

## Standards and Competencies for Construction Core (Course # 5730)

	Begin-End Yr
Standard 1 - Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.	2009 -
1.1 - Cultivate leadership skills.	2009 -
1.2 - Participate in SkillsUSA or similar organization.	2009 -
1.3 - Assess situations within the school, community, and workplace and apply values to develop and select solutions.	2009 -
1.4 - Demonstrate the ability to work cooperatively with others.	2009 -
1.5 - Exhibit integrity and pride in artisanship.	2009 -
Standard 2 - Students will identify and demonstrate basic principles of safety procedures used in the construction industry.	2009 -
2.1 - Demonstrate a positive attitude regarding safety practices and issues.	2009 -
2.2 - Use personal protective equipment.	2009 -
2.3 - Demonstrate safe operating procedures with tools and equipment, such as hand and power tools, ladders, scaffolding, and lifting equipment.	2009 -
2.4 - Follow safe procedures for lifting heavy objects.	2009 -
2.5 - Explain the importance of the HazCom (Hazard Communication Standard) requirement and MSDSs (Material Safety Data Sheets).	2009 -
2.6 - Adhere to responsibilities, regulations, and company policies regarding reporting of accidents.	2009 -
2.7 - Practice fire prevention in dealing with various flammable materials.	2009 -
2.8 - Demonstrate appropriate construction-related safety procedures.	2009 -
2.9 - Pass with 100 percent accuracy a written examination relating to safety issues.	2009 -
2.10 - Pass with 100percent accuracy a performance examination relating to safety.	2009 -
2.11 - Maintain a portfolio record of written safety examinations and equipment examinations for which the student has passed an operational checkout by the instructor.	2009 -
Standard 3 - Students will interpret drawings and written specifications and relate them to the construction layout.	2009 -
3.1 - Interpret dimensions and locations of components that are explicitly dimensioned in construction drawings and written specifications.	2009 -
3.2 - Scale dimensions that are not explicitly included in construction drawings.	2009 -
3.3 - Interpret plan and elevation views shown in construction drawings.	2009 -
3.4 - Recognize and interpret lines and symbols commonly used in construction drawings.	2009 -
Standard 4 - Students will trace the growth and development of the construction industry.	2009 -
4.1 - Analyze the evolution of the construction industry.	2009 -
4.2 - Analyze current cultural and economic indicators to anticipate future trends in the construction industry.	2009 -
4.3 - Explore economic aspects, the free enterprise system, and the role of government as they relate to the construction industry.	2009 -
Standard 5 - Students will evaluate career opportunities and career paths within the construction industry.	2009 -
5.1 - Examine various fields of work and related occupations within the construction industry.	2009 -
5.2 - Explain the titles, roles, and functions of individuals engaged in construction careers, including opportunities for advancement.	2009 -
5.3 - Investigate employment and entrepreneurial opportunities.	2009 -
5.4 - Evaluate personal characteristics required for working in the construction industry.	2009 -
5.5 - Investigate post-secondary education, professional organizations, and trade publications appropriate for continuing education.	2009 -
Standard 6 - Students will identify, select, inspect, safely use, maintain, and store hand tools.	2009 -
6.1 - Demonstrate the proper use of striking tools.	2009 -
6.2 - Demonstrate the proper use of cutting tools.	2009 -
6.3 - Demonstrate the proper use of torque producing tools.	2009 -
6.4 - Demonstrate the proper use of leveling and squaring tools.	2009 -
6.5 - Demonstrate the proper use of grinding and shaping tools.	2009 -
6.6 - Demonstrate the proper use of clamping tools.	2009 -
6.7 - Demonstrate the proper use of pulling and lifting tools.	2009 -
Standard 7 - Students will identify, select, inspect, safely use, maintain, and store power tools.	2009 -
7.1 - Demonstrate the proper use of striking tools.	2009 -
7.2 - Demonstrate the proper use of cutting tools.	2009 -
7.3 - Demonstrate the proper use of torque producing tools.	2009 -
7.4 - Demonstrate the proper use of grinding and shaping tools.	2009 -
7.5 - Demonstrate the proper use of clamping tools.	2009 -
7.6 - Demonstrate the proper use of pulling and lifting tools.	2009 -
Standard 8 - Students will make and lay out linear and angular measurements.	2009 -
8.1 - Make accurate linear measurements.	2009 -
8.2 - Make accurate angular measurements.	2009 -
8.3 - Make accurate two-dimensional layouts specified with linear and angular dimensions.	2009 -
8.4 - Make accurate three-dimensional layouts specified with linear and angular dimensions.	2009 -
Standard 9 - Students will transfer mathematics concepts to solve problems encountered in the construction industry.	2009 -
9.1 - Apply geometric and algebraic concepts to calculations of areas and volumes from construction drawings.	2009 -
9.2 - Apply rate-of-change concepts to construction problems.	2009 -
9.3 - Estimate error propagation in calculations due to uncertainty in measurements.	2009 -
9.4 - Analyze the effect of interest rates on the cost of construction.	2009 -
Standard 10 - Students will rig and move materials and equipment.	2009 -
10.1 - Inspect rigging equipment.	2009 -
10.2 - Estimate size, weight, and center of gravity.	2009 -

	10.3 - Demonstrate tying common knots used for rigging operations.	2009 -
	10.4 - Evaluate various wire rope slings used for rigging operations.	2009 -
Standard 11	Students will demonstrate proficiency in creating two- and three-dimensional scale drawings.	2009 -
	11.1 - Create accurate and complete manual scale drawings of two-dimensional objects and two-dimensional plans.	2009 -
	11.2 - Apply drawing dimensioning rules using basic measurement systems.	2009 -
	11.3 - Analyze the use of a computer-aided drafting software program to draw two- and three-dimensional objects.	2009 -
	11.4 - Apply scaled dimensional drawing to a practical project.	2009 -