

Essential Skills for

Career Programs

2020-21 School Year

Allied Health Essential Skills Profile

Rating Key: L	ow = Slightly Essential	Medium = Essential	High = Ver	y Essential
Key Vocational	Factors			Rating
Visual Acuity			High	
Depth Perception	The ability to detect the ph	The ability to detect the physical distance/depth of objects in space and		High
	time			
Oral	The ability to express/expla	in ideas.		High
Communication				
Written	The ability to communicate	in a written format and re	cord information	High
Communication	accurately	11.	1 11 . 1:6:	
Physical	Extended stooping, bending	g, walking, and lifting; must	be able to lift a	High
Mobility/Strength Eye-hand	minimum of 50 pounds The ability to use tools			Ligh
Coordination	The ability to use tools			High
Auditory Acuity	The ability to detect differe	nces in pitch and sound		High
Worker Trait Sk		nees in preen and seand		Rating
Ability to get along with others			High	
Ability to work independently, without close supervision			High	
Ability to work toward work including tasks of minimal interest		High		
Ability to work accurately, recheck and correct work, to an industry standard		High		
Dependability (Attendance and Punctuality)		High		
Ability to follow, interpret, and retain:				
Multi step oral instructions		High		
Written instructions/technical manuals-multi step			High	
Simple to complex diagram instructions			Medium	
Visual models or demonstrated instructions			Medium	
	ls of trade (urinalysis test strip			High
compresses, specimen collection container, glucose monitors or meters, electronic medical				
	lood pressure, stethoscope, sp	irometers, patient stabiliza	tion devices,	
needles, etc.)				
Ability to use numerical data (count, measure, compute, etc.) in applied setting			High	
Ability to discriminate between objects of similar:				
Size, shape, and color			Medium	
Spatial Relationship		High		
Ability to organize work process/follow defined procedures		High		
Ability to use various measuring tools with consistency and accuracy		High		
Ability to reference charts to determine course of action or equivalencies		High		
Ability to follow sequence or to determine sequence of actions to a successful conclusion			High	
Dexterity (fine finger)			High	

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.	High
Service Orientation: Actively looking for ways to help people.	High
Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.	High

Academic Skills

Math Skills	Literacy
 Convert a familiar fraction (such as ½ or ¼ to a decimal) and convert from a decimal to a common fraction; OR convert between decimals to percentages (such as 0.75 to 75%). Convert between familiar units of money and time. Add the prices of several products together to find the total, and calculate the correct change for a customer. Solve problems that require one or two mathematical operations. They can add, subtract, or multiply using positive or negative numbers and they can divide positive numbers. Calculate the average or mean of a set of numbers. Figure out simple ratios, simple proportions or rates (such as 10 mph). Add commonly known fractions, decimals, or percentages Add or subtract fractions with a common denominator Multiply a mixed number by a whole number or a decimal. Put information in the right order before performing calculations. 	 Identify the main idea Identify specific details Apply information/instructions to a situation that is the same as the situation described in the document Locate information in a graphic using information found in a second graphic Compare two or more pieces of information Identify a trend/pattern/relationship Make an inference or decision Identify the graphic that accurately represents the data Grade level: Text Readability 9.0-12.0

Additional Abilities Required

Oral Comprehension	The ability to listen to and understand information and
	ideas presented through spoken words and sentences.

Problem Sensitivity	The ability to tell when something is wrong or is likely to
	go wrong. It does not involve solving the problem, only
	recognizing there is a problem.
Near Vision	The ability to see details at close range (within a few feet
	of the observer).

Knowledge Required in Health Technology Field

Customer and Personal Service	Knowledge of principles and processes for providing
Customer and refsonal service	
	customer and personal services. This includes customer
	needs assessment, meeting quality standards for services,
	and evaluation of customer satisfaction.
English Language	Knowledge of the structure and content of the English
	language including the meaning and spelling of words,
	rules of composition, and grammar.
Psychology	Knowledge of human behavior and performance;
	individual differences in ability, personality, and interests;
	learning and motivation; psychological research methods;
	and the assessment and treatment of behavioral and
	affective disorders.
Medicine and Dentistry	Knowledge of the information and techniques needed to
	diagnose and treat human injuries, diseases, and
	deformities. This includes symptoms, treatment
	alternatives, drug properties and interactions, and
	preventive health-care measures.

Additional Considerations

Solid writing and spelling skills	Moving around, stooping, and bending
Wear a uniform	Pass background screening (BCI)
Work as a team member	Visually astute and detail oriented
Enjoy helping others	STRONG memorization skills are needed
	Must be able to deal with bodily fluids, smells, and
	injuries

Health Technology Work Activities

Answer patient call signals, signal lights, bells, or intercom systems to determine patients' needs.	Review patients' dietary restrictions, food allergies, and preferences to ensure patient receives appropriate diet.
Turn or reposition bedridden patients.	Supply, collect, or empty bedpans.
Provide physical support to assist patients to perform daily living activities, such as getting out of bed, bathing, dressing, using the toilet, standing, walking, or exercising.	Record vital signs, such as temperature, blood pressure, pulse, or respiration rate, as directed by medical or nursing staff.

Measure and record food and liquid intake or urinary and fecal output, reporting changes to medical or nursing staff.	Gather information from caregivers, nurses, or physicians about patient condition, treatment plans, or appropriate activities.
Observe or examine patients to detect symptoms that may require medical attention, such as bruises, open wounds, or blood in urine.	Exercise patients who are comatose, paralyzed, or have restricted mobility.
Document or otherwise report observations of patient behavior, complaints, or physical symptoms to nurses.	Remind patients to take medications or nutritional supplements.
Feed patients or assist patients to eat or drink.	Prepare or serve food trays.
Communicate with patients to ascertain feelings or need for assistance or social and emotional support.	Lift or assist others to lift patients to move them on or off beds, examination tables, surgical tables, or stretchers.
Undress, wash, and dress patients who are unable to do so for themselves.	Clean and sanitize patient rooms, bathrooms, examination rooms, or other patient areas.
Wash, groom, shave, or drape patients to prepare them for surgery, treatment, or examination.	Record height or weight of patients.
Assist nurses or physicians in the operation of medical equipment or provision of patient care.	Apply clean dressings, slings, stockings, or support bandages, under direction of nurse or physician.
Collect specimens, such as urine, feces, or sputum.	Change bed linens or make bed.
Administer medications or treatments, such as catheterizations, suppositories, irrigations, enemas, massages, or douches, as directed by a physician or nurse	Transport patients to treatment units, testing units, operating rooms, or other areas, using wheelchairs, stretchers, or moveable beds.
Set up treating or testing equipment, such as oxygen tents, portable radiograph (x-ray) equipment, or overhead irrigation bottles, as directed by a physician or nurse.	Operate equipment, such as electrocardiograms (EKGs), external defibrillators, or bag valve mask resuscitators, in advanced life support environments.
Administer first aid treatment or life support care to sick or injured persons.	Assess nature and extent of illness or injury to establish and prioritize medical procedures.
Perform emergency diagnostic and treatment procedures	Observe, record, and report to physician the patient's condition or injury, the treatment provided, and reactions to drugs or treatment.

Explain medical instructions to patients or family members.	Observe patients, charting and reporting changes in patients' conditions, such as adverse reactions to medication or treatment, and taking any necessary action.
Administer drugs, orally or by injection, or perform intravenous procedures under a physician's direction.	Coordinate work with other emergency medical team members or police or fire department personnel
Immobilize patient for placement on stretcher and ambulance transport, using backboard or other spinal immobilization device.	Communicate with dispatchers or treatment center personnel to provide information about situation, to arrange reception of victims, or to receive instructions for further treatment.
Maintain vehicles and medical and communication equipment and replenish first aid equipment and supplies.	Comfort and reassure patients.
Attend training classes to maintain certification licensure, keep abreast of new developments in the field, or maintain existing knowledge.	Coordinate with treatment center personnel to obtain patients' vital statistics and medical history, to determine the circumstances of the emergency, and to administer emergency treatment.
Provide basic patient care or treatments, such as taking temperatures or blood pressures, dressing wounds, treating bedsores, giving enemas or douches, rubbing with alcohol, massaging, or performing catheterizations.	Provide medical treatment or personal care to patients in private home settings, such as cooking, keeping rooms orderly, seeing that patients are comfortable and in good spirits, or instructing family members in simple nursing tasks.
Administer prescribed medications or start intravenous fluids, noting times and amounts on patients' charts.	Measure and record patients' vital signs, such as height, weight, temperature, blood pressure, pulse, and respiration.
Observe patients, charting and reporting changes in patients' conditions, such as adverse reactions to medication or treatment, and taking any necessary action.	Provide basic patient care or treatments, such as taking temperatures or blood pressures, dressing wounds, treating bedsores, giving enemas or douches, rubbing with alcohol, massaging, or performing catheterizations.
Answer patients' calls and determine how to assist them.	Work as part of a healthcare team to assess patient needs, plan and modify care, and implement interventions.
Supervise nurses' aides or assistants.	Sterilize equipment and supplies, using germicides, sterilizer, or autoclave.

