Point, WI 54481
- ☐ Set up student MyCampus account at [mstc.edu/mycampus-assistance](https://mstc.edu/mycampus-assistance).
- ☐ Schedule a New Student Advising appointment at [mstc.edu/advising](https://mstc.edu/advising).



[mstc.edu](https://mstc.edu) • 888.575.6782 • TTY: 711



**ADAMS CAMPUS**  
401 North Main  
Adams, WI 53910

**MARSHFIELD CAMPUS**  
2600 West 5th Street  
Marshfield, WI 54449

**STEVENS POINT  
DOWNTOWN CAMPUS**  
1001 Centerpoint Drive  
Stevens Point, WI 54481

**WISCONSIN RAPIDS CAMPUS**  
500 32nd Street North  
Wisconsin Rapids, WI 54494

# CAREER PATHWAY • BEGIN AT ANY POINT

HIGH  
SCHOOL  
STUDENT

COLLEGE  
TRANSFER

RETURNING  
ADULT

## CREDIT FOR PRIOR LEARNING AND EXPERIENCE

### CREDIT FOR PRIOR LEARNING AND EXPERIENCE

- Certifications and Licenses
- High School Credit
- Military Experience
- National/Standardized Exams
- Transfer Credit
- Work and Life Experience

Learn about Credit for Prior Learning at [mstc.edu/cpl](https://mstc.edu/cpl).

## TECHNICAL DIPLOMA

### CONSTRUCTION TRADES

Technical Diploma • 10 Credits

#### Start Your Career

- Electrical Contracting Laborer
- Carpentry Contracting Laborer
- Plumbing Contracting Laborer
- Apprenticeship

### HEATING, VENTILATION, & AIR CONDITIONING (HVAC) INSTALLER

Technical Diploma • 24 Credits

#### Start Your Career

- Heating, Ventilation, and Air Conditioning Installer
- Residential Heating, Ventilation and Air Conditioning Technician
- Heating, Ventilation and Air Conditioning Sales Representative
- Apprenticeship

## ASSOCIATE IN APPLIED SCIENCE (AAS)

### HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVAC-R) TECHNICIAN

Associate in Applied Science (AAS) • 60 Credits

#### Start Your Career

- Building Control Technician
- HVAC-R Service Technician
- HVAC-R Project Manager
- Apprenticeship

## BACHELOR'S DEGREE

### BACHELOR'S DEGREE OPTIONS

For those interested in continuing their education, Mid-State offers transfer agreements with various four-year colleges and universities. For more information and additional opportunities, visit [mstc.edu/transfer](https://mstc.edu/transfer).

## OTHER OPTIONS

### APPRENTICESHIP OPPORTUNITIES

- Carpenter Apprenticeship
- Construction Electrician (ABC) Apprenticeship
- Construction Electrician (IBEW-NECA) Apprenticeship
- Plumber Apprenticeship
- Steamfitter and Steamfitter Service Apprenticeship

OUTCOMES

Employers will expect you, as a Construction Trades graduate, to be able to:

- Demonstrate construction safety.
- Use construction tools and equipment.
- Interpret construction documents and blueprints.
- Construct a building structure using wood framing techniques.
- Recognize plumbing, HVAC, and electrical systems.
- Comply with all applicable standards, policies, and procedures, including safety procedures and the maintenance of a clean work area.

TECHNICAL SKILLS ATTAINMENT

The Wisconsin Technical College System (WTCS) has implemented a requirement that all technical colleges measure outcomes attained by students. This requirement is called Technical Skills Attainment (TSA). The main objective of TSA is to ensure graduates have the technical skills needed by employers. Students are notified of TSA reporting in the Construction Fundamentals course.

STUDENT HANDBOOK

Visit [mstc.edu/studenthandbook](http://mstc.edu/studenthandbook) to view Mid-State’s student handbook, which contains information about admissions, enrollment, appeals processes, services for people with disabilities, financial aid, graduation, privacy, Mid-State’s Student Code of Conduct, and technology.

GRADUATION REQUIREMENT

The GPS for Student Success course is required for all Mid-State program students and is recommended to be completed before obtaining 12 credits. (Not counted in the total credit value for this program.) Some students are exempt from this requirement. Please see your program advisor for more information.

