

Section 1: Introduction





INTRODUCTION

Technological advances and the drive for sustainable solutions have transformed the nature of the building industry. Tomorrow's jobs will require more knowledge, better skills, and more flexibility than ever before to apply these solutions to existing facilities and structures while building for a growing population. Tomorrow's workers must be prepared to change jobs and careers several times, while continually updating their knowledge and skills.

Career Clusters provide a common framework for career preparation by linking what students learn in school with the knowledge, skills, and experiences needed for success in postsecondary education and careers. When used to develop a student's Personal Plan of Study, the Career Clusters Framework provides students with a strong foundation for postsecondary education and future employment.

MISSOURI'S SEVEN CORE CONCEPTS FOR CAREER CLUSTERS

1. Learning should be student-centered.
2. Instruction should integrate academic education, career development, and career education.
3. Connections should be enhanced among secondary education, postsecondary education, business, and economic development.
4. Rigorous and relevant academics are needed by all students, whatever their educational and career plans.
5. Secondary schools' instruction should prioritize foundational knowledge and skills for career preparation above job preparation.

6. Industry-verified standards should serve as a benchmark for career education.
7. School reform is needed to prepare students for success in the 21st century workforce.

[Source: Missouri Department of Elementary and Secondary Education (DESE)]

Career Pathways for the Construction Profession, within the Architecture and Construction career cluster, provides students opportunities to focus on future employment as carpenters, electricians, masonry workers, HVAC contractors, remodeling contractors, facility managers, and construction managers. This competency packet can be used to effectively plan a Career Pathways for the Building Trades program within a school district or to adapt or expand an existing program. Administrators, educators, students, and parents can use components of the packet to assist in career planning and to continue a focus on the Architecture and Construction career cluster.

Career Pathways for the Construction Trades Competency Packet Components*:

- Tools for the Administrator
- Tools for the Teacher
- Tools for the Student
- Appendix A: Core Competencies
- Appendix B: Instructional Frameworks
- Appendix C: Resources

** Development of this competency packet was funded by the Missouri Department of Elementary and Secondary Education (DESE) and facilitated by the Missouri Center for Career Education (MCCCE). Core Competencies were identified by the advisory committee and approved by DESE.*



ABOUT CAREER PATHWAYS FOR THE CONSTRUCTION TRADES

In the construction pathway, people build cities, homes, and highways as well as remodel buildings used for commercial and residential purposes as well as build infrastructure (e.g., highways, bridges, tunnels, and airports). The following occupations are representative of this pathway:

- Boilermakers
- General Construction Workers
- Bricklayers and Stonemasons
- Glaziers
- Cabinetmakers
- Heating and Cooling System Mechanics
- Carpenters
- Insulation Installers
- Cement Masons
- Landscapers and Grounds Keepers
- Commercial Drivers
- Line Installers and Repairers
- Construction and Well Drillers
- Painters
- Construction Helpers
- Paving Equipment Operators
- Construction Managers
- Pipelayers
- Drywall Finishers
- Plasterers
- Drywall Installers
- Plumbers and Pipefitters
- Electrician Helpers
- Roof Bolters
- Electricians
- Roofers
- Elevator Installers and Repairers
- Sheet Metal Workers
- Explosives Workers
- Structural Metal Workers
- Fence Builders
- Tile Setters
- Floor Sanding Machine Operators
- Wallpaper Hangers

(Source: www.missouriconnections.org):

Initially, it is important to understand the core competencies required for success in the construction trades. Ensure that everyone involved in your program carefully reviews the competencies outlined in Appendix A (pages 37 through 48). Appendix B provides the Instructional Framework tied to these core competencies.

ASSESSING THE CONSTRUCTION PROGRAM IN YOUR LOCAL COMMUNITY

Conducting a survey will provide program administrators and instructors with a better understanding of a community's occupational needs in the construction trades. Table 1.1 (on the next page) provides guidance for structuring and conducting a survey as well as for evaluating survey results. In general, you will want to identify demographics, anticipated participation, and available resources. Additionally you can access this type of information through your local chamber of commerce, professional association [e.g., Associated General Contractors of America, Inc. (AGC), American Public Works Association (APWA), etc.] and local or regional Job Service centers.

It is important to clearly identify the benefits of the survey in terms of new teaching strategies, new industry information, new equipment/methodology being used, or local/state administrator guidance, and then seek feedback from a program advisory committee (see pages 7 through 9 about creating an advisory committee).



This packet is to be used only with a DESE-approved Career Pathways for the Construction Trades program.

For more information, contact:

Missouri Department of
Elementary and Secondary
Education

Skilled Technical Sciences

PO Box 480
Jefferson City, MO
65102-0480

[http://dese.mo.gov/
divcareered/skilled_tech_
sciences_index.htm](http://dese.mo.gov/divcareered/skilled_tech_sciences_index.htm)



Table 1.1. Tips for Conducting a Local Program Needs Assessment

IDENTIFYING DEMOGRAPHIC, PARTICIPATION, RESOURCE INFORMATION NEEDED	CONDUCTING A FEASIBILITY ASSESSMENT	EVALUATING ASSESSMENT RESULTS
To structure your survey, determine:	To conduct your survey, determine:	To evaluate survey results, consider:
<ul style="list-style-type: none"> What group of people will you survey (e.g., construction firms within a 25-mile radius; electrical firms with 15 or fewer employees, remodeling contractors, facility managers of public institutions, etc.)? 	<ul style="list-style-type: none"> How will you collect survey data (e.g., by phone, mail, online survey program, job shadowing)? 	<ul style="list-style-type: none"> What the data means and how you are interpreting that data (e.g., if 13 of the 15 respondents answered the same way on a particular question, what does this indicate?)
<ul style="list-style-type: none"> Why did you choose this population? How did you decide which members of the population you would survey (e.g., all available firms, a randomly selected percentage)? 	<ul style="list-style-type: none"> How long will you give respondents to respond (if not a job shadowing approach)? What will you do to enhance the return rate? 	<ul style="list-style-type: none"> How the results affect your individual program
<ul style="list-style-type: none"> Is there an existing survey that can be modified for your purpose, or do you need to create an original one? 	<ul style="list-style-type: none"> How will you format data collected (e.g., table, narrative section describing data collected)? 	<ul style="list-style-type: none"> If curriculum changes or program administration changes are indicated from the survey results, how will you implement these changes?
<ul style="list-style-type: none"> What is the most feasible time line for conducting, evaluating, and implementing survey results? 	<ul style="list-style-type: none"> How will you deal with unexpected data provided (e.g., additional comments), and will this data be beneficial? 	<ul style="list-style-type: none"> How transferable is this information to other Missouri Vocational/ Technical programs? What are the benefits of sharing this information, and how will you do so?

This packet contains a wealth of tools for program administrators, teachers, and students involved in a Construction Trades career program. Highlights from each section are:

Section 1: Introduction provides information on assessing your local community for need and possible participation.

Section 2: Tools for the Program Administrator guides you through setting up an advisory committee and suggested resources for funding and other assistance with securing facilities, equipment, and tools for your program.

Section 3: Tools for the Teacher provides information on technical skills training, OSHA training, and “soft skills” training.

Section 4: Tools for the Student features guidance on the employment outlook for the construction trades as well as on developing a personal plan of study.

Appendix A presents core competencies for the Architecture and Construction Core as well as for the Construction Pathway.

Appendix B presents the instruction framework (crosswalk).

Appendix C lists diverse resources related to construction industry, relevant careers, and construction trades programs.