Evaluate nursing intervention outcomes, conferring with other healthcare team members as necessary.	Make appointments, keep records, or perform other clerical duties in doctors' offices or clinics.
Provide medical treatment or personal care to patients in private home settings, such as cooking, keeping rooms' orderly, seeing that patients are comfortable and in good spirits, or instructing family members in simple nursing tasks.	Counsel patients about drug regimens and possible side effects or interactions with other substances such as food supplements, over-the-counter (OTC) medications, or herbal remedies.
Assemble and use equipment, such as catheters, tracheotomy tubes, or oxygen suppliers.	Record food and fluid intake and output.
Collect samples, such as blood, urine, or sputum from patients, and perform routine laboratory tests on samples.	Prepare patients for examinations, tests, or treatments and explain procedures.
Help patients with bathing, dressing, maintaining personal hygiene, moving in bed, or standing and walking.	Prepare or examine food trays for conformance to prescribed diet.
Inventory and requisition supplies and instruments.	Clean rooms and make beds.
Assist in delivery, care, or feeding of infants.	Apply compresses, ice bags, or hot water bottles.
Maintain accurate, detailed reports and records.	Record patients' medical information and vital signs.
Monitor, record, and report symptoms or changes in patients' conditions.	Consult and coordinate with healthcare team members to assess, plan, implement, or evaluate patient care plans.
Provide health care, first aid, immunizations, or assistance in convalescence or rehabilitation in locations such as schools, hospitals, or industry.	Direct or coordinate infection control programs, advising or consulting with specified personnel about necessary precautions.
Prepare patients for and assist with examinations or treatments.	Conduct specified laboratory tests.
Perform physical examinations, make tentative diagnoses, and treat patients en route to hospitals or at disaster site triage centers.	Prepare rooms, sterile instruments, equipment, or supplies and ensure that stock of supplies is maintained.

Technology

Word processing software	Spreadsheet software
Medical software	Office suite software

Available Certifications

Ohio State Tested Nurse Aide (STNA) (12 Points)	National Health Association (NHA)-Clinical	
	Medical Assistant (3 Points)	
National Health Association (NHA)-Certified	OSHA-10 Healthcare (1 Point	
Phlebotomy Technician (12 Points)		
	CPR/First Aid Certification (1 Point)	

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.
Career Technical Credit Transfer (Up to 3 semester hours)	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: 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.

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

Nurse assistant	Paramedic
Patient care assistant	LPN
Radiographic technician	Lab technician
Nurse practitioner	RN
Medical assistant	Physician
Respiratory therapist	Pharmacy assistant

Auto Collision Essential Skills Profile

Rating Key:	Lov	w = Slightly Essential	Medium = Essential	High = Very	Essential
Key Vocation	al Fa	actors			Rating
Visual Acuity		The ability to detect differe	nces/details visually		High
Auditory Acuit	у	The ability to detect differe	nces in pitch/sound		Medium
Oral		The ability to express/expla	nin ideas.		High
Communication	n				
Oral Expressio	n	The ability to verbally explamanner so others will unde	•	telligible	High
Written		The ability to communicate	in a written format and re	cord	Medium
Communication	n	information accurately			
Physical Mobility/Stren	gth	The ability to lift 50 pounds	or more		High
Eye-Hand		The ability to use tools to e	nsure work is completed		High
Coordination a	and	,	·		
Dexterity					
Worker Trait	Skill	s			Rating
Ability to get a	long	with others			High
Ability to work	inde	pendently, without close su	pervision		High
Ability to work	tow	ard work including tasks of n	ninimal interest		High
Ability to stick	to as	signed task to a positive/exp	ected conclusion		High
Ability to work	accı	rately, recheck and correct v	work to industry standards		High
Ability to follo	w an	d retain:			
Multi step o	oral ir	nstructions			High
Written inst	tructi	ions/technical manuals-mult	i step		High
Simple to c	omp	lex diagram instructions			High
Visual mod	els o	r demonstrated instructions			High
Ability to use t	ools	of trade (trim or molding too	ols, sheers, pullers, pneuma	itic hammer,	High
metal cutters,	etc.)				
Ability to use r	nume	rical data (count, measure, c	compute, etc.) in applied se	tting	High
Ability to discr	imina	ate between objects of simila	ar:		
Size					High
Shape					High
Color					High
Spatial Rela	tions	hip			High
•		gross finger/motor			High
		work process/follow defined	•		High
Able to sequer	nce e	vents or follow a sequence a	s necessary		High

Active Listening: Give full attention to what other people are saying, taking time to	High
understand the points being made, asking appropriate questions and not interrupting	

Academic Skills

 Solve problems that require one or two mathematical operations. They can add, subtract, or multiply using positive or negative numbers (such as 10 or -2), and they can divide positive numbers (such as 10). Calculate the average or mean of a set of numbers (such as (10+11+12)/3)). For this, they may use whole numbers and decimals. Figure out simple ratios (such as ¾), simple proportions (such as 10/100 cases), or rates (such as 10 mph). Add commonly known fractions, decimals, or percentages (such as ½, 0.75, or 25%). Add or subtract fractions with a common denominator (such as ¾ + ¾ + ¾). Multiply a mixed number (such 12 1/8) by a whole number or a decimal. Put information in the right order Identify the main idea Identify specific details Use the information in the document to figure out the meanings of words or phrases that are not defined for them Choose when to perform a step in a series of steps Apply information/instructions to a situation that is the same as the situation described in the document Choose what to do when changing conditions call for a different action Locate information in a graphic using information found in another graphic Identify the main idea Use the information in the document to figure out the meanings of words or phrases that are not defined for them Choose when to perform a step in a series of steps Apply information/instructions to a situation that is the same as the situation described in the document Choose what to do when changing conditions call for a different action Locate information found in another graphic Identify the main idea Use the information in the document Choose what to do when changing Add commonly known fractions, a trend/pattern/relationship Make and justify an inference or decision Identify the main idea 	Math Skills Literacy			
given a defined purpose	two mathematical operations. They can add, subtract, or multiply using positive or negative numbers (such as 10 or -2), and they can divide positive numbers (such as 10). • Calculate the average or mean of a set of numbers (such as (10+11+12) /3)). For this, they may use whole numbers and decimals. • Figure out simple ratios (such as ¾), simple proportions (such as 10/100 cases), or rates (such as 10 mph). • Add commonly known fractions, decimals, or percentages (such as ½, 0.75, or 25%). • Add or subtract fractions with a common denominator (such as ¼ + ¾ + ¼). • Multiply a mixed number (such 12 1/8) by a whole number or a decimal.	 Identify specific details Use the information in the document to figure out the meanings of words or phrases that are not defined for them Choose when to perform a step in a series of steps Apply information/instructions to a situation that is the same as the situation described in the document Choose what to do when changing conditions call for a different action Locate information in a graphic using information found in another graphic Identify and interpret a trend/pattern/relationship Make and justify an inference or decision Identify the graphic that accurately represents the data Compare two or more trends/patterns/relationships Identify the most effective graphic 		

Additional Abilities/Skills 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.	
Information Ordering	The ability to arrange things or actions in a certain order or	
	pattern according to a specific rule or set of rules (e.g., patterns	
	of numbers, letters, words, pictures, mathematical operations).	
Oral Comprehension	The ability to listen to and understand information and ideas	
	presented through spoken words and sentences.	
Repairing	Repairing machines or systems using the needed tools.	
Complex Problem Solving	Identifying complex problems and reviewing related information	
	to develop and evaluate options and implement solutions.	

Knowledge Required in Automotive Collision

Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
Mechanical	Knowledge of machines and tools, including their designs,
	uses, repair, and maintenance.
English Language	Knowledge of the structure and content of the English
	language including the meaning and spelling of words, rules
	of composition, and grammar.

Activities

Follow supervisors' instructions as to which parts to restore or replace and how much time the job should take. Inspect repaired vehicles for proper functioning,	Review damage reports, prepare or review repair cost estimates, and plan work to be performed. Sand body areas to be painted and cover
completion of work, dimensional accuracy, and overall appearance of paint job, and test drive vehicles to ensure proper alignment and handling.	bumpers, windows, and trim with masking tape or paper to protect them from the paint.
Fit and weld replacement parts into place, using wrenches and welding equipment, and grind down welds to smooth them, using power grinders and other tools.	Prime and paint repaired surfaces, using paint spray guns and motorized sanders.
Remove damaged sections of vehicles using metal-cutting guns, air grinders and wrenches, and install replacement parts using wrenches or welding equipment.	Chain or clamp frames and sections to alignment machines that use hydraulic pressure to align damaged components.
Fill small dents that cannot be worked out with plastic or solder.	File, grind, sand, and smooth filled or repaired surfaces, using power tools and hand tools.
Remove upholstery, accessories, electrical window-and-seat-operating equipment, and trim to gain access to vehicle bodies and fenders.	Position dolly blocks against surfaces of dented areas and beat opposite surfaces to remove dents, using hammers.
Mix polyester resins and hardeners to be used in restoring damaged areas.	Adjust or align headlights, wheels, and brake systems.
Read specifications or confer with customers to determine the desired custom modifications for altering the appearance of vehicles.	Cut and tape plastic separating film to outside repair areas to avoid damaging surrounding surfaces during repair procedure and remove tape and wash surfaces after repairs are complete.