GPS for Student Success

10890102 ..... 1 credit

Integrate necessary skills for student success by developing an academic plan, identifying interpersonal attributes for success, adopting efficient and effective learning strategies, and utilizing Mid-State resources, policies, and processes. This course is recommended to be completed prior to obtaining 12 credits and is a graduation requirement unless you receive an exemption from your program advisor.

ADDITIONAL COURSES AS NEEDED

The following courses may be recommended or required if the student does not achieve minimum Accuplacer scores.

College Reading and Writing 1

10831104 ..... 3 credits

Provides learners with opportunities to develop and expand reading and writing skills to prepare for college-level academic work. Students will employ critical reading strategies to improve comprehension, analysis, and retention of texts. Students will apply the writing process to produce well-developed, coherent, and unified written work.

Pre-Algebra

10834109 ..... 3 credits

Provides an introduction to algebra. Includes operations on real numbers, solving linear equations, percent and proportion, and an introduction to polynomials and statistics. Prepares students for elementary algebra and subsequent algebra-related courses.

SAMPLE FULL-TIME CURRICULUM OPTION		
Term		10 credit
10476171	Safety for Construction Trades	1
10482107	Construction Fundamentals	2
10483123	Piping Installation	2
10601130	Blueprint Reading for Construction Trades	2
10601140	Electricity for the Construction Trades	2
31442320	Welding Foundations 1	1
Total credits		10

This course has options available to receive credit for prior learning (CPL) or work experience. Visit the website at [mstc.edu/cpl](http://mstc.edu/cpl) or contact your advisor for details.

Please Note:

- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Program completion time may vary based on student scheduling and course availability. For details, go to [mstc.edu/schedule](http://mstc.edu/schedule).

SAMPLE PART-TIME CURRICULUM OPTION		
Term		4 credits
10476171	Safety for Construction Trades	1
10482107	Construction Fundamentals	2
31442320	Welding Foundations 1	1
Term		6 credits
10483123	Piping Installation	2
10601130	Blueprint Reading for Construction Trades	2
10601140	Electricity for the Construction Trades	2
Total credits		10

# COURSE DESCRIPTIONS

## **Blueprint Reading for Construction Trades**

**10601130 .....2 credits**

Develops the ability to read blueprints for commercial and non-commercial structures. Emphasizes blueprints drawn by licensed architects, covering plumbing, electrical wiring, structural framing, millwork, interior and exterior details, and basic information.

## **Construction Fundamentals**

**10482107 .....2 credits**

Studies the concepts associated with the theory, materials, and methods used in construction, including footings and foundations, walls, floors, roofs and roof materials, exterior finishes, interior walls, ceiling and floor finishes, insulation types, vapor and air infiltration, and sound protection. Students also become familiar with blueprint reading and examine all trades associated with construction, including, electrical, HVAC, and plumbing. Safe use of the appropriate tools for each trade is covered.

## **Electricity for the Construction Trades**

**10601140 .....2 credits**

This course is an introduction to electrical theory and application for those in the construction and building trades. Content includes AC and DC circuits, schematics, Ohms law, multimeter use and circuit troubleshooting. This course will also provide an introduction to the contents of the National Electric Code (NEC).

## **Piping Installation**

**10483123 .....2 credits**

This course introduces students to the fundamentals of measuring, fitting, joining, and installing piping common to the plumbing and HVAC industries.

## **Safety for Construction Trades**

**10476171 .....1 credit**

The Safety for Construction Trades course teaches construction related workers about their rights, employer responsibilities and how to identify, abate, avoid and prevent job related hazards. Students will familiarize themselves with the proper selection and use of personal protective equipment and safety requirements on a construction site for various activities. Course outcomes align with the training outcomes recommended by OSHA. Upon successful completion, students will receive an OSHA 10 Card.

## **Welding Foundations 1**

**31442320 .....1 credit**

An introduction to fundamental welding techniques with an emphasis on safe work habits that covers the processes of FCAW, GMAW, and OXY-Fuel cutting. Classroom instruction paired with lab activities are designed to provide fundamental skills in each of the welding processes covered in the class.