



Butler Tech Construction Essential Skills Profile

This profile provides an outline of the skills required for the successful completion of this career program. Additional information is located on the Butler Tech website at: <https://www.butlertech.org/high-school/> and selecting the corresponding career program.

Recommended WorkKeys® Scores for Construction

Applied Mathematics - 3	Graphic Literacy - 4
Workplace Documents - 3	

*Practice tests and more information at: www.act.org/workkeys

Skills

Speaking	Talking to others to convey information effectively.
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
Coordination	Adjusting actions in relation to others' actions.

Abilities Required

Manual Dexterity	The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
Static Strength	The ability to exert maximum muscle force to lift, push, pull, or carry objects.
Multi-limb Coordination	The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.

Knowledge Required in Construction

Building and Construction	Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
Public Safety and Security	Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.
Mechanical	Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

Construction Activities

- Tend pumps, compressors, or generators to provide power for tools, machinery, or equipment or to heat or move materials, such as asphalt.
- Lubricate, clean, or repair machinery, equipment, or tools.
- Signal equipment operators to facilitate alignment, movement, or adjustment of machinery, equipment, or materials.
- Position, join, align, or seal structural components, such as concrete wall sections or pipes.
- Perform site activities required of green certified construction practices, such as implementing waste management procedures, identifying materials for reuse, or installing erosion or sedimentation control mechanisms.
- Control traffic passing near, in, or around work zones.
- Install sewer, water, or storm drain pipes, using pipe-laying machinery or laser guidance equipment.
- Operate or maintain air monitoring or other sampling devices in confined or hazardous environments.
- Read plans, instructions, or specifications to determine work activities.
- Smooth or finish freshly poured cement or concrete, using floats, trowels, screeds, or powered cement finishing tools.
- Measure, mark, or record openings or distances to layout areas where construction work will be performed.
- Erect or dismantle scaffolding, shoring, braces, traffic barricades, ramps, or other temporary structures.
- Dig ditches or trenches, backfill excavations, or compact and level earth to grade specifications, using picks, shovels, pneumatic tampers, or rakes.
- Clean or prepare construction sites to eliminate possible hazards.
- Load, unload, or identify building materials, machinery, or tools, distributing them to the appropriate locations, according to project plans or specifications.
- Provide assistance to craft workers, such as carpenters, plasterers, or masons.
- Perform building weatherization tasks, such as repairing windows, adding insulation, or applying weather-stripping materials.
- Apply weather-stripping to reduce energy loss.
- Spray materials, such as water, sand, steam, vinyl, paint, or stucco, through hoses to clean, coat, or seal surfaces.
- Raze buildings or salvage useful materials.
- Mop, brush, or spread paints, cleaning solutions, or other compounds over surfaces to clean them or to provide protection.
- Position or dismantle forms for pouring concrete, using saws, hammers, nails, or bolts.
- Grind, scrape, sand, or polish surfaces, such as concrete, marble, terrazzo, or wood flooring, using abrasive tools or machines.
- Place, consolidate, or protect case-in-place concrete or masonry structures.
- Mix ingredients to create compounds for covering or cleaning surfaces.
- Mix, pour, or spread concrete, using portable cement mixers.
- Operate jackhammers or drills to break up concrete or pavement.
- Apply caulking compounds by hand or caulking guns to protect against entry of water or air.
- Tend machines that pump concrete, grout, cement, sand, plaster, or stucco through spray guns for application to ceilings or walls.
- Identify, pack, or transport hazardous or radioactive materials.

Technology

Project Management software	Operating System software
Computer Aided Design (CAD) software	

Personality

Realistic: People interested in this work like activities that include practical, hands-on problems and solutions. They do well at jobs that need:	
Attention to Detail	Integrity
Dependability	Stress Tolerance
Cooperation	Concern for Others

Available Certifications

OSHA 10 (1 Point)	CPR/First Aid Certification (1 Point)
OSHA 30 (1 Point)	Skid Steer Operations Certification
CITF – Career Connections Certifications I, II, III (Each worth 4 Points)	

Possible College Credits

College Credit Plus in English, Math, Social Studies, or Science	Must be preapproved. Must pass a college course at an Ohio college or College Credit Plus class at Butler Tech.
Articulated Credit	Butler Tech has agreements with certain colleges that may give you credits for a specific degree.
Career Technical Credit Transfer	<p>The Ohio Transfer to Degree Guarantee helps career and technical students transfer credits earned in high school to community college or four-year degree programs. The credit can be used at any Ohio public college or university:</p> <ul style="list-style-type: none">• If you successfully completed your Career-Technical program and passed certain required assessments.• If you attend a similar program at a public Ohio college or university. <p>For more information, go to www.transfercredit.ohio.gov</p>

*Additional college or post-secondary education may be required in this field

Possible Career Pathways

Carpenter	Cabinetmaker
Carpentry Subcontractor	Foreperson