Remove small pits and dimples in body metal, using pick hammers and punches.	Fit and secure windows, vinyl roofs, and metal trim to vehicle bodies, using caulking guns, adhesive brushes, and mallets.
Measure and mark vinyl material and cut	Remove damaged panels, and identify the family
material to size for roof installation, using rules,	and properties of the plastic used on a vehicle.
straightedges, and hand shears.	
Replace damaged glass on vehicles.	Soak fiberglass matting in resin mixtures and apply layers of matting over repair areas to specified thicknesses.
Clean work areas, using air hoses, to remove	Apply heat to plastic panels, using hot-air welding
damaged material and discarded fiberglass strips	guns or immersion in hot water, and press the
used in repair procedures.	softened panels back into shape by hand.
Cut openings in vehicle bodies for the installation	
of customized windows, using templates and power shears or chisels.	

Technology

Inventory management software	Analytical or scientific software
Data base user interface and query software	Accounting software
Calendar and scheduling software	

Available Certifications

I-Car Pro Level 1 Refinishing Technician (12 points)	
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Possible College Credits

College Credit Plus in English, Math, Social	Must be preapproved. Must pass a college
Studies, or Science	course at an Ohio college or College Credit Plus
	class.

Painter's assistant	Estimator
Auto body assistant	Automotive welding and frame repair technician
Painter	Body shop owner
Collision repair technician	

Auto Technology Essential Skills Profile

Rating Key: L	ow = Slightly Essential	Medium = Essential	High = Very Esser	ntial
Key Vocational Factors			Rat	ting
Visual Acuity			Hig	
Auditory Acuity The ability to detect differences in pitch/sound		Hig		
Oral	The ability to express/expla	•		dium
Communication	, , , , ,			
Oral Expression	The ability to verbally expla	nin and express self in an in	telligible Me	dium
	manner so others will unde	erstand		
Written	The ability to communicate	in a written format and re	cord Me	dium
Communication	information accurately			
Physical	The ability to lift 50 pounds	or more, bending, stoopir	ng Hig	h
Mobility/Strength	h			
Eye-Hand-Arm	The ability to use tools to e	nsure work is completed	Hig	h
Coordination and	I			
Dexterity				
Worker Trait Sk	kills		Rat	ting
Ability to get alor	ng with others		Me	dium
Ability to work independently, without close supervision		Hig	h	
Ability to work toward work including tasks of minimal interest		Me	dium	
Ability to stick to assigned task to a positive/expected conclusion		Me	dium	
Ability to work accurately, recheck and correct work to industry standards		Hig	h	
Ability to follow and retain:				
Multi step ora	Multi step oral instructions		Hig	h
Written instructions/technical manuals-multi step		Hig	h	
Simple to complex diagram instructions		Hig	h	
Visual models or demonstrated instructions		Hig	h	
Ability to use tools of trade (voltage or current meters, specialty wrenches, pullers,		, pullers, Hig	h	
pneumatic vacuu	m equipment, brake repair kit	s, etc.)		
Ability to use nur	merical data (count, measure, c	compute, etc.) in applied se	etting Hig	h
Ability to discrim	inate between objects of simila	ar:		
Size			Me	dium
Shape			Me	dium
Color			Me	dium
Spatial Relationship M		dium		
Dexterity-Fine and gross finger/motor Hig			h	
Ability to organize work process/follow defined procedures			Me	dium
Able to sequence	Able to sequence events or follow a sequence as necessary		Me	dium
Active Listening: Give full attention to what other people are saying, taking time to			-	h
understand the p	understand the points being made, asking appropriate questions and not interrupting			

Required Academic Skills

s Calva problems that require and type	 Identify the main idea
 Solve problems that require one type of mathematical operation. They add or subtract either positive or negative numbers (such as 10 or -2). They multiply or divide using only positive numbers (such as 10). Convert a familiar fraction (such as ½ or ¼ to a decimal) and convert from a decimal to a common fraction; OR convert between decimals to percentages (such as 0.75 to 75%). Convert between familiar units of money and time (such as one hour equals 60 minutes or ½ of a dollar equals \$0.50). Add the prices of several products together to find the total, and calculate the correct change for a customer. 	 Identify the main idea Identify specific details Use the information in the document to figure out the meanings of words or phrases that are not defined for them Choose when to perform a step in a series of steps Apply information/instructions to a situation that is the same as the situation described in the document Choose what to do when changing conditions call for a different action Locate information in a graphic using information found in a second graphic Compare two or more pieces of information Identify a trend/pattern/relationship Make an inference or decision Identify the graphic that accurately represents the data

Additional Abilities/Skills Required

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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.
Arm-Hand Steadiness	The ability to keep your hand and arm steady while
	moving your arm or while holding your arm and
	hand in one position.
Control Precision	The ability to quickly and repeatedly adjust the
	controls of a machine or a vehicle to exact positions.
Work Preferences	Detail oriented, computer savvy, dirty/greasy, inside
	work with crawling, bending, and stooping
Customer and Personal Service	Knowledge of principles and processes for providing
	customer and personal services. This includes
	customer needs assessment, meeting quality
	standards for services, and evaluation of customer
	satisfaction.
Mechanical	Knowledge of machines and tools, including their
	designs, uses, repair, and maintenance.
English Language	Knowledge of the structure and content of the
	English language including the meaning and spelling
	of words, rules of composition, and grammar.

Activities

Inspect vehicles for damage and record findings so that necessary repairs can be made.	Estimate costs of vehicle repair.
Troubleshoot fuel, ignition, and emissions control systems, using electronic testing equipment.	Repair, overhaul, or adjust automobile brake systems.
Test electronic computer components in automobiles to ensure proper operation.	Repair or replace defective ball joint suspensions, brake shoes, or wheel bearings.
Align wheels, axles, frames, torsion bars, and steering mechanisms of automobiles, using special alignment equipment and wheelbalancing machines.	Tune automobile engines to ensure proper and efficient functioning.
Repair, replace, or adjust defective fuel injectors, carburetor parts, and gasoline filters.	Rebuild, repair, or test automotive fuel injection units.
Change spark plugs, fuel filters, air filters, and batteries in hybrid electric vehicles.	Conduct visual inspections of compressed natural gas fuel systems to identify cracks, gouges, abrasions, discoloration, broken fibers, loose brackets, damaged gaskets, or other problems
Diagnose and replace or repair engine management systems or related sensors for flexible fuel vehicles (FFVs) with ignition timing, fuel rate, alcohol concentration, or air-to-fuel ratio malfunctions.	Replace hydraulically assisted systems with electric-powered systems, such as power steering pumps or air conditioning compressors, to improve fuel economy.
Service or repair butane gas, ethanol, methane, or other alternative or biofuel systems.	Install or repair air conditioners and service components, such as compressors, condensers, and controls.
Service internal combustion engine systems for hybrid electric vehicles.	Install, adjust, or repair hydraulic or electromagnetic automatic lift mechanisms used to raise and lower automobile windows, seats, and tops.
Diagnose and repair regenerative braking systems or hydraulic systems in hybrid vehicles.	Repair or rebuild clutch systems.
Repair or replace automobile leaf springs.	Replace defective mufflers and tailpipes.
Service biodiesel fuel tanks for algae or sludge accumulation by cleaning, changing filters, or adding algaecides.	Diagnose, troubleshoot, repair & install the following: brakes, electrical/electronics, engine repair, steering & suspension, engine performance.

Technology

Project management software	Facilities management software
Information retrieval or search software	Database reporting software
Analytical scientific software	

Available Certifications

ASE Student Certification (3 Points each) There are 5 certifications available

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
Career Technical Credit Transfer (Up to 2 semester hours)	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: 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.

Automotive Technician	Diagnostician
Master Mechanic	Service Manager



Construction Technologies Essential Skills Profile

Rating Key:	Lov	w = Slightly Essential	Medium = Essential	High = Very	Essential
Key Vocational Factors		Rating			
Visual Acuity			High		
Depth Percept	ion	The ability to detect the physical distance/depth of objects in space and time		High	
Oral Communicatio	n	The ability to express/expla	nin ideas		Medium
Oral Expressio		The ability to verbally expla	-	telligible	Medium
Written Communicatio	n	The ability to communicate in a written format and record information accurately		Medium	
Physical Mobility/Stren		Extended standing, bending, stooping, use of ladders, working inside and outside, and working on roofs or at high levels above the ground		High	
Eye-hand Coordination		The ability to use construct	ion tools		High
Auditory Acuit	У	The ability to detect differe			Medium
Safety Understanding	S	Able to comprehend hazards of working with tools, materials, equipment, and environmental conditions; able to wear personal protective equipment suitable for task		High	
Worker Trait	Skil	ls			Rating
Ability to get a	long	with others			Medium
Ability to work	Ability to work independently, without close supervision		Medium		
Ability to work	tow	ard work including tasks of n	ninimal interest		High
Ability to follo	w an	d retain:			
Multi step oral instructions		High			
Written inst	truct	ions/technical manuals-mult	i step		High
Simple to c	omp	lex diagram instructions			Medium
		r demonstrated instructions			Medium
Ability to use tools of trade (power saws, man lift or personnel lift, levels, forklifts, blow torch, hammers, squares, power routers, ladders, etc.)		High			
Ability to use numerical data (count, measure, compute, etc.) in applied setting		Medium			
Ability to discr	imin	ate between objects of simila	ar:		
Size					High
Shape		Medium			
Color		Medium			
Spatial relationship		Medium			
Ability to organize work process/follow defined procedures		High			
Coordination (eye-hand)		High			
Able to sequence events or follow a sequence as necessary		High			

Active Listening: Give full attention to what other people are saying, taking time to	High
understand the points being made, asking appropriate questions and not interrupting	
Operation Monitoring: Watching gauges, dials, or other indicators to make sure machine	High
is working properly	

Math Skills	Literacy
 Convert a familiar fraction and convert from a decimal to a common fraction; OR convert between decimals to percentages Convert between familiar units of money and time. Add the prices of several products together to find the total, and calculate the correct change for a customer. Solve problems that require one or two mathematical operations. They can add, subtract, or multiply using positive or negative numbers and they can divide positive numbers. Calculate the average or mean of a set of numbers. Figure out simple ratios, simple proportions or rates (such as 10 mph). Add commonly known fractions, decimals, or percentages Add or subtract fractions with a common denominator Multiply a mixed number by a whole number or a decimal. Put information in the right order before performing calculations. 	 Identify the main idea Identify specific details Apply information/instructions to a situation that is the same as the situation described in the document Locate information in a graphic using information found in a second graphic Compare two or more pieces of information Identify a trend/pattern/relationship Make an inference or decision Identify the graphic that accurately represents the data

Additional 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.
Arm-Hand Steadiness	The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
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.

Additional Considerations

Inside and outside work in harsh conditions-heat,	Must be ok with heights, moving, bending, lifting,
snow, rain, ice, etc.	stooping and using ladders
Must understand hazards of working with tools	Must wear protective equipment suitable for the task
and materials	
Will get dirty	

Knowledge Required in Construction Technologies Field

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.
Mechanical	Knowledge of machines and tools, including their designs, uses, repair, and maintenance
Administration and Management	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Construction Technologies Work Activities

Control traffic passing near, in, or around work zones.	Signal equipment operators to facilitate alignment, movement, or adjustment of machinery, equipment, or materials.
Clean or prepare construction sites to eliminate possible hazards.	Read plans, instructions, or specifications to determine work activities.
Load, unload, or identify building materials, machinery, or tools, distributing them to the appropriate locations, according to project plans or specifications.	Measure, mark, or record openings or distances to layout areas where construction work will be performed.
Install sewer, water, or storm drain pipes, using pipelaying machinery or laser guidance equipment.	Operate or maintain air monitoring or other sampling devices in confined or hazardous environments.
Mix ingredients to create compounds for covering or cleaning surfaces.	Dig ditches or trenches, backfill excavations, or compact and level earth to grade specifications, using picks, shovels, pneumatic tampers, or rakes.
Tend pumps, compressors, or generators to provide power for tools, machinery, or equipment or to heat or move materials, such as asphalt.	Mix, pour, or spread concrete, using portable cement mixers.
Erect or dismantle scaffolding, shoring, braces, traffic barricades, ramps, or other temporary structures.	Provide assistance to craft workers, such as carpenters, plasterers, or masons.
Lubricate, clean, or repair machinery, equipment, or tools.	Position, join, align, or seal structural components, such as concrete wall sections or pipes.

Grind, scrape, sand, or polish surfaces, such as	Position or dismantle forms for pouring concrete,		
concrete, marble, terrazzo, or wood flooring, using	using saws, hammers, nails, or bolts.		
abrasive tools or machines	using saws, naminers, nais, or boits.		
	Spray materials such as water sand steam vinul		
Tend machines that pump concrete, grout, cement,	Spray materials, such as water, sand, steam, vinyl,		
sand, plaster, or stucco through spray guns for	paint, or stucco, through hoses to clean, coat, or seal		
application to ceilings or walls.	surfaces.		
Apply caulking compounds by hand or caulking guns	Smooth or finish freshly poured cement or concrete,		
to protect against entry of water or air.	using floats, trowels, screeds, or powered cement		
	finishing tools.		
Mop, brush, or spread paints, cleaning solutions, or	Perform site activities required of green certified		
other compounds over surfaces to clean them or to	construction practices, such as implementing waste		
provide protection.	management procedures, identifying materials for		
	reuse, or installing erosion or sedimentation control		
	mechanisms.		
Operate jackhammers or drills to break up concrete	Measure and mark cutting lines on materials, using a		
or pavement.	ruler, pencil, chalk, and marking gauge.		
Raze buildings or salvage useful materials.	Perform building weatherization tasks, such as		
	repairing windows, adding insulation, or applying		
	weather-stripping materials.		
Perform minor plumbing, welding, or concrete	Finish surfaces of woodwork or wallboard in houses		
mixing work.	or buildings, using paint, hand tools, or paneling.		
	ar a manage, as no participation of		
Build or repair cabinets, doors, frameworks, floors,	Install structures or fixtures, such as windows,		
or other wooden fixtures used in buildings, using	frames, floorings, trim, or hardware, using		
woodworking machines, carpenter's hand tools, or	carpenters' hand or power tools.		
power tools.	carpenters mand or power tools.		
power tools.			
Follow established safety rules and regulations and	Inspect ceiling or floor tile, wall coverings, siding,		
maintain a safe and clean environment.	glass, or woodwork to detect broken or damaged		
	structures.		
Study specifications in blueprints, sketches, or	Install structures or fixtures, such as windows, frames,		
building plans to prepare project layout and	floorings, trim, or hardware, using carpenters' hand or		
determine dimensions and materials required.	power tools.		
Shape or cut materials to specified measurements,	Build or repair cabinets, doors, frameworks, floors, or		
using hand tools, machines, or power saws.	other wooden fixtures used in buildings, using		
asgsita toolo, masimico, or power saws.	woodworking machines, carpenter's hand tools, or		
	power tools.		
Verify trueness of structure, using plumb bob and	Select and order lumber or other required materials		
level	Select and order familier of other required materials		
Arrange for subcontractors to deal with special	Maintain records, document actions, and present		
areas, such as heating or electrical wiring work.	written progress reports.		
Prepare cost estimates for clients or employers.	Work with or remove hazardous material.		
Assemble and fasten materials to make frameworks	Finish surfaces of woodwork or wallboard in houses		
	or buildings, using paint, hand tools, or paneling.		
or props, using hand tools and wood screws, nails,	or buildings, using paint, fidily tools, or patieting.		
dowel pins, or glue.			

Dig ditches or trenches, backfill excavations, or	Tend pumps, compressors, or generators to provide
compact and level earth to grade specifications,	power for tools, machinery, or equipment or to heat
using picks, shovels, pneumatic tampers, or rakes.	or move materials, such as asphalt.
Perform site activities required of green certified	Perform building weatherization tasks, such as
construction practices, such as implementing waste	repairing windows, adding insulation, or applying
management procedures, identifying materials for	weather-stripping materials.
reuse, or installing erosion or sedimentation control	
mechanisms.	
Perform construction laborer duties at green building	Read plans, instructions, or specifications to
sites, such as renewable energy plants or wind	determine work activities.
turbine installations.	
Control traffic passing near, in, or around work	Measure materials or distances, using square,
zones.	measuring tape, or rule to lay out work.
Cut or saw boards, timbers, or plywood to required	Erect forms, framework, scaffolds, hoists, roof
size, using handsaw, power saw, or woodworking	supports, or chutes, using hand tools, plumb rule, and
machine.	level.

Available Certifications

Industrial Forklift Operations (1 point)	NCCER Core (6 Points)
OHSA 10-hour card (1 Point)	AWS Welding Qualification (9pts)
CPR/First Aid Certification (1 Point)	Aerial Life Certification (1 point)

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.
Career Technical Credit Transfer (Up to 3 semester hours)	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: 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.

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

Carpenter	Electrician
Foreperson	Engineer
Plumber	

Cosmetology Essential Skills Profile

Rating Key:	Lov	v = Slightly Essential	Medium = Essential	High = V	ery Essential
			Wicdiani - Essentiai	mgn – v	Rating
Key Vocational Factors Visual Acuity The ability to detect differences/details visually			High		
Depth Perception	οn	The ability to detect differences/details visually The ability to detect the physical distance/depth of objects in space			High
Верин стеери	011	and time			111611
Oral		The ability to express/expla	ain ideas.		Medium
Communication	า				
Oral Expression)	The ability to verbally expla	nin and express self in an inte	elligible	Medium
•		manner so others will unde	erstand	_	
Written		The ability to communicate	in a written format and rec	ord	Medium
Communication	ı	information accurately			
Physical		Extended standing, bending	g, stooping, and standing for	extended	Medium
Mobility/Streng	gth	times			
Eye-hand		The ability to use tools			High
Coordination					
Auditory Acuity	1	The ability to detect differe	nces in pitch and sound		Low
Worker Trait S	Worker Trait Skills Rating				Rating
Ability to get al	_				High
Ability to work	inde	pendently, without close su	pervision		High
Ability to work	tow	ard work including tasks of n	ninimal interest		Medium
Ability to work accurately, recheck and correct work, to an industry standard			High		
Ability to follow	v and	d retain:			
Multi step oral instructions H			High		
Written instructions/technical manuals-multi step			High		
Simple to complex diagram instructions			Medium		
Visual models or demonstrated instructions			Medium		
Ability to use tools of trade (scissors, nail file, chemicals, manicure implements, combs or High				High	
		applicator brushes, etc.)			
Ability to use numerical data (count, measure, compute, etc.) in applied setting			Medium		
Ability to discriminate between objects of similar:					
Size			Medium		
Shape			High		
Color			High		
Spatial relationship Medium					
Ability to organize work process/follow defined procedures Medium					
Ability to refer to charts for troubleshooting and specifications High					
Able to sequence events or follow a sequence as necessary High					
Active Listening: Give full attention to what other people are saying, taking time to understand the points being made, asking appropriate questions and not interrupting					
understand the	poi	nts being made, asking appr	opriate questions and not in	terrupting	

Reading Comprehension: Understanding written sentences and paragraphs in work related	High	
documents		
Speaking: Talking to others to convey information effectively	High	
Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of		
alternative solutions, conclusions or approaches to problems.		
Service Orientation: Actively looking for ways to help people		

Math Skills	Literacy
 Convert a familiar fraction (such as ½ or ¼ to a decimal) and convert from a decimal to a common fraction; OR convert between decimals to percentages. Convert between familiar units of money and time. Add the prices of several products together to find the total, and calculate the correct change for a customer. Solve problems that require one or two mathematical operations. They can add, subtract, or multiply using positive or negative numbers and they can divide positive numbers. Calculate the average or mean of a set of numbers. Figure out simple ratios, simple proportions or rates (such as 10 mph). Add commonly known fractions, decimals, or percentages Add or subtract fractions with a common denominator Multiply a mixed number by a whole number or a decimal. Put information in the right order before performing calculations. 	 Identify the main idea Identify specific details Apply information/instructions to a situation that is the same as the situation described in the document Locate information in a graphic using information found in a second graphic Compare two or more pieces of information Identify a trend/pattern/relationship Make an inference or decision Identify the graphic that accurately represents the data

Additional Requirements

Attendance	Seat hours meaning students must meet minimum hours required which	
	requires absences made up minute for minute after school.	
Anatomy and Physiology	Must like and possess strong background	
Near Vision	The ability to see details at close range (within a few feet of the	
	observer).	
Arm-Hand Steadiness	The ability to keep your hand and arm steady while moving your arm or	
	while holding your arm and hand in one position.	

Finger Dexterity	The ability to make precisely coordinated movements of the fingers of
	one or both hands to grasp, manipulate, or assemble very small objects.

Knowledge Required in Cosmetology Field

Sales and Marketing	Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.
Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Cosmetology Work Activities

Keep work stations clean and sanitize tools such as scissors and combs.	Bleach, color, or tint hair, using applicator or brush.
Cut, trim and shape hair or hairpieces, based on customers' instructions, hair type and facial features, using clippers, scissors, trimmers and razors.	Analyze patrons' hair and other physical features to determine and recommend beauty treatment or suggest hair styles.
Schedule client appointments.	Apply artificial fingernails.
Update and maintain customer information records, such as beauty services provided.	Train or supervise other hairstylists, hairdressers and assistants.
Massage and treat scalp for hygienic and remedial purposes, using hands, fingers, or vibrating equipment.	Shampoo, rinse, condition and dry hair and scalp or hairpieces with water, liquid soap, or other solutions.
Operate cash registers to receive payments from patrons.	Operate cash registers to receive payments from patrons.
Administer therapeutic medication and advise patron to seek medical treatment for chronic or contagious scalp conditions.	Demonstrate and sell hair care products and cosmetics.
Order, display, and maintain supplies	Comb, brush, and spray hair or wigs to set style.
Develop new styles and techniques.	Shave, trim and shape beards and moustaches.
Apply water, setting, straightening or waving solutions to hair and use curlers, rollers, hot combs and curling irons to press and curl hair.	Recommend and explain the use of cosmetics, lotions, and creams to soften and lubricate skin and enhance and restore natural appearance.
Shape eyebrows and remove facial hair, using depilatory cream, tweezers, electrolysis or wax.	Clean, shape, and polish fingernails and toenails, using files and nail polish.
Give facials to patrons, using special compounds such as lotions and creams.	Attach wigs or hairpieces to model heads and dress wigs and hairpieces according to instructions, samples, sketches or photographs.

Technology

Word processing software	Spreadsheet software
Office suite software	Calendar and scheduling software
Accounting software	

Available Certifications

Ohio State Board of Cosmetology License	CPR/First Aid (1 Point)
(12 Points)	

Possible College Credits

College Credit Plus in English, Math, Social	Must be preapproved. Must pass a college
Studies, or Science	course at an Ohio college or College Credit Plus
	class at Great Oaks.

Hair stylist	Make-up consultant
Image consultant	Nail technician
Salon manager or owner	Aesthetician
Educator	Platform artist
Color consultant/artist	

Criminal Justice Essential Skills Profile

Rating Key:	Lov	w = Slightly Essential	Medium = Essential	High = Very I	Essential
Key Vocational Factors			Rating		
Visual Acuity The ability to detect differences/details visually		High			
Depth Perception The ability to detect the physical distance/depth of obje		jects in space	High		
	and time				
Oral	The ability to express/explain ideas.		High		
Communication	n				
Written		The ability to communicate	in a written format and re	cord	High
Communication	n	information accurately			
Physical		Stooping, bending, walking			High
Mobility/Stren	gth	environments such as heat,	snow, cold, ice, and high s	tress	
Eye-hand		The ability to use tools			High
Coordination					
Auditory Acuity		The ability to detect differe	nces in pitch and sound		High
Worker Trait	Skill	s			Rating
Ability to get al					High
		pendently, without close su			High
Ability to work toward work including tasks of minimal interest			High		
Ability to work accurately, recheck and correct work, to an industry standard			High		
Dependability (Attendance and Punctuality) Hi			High		
Ability to follow, interpret, and retain:					
Multi step oral instructions High			High		
Written instructions/technical manuals-multi step Hig			High		
Simple to co	Simple to complex diagram instructions High			High	
Visual mode				Medium	
Ability to use tools of trade (two way radios, police or security vehicles, notebook Hi			High		
computers, har	computers, handguns, biological evidence collection kits, etc.)				
Ability to use numerical data (count, measure, compute, etc.) in applied setting			High		
Ability to discriminate between objects of similar:					
Size			High		
Shape			High		
Color			High		
Spatial relationship			High		
Ability to organize work process/follow defined procedures			High		
Ability to follow	v sec	quence or to determine sequ	ence of actions to a succes	sful conclusion	High
Dexterity (fine	Dexterity (fine finger) High			High	
Active Listening: Giving full attention to what other people are saying, taking time to High			High		
understand the points being made, asking questions as appropriate, and not interrupting					
at inappropriate times.					

Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of	
alternative solutions, conclusions or approaches to problems.	
Monitoring: Monitoring/Assessing performance of yourself, other individuals, or	
organizations to make improvements or take corrective action.	
Speaking: Talking to others to convey information effectively	High

Academic Skills

Math Skills	Literacy
Pre-Algebra/Geometry	Text readability is 9.0-12.0

Additional Abilities Required

Deductive Reasoning	The ability to apply general rules to specific
	problems to produce answers that make sense.
Problem Sensitivity	The ability to tell when something is wrong or is
	likely to go wrong. It does not involve solving the
	problem, only recognizing there is a problem.
Inductive Reasoning	The ability to combine pieces of information to
	form general rules or conclusions (includes
	finding a relationship among seemingly unrelated
	events).

Knowledge Required in Law Enforcement Field

Law and Government	Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.
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.
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Additional Considerations

Solid writing and spelling skills	Physically fit and enjoys working out
Wear a uniform	Pass background xcreening (BCI)
Work as a team member	Visually astute and detail oriented

CANNOT have a police record	Drug free for last 5 years or more and pass
	random drug screenings
Certain drugs like heroin, cocaine,, ecstasy, etc.	Must be able to deal with bodily fluids, smells,
are automatic disqualifiers or elimination from	injuries, and aggressive/violent individuals
the program	

Law Enforcement Work Activities

Identify, pursue, and arrest suspects and perpetrators of criminal acts.	Record facts to prepare reports that document incidents and activities.
Provide for public safety by maintaining order, responding to emergencies, protecting people and property, enforcing motor vehicle and criminal laws, and promoting good community relations.	Monitor, note, report, and investigate suspicious persons and situations, safety hazards, and unusual or illegal activity in patrol area.
Render aid to accident victims and other persons requiring first aid for physical injuries.	Review facts of incidents to determine if criminal act or statute violations were involved.
Testify in court to present evidence or act as witness in traffic and criminal cases.	Relay complaint and emergency-request information to appropriate agency dispatchers.
Process prisoners, and prepare and maintain records of prisoner bookings and prisoner status during booking and pre-trial process.	Monitor traffic to ensure motorists observe traffic regulations and exhibit safe driving procedures.
Photograph or draw diagrams of crime or accident scenes and interview principals and eyewitnesses.	Evaluate complaint and emergency-request information to determine response requirements.
Patrol specific area on foot, horseback, or motorized conveyance, responding promptly to calls for assistance.	Investigate traffic accidents and other accidents to determine causes and to determine if a crime has been committed.
Direct traffic flow and reroute traffic in case of emergencies.	Issue citations or warnings to violators of motor vehicle ordinances.
Inform citizens of community services and recommend options to facilitate longer-term problem resolution.	Act as official escorts, such as when leading funeral processions or firefighters.
Inform citizens of community services and recommend options to facilitate longer-term problem resolution	Inspect public establishments to ensure compliance with rules and regulations.

Answer alarms and investigate disturbances.	Circulate among visitors, patrons, or employees to preserve order and protect property.
Write reports of daily activities and irregularities, such as equipment or property damage, theft, presence of unauthorized persons, or unusual occurrences.	Monitor and authorize entrance and departure of employees, visitors, and other persons to guard against theft and maintain security of premises.
Patrol industrial or commercial premises to prevent and detect signs of intrusion and ensure security of doors, windows, and gates.	Respond to medical emergencies by administering basic first aid or by obtaining assistance from paramedics.

Technology

Word Processing software	Spreadsheet software
Graphic or photo imaging software	Data base user interface and query software

Available Certifications

National Incident Management System (NIMS)	CPR/First Aid Certification (1 point)
(Up to 10 points)	
OSHA-10 Healthcare (1 point)	ASP Baton Certification (1 point)

Possible College Credits

College Credit Plus in English, Math, Social	Must be preapproved. Must pass a college
Studies, or Science	course at an Ohio college or College Credit Plus
	class.
Career Technical Credit Transfer	The Ohio Transfer to Degree Guarantee helps
(Up to 3 semester hours)	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:
	 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.

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

Private security	Police officer
Detective	Police supervisor

Culinary Arts and Hospitality Services Essential Skills Profile

These are the essential skills for a student to have a successful transition into the workforce.

These skills are not a requirement for participation into the program.

Rating Key: Low = Slightly Essential Medium = Essential High = Very Essential

Key Vocational Factors Rat		
Visual Acuity		
Depth Perception		
	and time	
Oral Communication		
Oral Expression		
	manner so others will understand	
Written	The ability to communicate in a written format and record	High
Communication	information accurately	
Physical	Extended standing, bending, stooping, and standing for extended	High
Mobility/Strength	times	
Eye-hand Coordination	The ability to use tools	High
Auditory Acuity	The ability to detect differences in pitch and sound	Low
Worker Trait Skills		Rating
Ability to get along with o	others	High
Ability to work independ	ently, without close supervision	High
Ability to work toward work including tasks of minimal interest		Medium
Ability to work accurately, recheck and correct work, to an industry standard		High
Ability to follow and retain:		
Multi step oral instructions		High
Written instructions/technical manuals-multi step		High
Simple to complex diagram instructions		Medium
Visual models or demonstrated instructions		Medium
Ability to use tools of trade (commercial use ranges, commercial use deep fryers, commercial use		High
cutlery, commercial use convection ovens, commercial use broilers, dishwashing equipment,		
measuring cups/spoons, etc.)		
Ability to use numerical data (count, measure, compute, etc.) in applied setting		
Ability to discriminate between objects of similar:		
Size		Medium
Shape		High
Color		High
Spatial relationship		Medium
Ability to organize work process/follow defined procedures		High
Ability to refer to charts for troubleshooting and specifications		High
Able to follow recipe and/or charts		High
Active Listening: Give full attention to what other people are saying, taking time to understand the		ne High
points being made, asking appropriate questions and not interrupting		
Reading Comprehension: Understanding written sentences and paragraphs in work related		
documents Time Management: Managing one's own time and the time of others. High		
Time Management: Managing one's own time and the time of others.		

Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to	
make improvements or take corrective action.	High
Judgment and Decision Making: Considering the relative costs and benefits of potential actions to	High
choose the most appropriate one.	
Active Listening: Giving full attention to what other people are saying, taking time to understand	High
the points being made, asking questions as appropriate, and not interrupting at inappropriate	
times.	
Coordination: Adjusting actions in relation to others' actions.	High
Service Orientation: Actively looking for ways to help people.	High

Math Skills	Literacy
 Solve problems that require one type of mathematical operation. They add or subtract either positive or negative numbers (such as 10 or -2). They multiply or divide using only positive numbers (such as 10). Convert a familiar fraction (such as ½ or ¼ to a decimal) and convert from a decimal to a common fraction; OR convert between decimals to percentages (such as 0.75 to 75%). Convert between familiar units of money and time (such as one hour equals 60 minutes or ½ of a dollar equals \$0.50). Add the prices of several products together to find the total, and calculate the correct change for a customer. 	 Identify the main idea Identify specific details Choose when to perform a step in a series of shot steps Apply information/instructions to a situation that is the same as the situation described in the document Locate and find information Identify the next step in a process

Additional Abilities Required

Information Ordering	The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
Near Vision	The ability to see details at close range (within a few
	feet of the observer).
Oral Comprehension	The ability to listen to and understand information and
	ideas presented through spoken words and sentences.

Knowledge Required in Culinary Arts and Hospitality Field

Customer and Personal Service	Knowledge of principles and processes for providing
	customer and personal services. This includes customer
	needs assessment, meeting quality standards for services,
	and evaluation of customer satisfaction.

English Language	Knowledge of the structure and content of the English	
	language including the meaning and spelling of words,	
	rules of composition, and grammar.	

Additional Considerations

Like to cook, clean, measure, and work with money	Creative
Enjoy wearing a uniform	Like repetitious work
Consider own food allergies, physical barriers to	
success, and speech needed to communicate	

Culinary Arts and Hospitality Services Work Activities

Clean, cut, and cook meat, fish, or poultry.	Apportion and serve food to facility residents, employees, or patrons.
Clean and inspect galley equipment, kitchen appliances, and work areas to ensure cleanliness and functional operation.	Cook foodstuffs according to menus, special dietary or nutritional restrictions, or numbers of portions to be served.
Monitor use of government food commodities to ensure that proper procedures are followed.	Direct activities of one or more workers who assist in preparing and serving meals.
Wash pots, pans, dishes, utensils, or other cooking equipment.	Compile and maintain records of food use and expenditures.
Take inventory of supplies and equipment.	Bake breads, rolls, or other pastries.
Monitor menus and spending to ensure that meals are prepared economically.	Determine meal prices, based on calculations of ingredient prices.
Plan menus that are varied, nutritionally balanced, and appetizing, taking advantage of foods in season and local availability.	Requisition food supplies, kitchen equipment, and appliances, based on estimates of future needs.
Train new employees.	Store food in designated containers and storage areas to prevent spoilage.
Clean and sanitize work areas, equipment, utensils, dishes, or silverware.	Butcher and clean fowl, fish, poultry, and shellfish to prepare for cooking or serving.
Prepare a variety of foods, such as meats, vegetables, or desserts, according to customers' orders or supervisors' instructions, following approved procedures.	Take and record temperature of food and food storage areas, such as refrigerators and freezers.
Wash, peel, and cut various foods, such as fruits and vegetables, to prepare for cooking or serving.	Portion and wrap the food, or place it directly on plates for service to patrons.

Weigh or measure ingredients.	Use manual or electric appliances to clean, peel, slice, and trim foods.
Add cutlery, napkins, food, and other items to trays on assembly lines in hospitals, cafeterias, airline kitchens, and similar establishments.	Assist cooks and kitchen staff with various tasks as needed, and provide cooks with needed items.
Receive and store food supplies, equipment, and utensils in refrigerators, cupboards, and other storage areas.	Stock cupboards and refrigerators, and tend salad bars and buffet meals.
Operate cash register and manage money	

Technology

Word processing software	Spreadsheet software
Point of sale POS software	Data base user interface and query software
Analytical or scientific software	

Available Certifications

ServSafe Certification (3 points)	OSHA-10 Culinary (1 point)
CPR/First Aid Certification (1 point)	RiseUp Retail & Customer Service (up to 9 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.
Career Technical Credit Transfer (Up to 4 semester hours)	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:
	 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.

Cook	Sous chef
Caterer	Chef
Restaurant owner	

Early Childhood Education Essential Skills Profile

Rating Key:	Lov	w = Slightly Essential	Medium = Essential	High = Ve	ry Essential
Key Vocation	al Fa	actors	-		Rating
Visual Acuity		The ability to detect differences/details visually		Medium	
Depth Percept	ion	n The ability to detect the physical distance/depth of objects in space		Medium	
		and time			
Oral		The ability to express/explain	ideas.		High
Communicatio	n				
Written		The ability to communicate in	a written format and rec	ord	High
Communicatio	n	information accurately			
Physical		Extended times bending, stoo	pping, walking, and movin	g	Medium
Mobility/Stren	gth				
Eye-hand		The ability to use tools			High
Coordination		— 1 1100 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Auditory Acuity		The ability to detect difference			Medium
Reasoning Skill	IS	Deductive: ability to apply ger			High
		Inductive: ability to combine p		orm	
	conclusions among seemingly unrelated events			 	
Worker Trait	_				Rating
Ability to get along with others			High		
Ability to work independently, without close supervision		High			
Ability to work toward work including tasks of minimal interest		Medium			
Ability to work accurately, recheck and correct work, to an industry standard		High			
Ability to follow					
Multi step oral instructions		High			
Written instructions/technical manuals-multi step		High			
Simple to complex diagram instructions		Medium			
		r demonstrated instructions			Medium
				High	
etc.)					
Ability to use numerical data (count, measure, compute, etc.) in applied setting			High		
Ability to discriminate between objects of similar:					
Size, shape, color and spatial relationships		High			
Ability to organize work process/follow defined procedures		High			
			High		
Dependability (Attendance and Punctuality)			High		
Ability to interact with small children and observe/record behavior			High		
Social Perceptiveness: Being aware of others' reactions and understanding why they react High as they do			High		
	ing t	o others to convey information	n effectively		High

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.

Math	Literacy
 Solve problems that require one or two mathematical operations. They can add, subtract, or multiply using positive or negative numbers (such as 10 or -2), and they can divide positive numbers (such as 10). Calculate the average or mean of a set of numbers (such as (10+11+12) /3)). For this, they may use whole numbers and decimals. Figure out simple ratios (such as ¾), simple proportions (such as 10/100 cases), or rates (such as 10 mph). Add commonly known fractions, decimals, or percentages (such as ½, 0.75, or 25%). Add or subtract fractions with a common denominator (such as ¼ + ¾ + ¼). Multiply a mixed number (such 12 1/8) by a whole number or a decimal. Put information in the right order before performing calculations. 	 Identify the main idea Identify specific details Use the information in the document to figure out the meanings of words or phrases that are not defined for them Choose when to perform a step in a series of steps Apply information/instructions to a situation that is the same as the situation described in the document Choose what to do when changing conditions call for a different action Locate information in a graphic using information found in a second graphic Compare two or more pieces of information Identify a trend/pattern/relationship Make an inference or decision Identify the graphic that accurately represents the data.

Additional Abilities Required

Oral Expression	The ability to communicate information and ideas in speaking so others will
	understand.
Oral Comprehension	The ability to listen to and understand information and ideas presented
	through spoken words and sentences.
Speech Clarity	The ability to speak clearly so others can understand you.

Knowledge Required in Early Childhood and Education Field

Education and Training	Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.
Psychology	Knowledge of human behavior and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioral and affective disorders.
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Additional Considerations

Must like children	Must demonstrate concern for others, self-control, social orientation, integrity, and stress tolerance
Must pass background checks	Must be adaptable and flexible
Must be dependable	Creative
Excellent hygiene	Desire to teach and not be a baby sitter
Must possess basic computer skills	Detail oriented and not easily distracted

Activities

Provide extra assistance to students with special needs, such as non-English-speaking students or those with physical and mental disabilities.	Supervise students in classrooms, halls, cafeterias, school yards, and gymnasiums, or on field trips.
Tutor and assist children individually or in small groups to help them master assignments and to reinforce learning concepts presented by teachers.	Provide disabled students with assistive devices, supportive technology, and assistance accessing facilities, such as restrooms.
Enforce administration policies and rules governing students.	Assist in bus loading and unloading.
Discuss assigned duties with classroom teachers to coordinate instructional efforts.	Observe students' performance, and record relevant data to assess progress.
Carry out therapeutic regimens, such as behavior modification and personal development programs, under the supervision of special education instructors, psychologists, or speech-language pathologists.	Present subject matter to students under the direction and guidance of teachers, using lectures, discussions, or supervised role-playing methods.
Instruct and monitor students in the use and care of equipment and materials to prevent injuries and damage.	Maintain computers in classrooms and laboratories and assist students with hardware and software use.
Distribute tests and homework assignments and collect them when they are completed.	Prepare lesson materials, bulletin board displays, exhibits, equipment, and demonstrations.
Grade homework and tests, and compute and record results, using answer sheets or electronic marking devices.	Organize and supervise games and other recreational activities to promote physical, mental, and social development.
Take class attendance and maintain attendance records.	Participate in teacher-parent conferences regarding students' progress or problems.

Distribute teaching materials, such as textbooks, workbooks, papers, and pencils to students.	Prepare lesson outlines and plans in assigned subject areas and submit outlines to teachers for review.
Organize and label materials and display students' work in a manner appropriate for their eye levels and perceptual skills.	Use computers, audio-visual aids, and other equipment and materials to supplement presentations.
Conduct demonstrations to teach skills, such as sports, dancing, and handicrafts.	Plan, prepare, and develop various teaching aids, such as bibliographies, charts, and graphs
Attend staff meetings and serve on committees, as required.	Type, file, and duplicate materials.
Laminate teaching materials to increase their durability under repeated use.	Requisition and stock teaching materials and supplies.
Operate and maintain audio-visual equipment.	Collect money from students for school-related projects
Monitor classroom viewing of live or recorded courses transmitted by communication satellites.	Establish and enforce rules for behavior and procedures for maintaining order.
Organize and lead activities designed to promote physical, mental, and social development, such as games, arts and crafts, music, storytelling, and field trips.	Teach basic skills, such as color, shape, number and letter recognition, personal hygiene, and social skills.
Observe and evaluate children's performance, behavior, social development, and physical health.	Attend to children's basic needs by feeding them, dressing them, and changing their diapers.
Provide disabled students with assistive devices, supportive technology, and assistance accessing facilities, such as restrooms.	Teach proper eating habits and personal hygiene.
Identify children showing signs of emotional, developmental, or health-related problems and discuss them with supervisors, parents or guardians, and child development specialists.	Enforce all administration policies and rules governing students.
Establish clear objectives for all lessons, units, and projects and communicate those objectives to children.	Adapt teaching methods and instructional materials to meet students' varying needs and interests.

Technology

Word processing software	Learning management systems
E-mail	Electronic Gradebooks

Available Certifications

Child Development Associate Credential (CDA)	Child Abuse Recognition and Prevention (1 Point)
(12 Points)	
CPR/First Aid Certification (1 Point)	Communicable Diseases Training (1 Point)

Possible College Credits

College Credit Plus in Early Childhood	Must be preapproved. Must pass a college
Education, English, Math, Social Studies, or	course at an Ohio college or College Credit Plus
Science	class.
Career Technical Credit Transfer	The Ohio Transfer to Degree Guarantee helps
(Up to 5 semester hours)	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:
	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.

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

Preschool assistant	Preschool teacher
School counselor	Elementary teacher
Intervention specialist	Summer camp counselor
Day care director	

Engineering Academy: CCP Program Essential Skills Profile

Essential Skills Needed to Successfully Complete the Program			
Rating Key:	Low = Slightly Essential	Medium = Essential	High = Very Essential

Key Vocational Factors		Rating
Visual Acuity	The ability to detect differences/details visually	High
Depth Perception	The ability to detect the physical distance/depth of objects in space and time	High
Oral	The ability to express/explain ideas.	High
Communication		
Written	The ability to communicate in a written format and record	High
Communication	information accurately	
Physical	Extended times sitting and using computers	Medium
Mobility/Strength		
Eye-hand	The ability to use tools	High
Coordination		
Auditory Acuity	The ability to detect differences in pitch and sound	Medium
Reasoning Skills	Deductive: ability to apply general rules to specific problems and	High
	Inductive: ability to combine pieces of information to form	
	conclusions among seemingly unrelated events	

Worker Trait Skills	Rating
Ability to get along with others	High
Ability to work independently, without close supervision	High
Ability to work toward work including tasks of minimal interest	Medium
Ability to work accurately, recheck and correct work, to an industry standard	High
Ability to work accurately/within industry standards	High
Dependability (Attendance and Punctuality)	High
Ability to follow and retain:	
Multi step oral instructions	High
Written instructions/technical manuals-multi step	High
Simple to complex diagram instructions	High
Visual models or demonstrated instructions	High
Ability to use tools of trade (soldering iron, signal conditioners, multi-meters,	High
microcontrollers, force or torque sensors, etc.)	
Ability to use numerical data (count, measure, compute, etc.) in applied setting	High
Ability to discriminate between objects of similar:	
Size	High
Shape	High
Color	Medium
Spatial Relationship	High
Ability to organize work process/follow defined procedures	High
Ability to follow sequence or to determine sequence of actions to a successful conclusion	High

Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of	
alternative solutions, conclusions or approaches to problems.	
Reading Comprehension: Understanding written sentences and paragraphs in work	High
related documents.	
Active Listening: Giving full attention to what other people are saying, taking time to	High
understand the points being made, asking questions as appropriate, and not interrupting	
at inappropriate times.	

Math Skills	Literacy
 Solve problems that include ratios, rates, or proportions with at least one of the quantities is a fraction. Identify the reason for a mistake. Convert between units of measurement using fractions, mixed numbers, decimals, and percentages. Calculate volumes of spheres, cylinders, or cones. Calculate the volume when it may be necessary to rearrange the formula, convert units of measurement in calculations, or use the result in further calculations. Set up and manipulate ratios, rates, or proportions where at least one of the quantities is a fraction. Determine the better economic value of several alternatives by using graphics, or determining the percentage difference, or by determining unit cost. Apply basic statistical concepts for example calculate the weighted mean, interpret measures of central tendency, or interpret measure of spread and tolerance. 	 Infer implied details Infer the meaning of an acronym, jargon, or technical term from context Apply information/instructions to a situation not directly described in the document or to a completely new situation Apply principles inferred in a passage to a situation not directly described in the document or to a completely new situation Identify the rationale behind an entire document or a section of a document Locate information in a graphic using information found in another graphic Interpret trends/patterns/relationships Make a reasonable inference or decision based on one graphic after finding information in another graphic Justify a decision using evidence found in a graphic Identify the graphic that accurately represents the data Justify an inference or decision based on information Identify and justify the most effective graphic given a defined purpose

Additional Math Skills	
Algebra II and Pre-Calculus Required Coursework	

Additional Abilities Required Problem Sensitivity The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a

problem.

Visualization	The ability to imagine how something will look after it is moved around	
	or when its parts are moved or rearranged.	
Deductive Reasoning The ability to apply general rules to specific problems to produce		
	answers that make sense.	

Knowledge Required

Engineering and Technology	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
Software/Programming	Knowledge of software, including applications and programming.
Design	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

Additional Considerations

Must have strong critical evaluation skills and	Must possess strong attention to detail
analytical thinking	
Strong computer skills	Independent work
Sitting for extended time	Must be creative
Enjoy Science and Math	Strong Math background

Activities

Debug programs.	Provide technical support for systems.
Review or approve designs, calculations, or cost estimates.	Install, calibrate, operate, or maintain systems.
Design end-of-arm tooling.	Process or interpret signals or sensor data.
Investigate mechanical failures or unexpected maintenance problems.	Integrate robotics with peripherals, such as welders, controllers, or other equipment.
Design automated robotic systems to increase production volume or precision in high-throughput operations, such as automated ribonucleic acid (RNA) analysis or sorting, moving, or stacking production materials.	Make system device lists or event timing charts.
Document application development, maintenance, or changes.	Prepare reports summarizing information or trends related to manufacturing performance.

Analyze and evaluate systems or prototypes.	Design layout of equipment or workspaces to achieve maximum efficiency.
Identify opportunities or implement changes to improve products or reduce costs using knowledge of fabrication processes, tooling and production equipment, assembly methods, quality control standards, or product design, materials and parts.	Determine root causes of failures using statistical methods and recommend changes in designs, tolerances, or processing methods.
Troubleshoot new or existing product problems involving designs, materials, or processes.	Review product designs for manufacturability or completeness.
Apply continuous improvement methods such as lean manufacturing to enhance manufacturing quality, reliability, or cost-effectiveness.	Investigate or resolve operational problems, such as material use variances or bottlenecks.
Estimate costs, production times, or staffing requirements for new designs.	Evaluate manufactured products according to specifications and quality standards.

Technology

Operating system software	File versioning software	
Development environment software	Computer aided design CAD software	
Analytical or scientific software		

Available Certifications

1	FANUC Certified CNC Certificates (Up to 8 points)	OSHA-10 hour –General Industry (1 point)
	I AND C CEI tilled CIVE CEI tilled tes (Op to 6 poilits)	OSHA-10 Hour —General Hidustry (1 point)

Possible College Credits

College Credit Plus in Career-Technical	Must be preapproved. All Engineering courses
Courses	offered at Grant are CCP.
College Credit Plus in English, Math, Social	Must be preapproved. Must pass a college
Studies, or Science	course at an Ohio college or College Credit Plus
	class.
Career Technical Credit Transfer (Up to 6 semester hours)	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: 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.

^{*}Additional college or post-secondary education may be required in this field.

Manufacturing installer	Robotic programmer	
Quality control inspector	Engineer	
Manufacturing maintenance		

Information Technology Essential Skills Profile

These are the essential skills for a student to have a successful transition into the workforce.

These skills are not a requirement for participation into the program.

Rating Key:	Lov	w = Slightly Essential			
Key Vocation	al Fa	ictors			Rating
Visual Acuity		The ability to detect differences/details visually		High	
Depth Percepti	on	The ability to detect the physical distance/depth of objects in space		High	
	and time				
Oral The ability to express/explain ideas.		High			
Communication					
Oral Expression		The ability to verbally explain	ain and express self in an in	telligible	High
manner so others will understand					
Written	Written The ability to communicate in a written format and record			Medium	
Communicatio	n	information accurately			
Physical		_	g, stooping, and lifting/mov	ing computers,	Medium
Mobility/Stren	gth	sitting for extended times			
Eye-hand		The ability to use tools			High
Coordination					
Auditory Acuity	/	The ability to detect difference	-		Medium
Clerical		Ability to perceive pertiner	nt detail in verbal and tabul	ar material	High
Perception					
Worker Trait					Rating
Ability to get a					Medium
-		pendently, without close su			Medium
		ard work including tasks of r			Medium
-		rately, recheck and correct	work, to an industry standa	<u>ird</u>	High
Ability to follow	v and				
•	Multi step oral instructions				
Multi step o					Medium
Multi step o Written inst	ructi	ons/technical manuals-mult	ti step		Medium
Multi step o Written inst Simple to co	ructi ompl	ons/technical manuals-mult ex diagram instructions	·		Medium Medium
Multi step o Written inst Simple to co Visual mode	ructi ompl els o	ons/technical manuals-mult ex diagram instructions · demonstrated instructions	•		Medium Medium Medium
Multi step o Written inst Simple to co Visual mode Ability to use to	ructi ompl els o ools	ons/technical manuals-mult ex diagram instructions demonstrated instructions of trade (computer, screwd	river, soldering iron, etc.)		Medium Medium Medium High
Multi step o Written inst Simple to co Visual mode Ability to use to Ability to use n	ructi ompl els oi ools o ume	ons/technical manuals-mult ex diagram instructions demonstrated instructions of trade (computer, screwd rical data (count, measure,	river, soldering iron, etc.) compute, etc.) in applied se	etting	Medium Medium Medium
Multi step o Written inst Simple to co Visual mode Ability to use to Ability to use n Ability to discri	ructi ompl els oi ools o ume	ons/technical manuals-mult ex diagram instructions demonstrated instructions of trade (computer, screwd	river, soldering iron, etc.) compute, etc.) in applied se	etting	Medium Medium Medium High Medium
Multi step o Written inst Simple to co Visual mode Ability to use to Ability to use n Ability to discri	ructi ompl els oi ools o ume	ons/technical manuals-mult ex diagram instructions demonstrated instructions of trade (computer, screwd rical data (count, measure,	river, soldering iron, etc.) compute, etc.) in applied se	etting	Medium Medium Medium High Medium Medium
Multi step o Written inst Simple to co Visual mode Ability to use to Ability to use n Ability to discri Size Shape	ructi ompl els oi ools o ume	ons/technical manuals-mult ex diagram instructions demonstrated instructions of trade (computer, screwd rical data (count, measure,	river, soldering iron, etc.) compute, etc.) in applied se	etting	Medium Medium Medium High Medium Medium Medium
Multi step o Written inst Simple to co Visual mode Ability to use to Ability to use n Ability to discri Size Shape Color	ructi ompl els or ools ume mina	ons/technical manuals-mult ex diagram instructions demonstrated instructions of trade (computer, screwdorical data (count, measure, ate between objects of simil	river, soldering iron, etc.) compute, etc.) in applied se	etting	Medium Medium High Medium Medium Medium Medium Medium
Multi step o Written inst Simple to co Visual mode Ability to use to Ability to discri Size Shape Color Spatial relat	ructiomples of ools of the ools ools on ools ools	ons/technical manuals-mult ex diagram instructions demonstrated instructions of trade (computer, screwd rical data (count, measure, ate between objects of simil	river, soldering iron, etc.) compute, etc.) in applied se ar:	etting	Medium Medium High Medium Medium Medium Medium Medium Medium Medium
Multi step o Written inst Simple to co Visual mode Ability to use to Ability to use n Ability to discri Size Shape Color Spatial relat Ability to organ	ructiomplels or ools of ume minationslines	ons/technical manuals-mult ex diagram instructions demonstrated instructions of trade (computer, screwdorical data (count, measure, ate between objects of simil	river, soldering iron, etc.) compute, etc.) in applied sear:	etting	Medium Medium High Medium Medium Medium Medium Medium

Active Listening: Give full attention to what other people are saying, taking time to	High
understand the points being made, asking appropriate questions and not interrupting	
Reading Comprehension: Understanding written sentences and paragraphs in work	High
related documents	
Speaking: Talking to others to convey information effectively	High
Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of	High
alternative solutions, conclusions or approaches to problems.	

Required Academic Skills

	Math Skills		Literacy		
•	Decide what information, calculations, or unit		dentify specific details		
	conversions to use to find the answer to a		nfer the meaning of a word or phrase from context		
	problem.	• A	Apply information/instructions to a new situation		
•	Add and subtract fractions with unlike	t	that is similar to the one described in the document		
	denominators (such as $\frac{1}{2}$ - $\frac{1}{4}$).	٧	while considering changing conditions		
•	Convert units within or between systems of	• A	Apply information/instructions that include		
	measurement (e.g., time, measurement, quantity)	C	conditions to situations described in the document		
	where the conversion factor is given either in the	• 10	dentify the appropriate meaning of an acronym,		
	problem or in the formula sheet.	jā	argon, or technical term defined in the document		
•	Solve problems that require mathematical	• A	Apply technical terms and jargon to stated		
	operations using mixed units (such as adding 6	S	situations		
	feet and 4 inches to 3 feet and 10 inches, or		Make inferences to accomplish a goal		
	subtracting 4 hours and 30 minutes from 3.5		Locate information in a graphic using information		
	hours).		found in a second graphic		
•	Identify the best deal using one or two step		Compare two or more pieces of information		
	calculations that meet the stated conditions.		dentify a trend/pattern/relationship		
•			Make an inference or decision		
	basic shape, or calculate the area of a basic		dentify the graphic that accurately represents the		
	shape.	d	data		
•	Calculate a given percentage of a given number				
	and then use that percentage to find the solution				
	to a problem (e.g., find the percentage and then				
	use it to find the discount, markup, or tax).				
•	Identify where a mistake occurred in a calculation				
	(such as identifying the row in a spreadsheet				
	where a problem occurred).				

Additional Abilities Required

Oral Comprehension	The ability to listen to and understand information and	
	ideas presented through spoken words and sentences.	
Oral Expression	The ability to communicate information and ideas in	
	speaking so others will understand.	
Written Comprehension	The ability to read and understand information and	
	ideas presented in writing.	

English Language	Knowledge of the structure and content of the English
	language including the meaning and spelling of words,
	rules of composition, and grammar.

Activities

Networking activities, program activities, web design, activities	Microsoft Office activities
Oversee the daily performance of computer systems.	Answer user inquiries regarding computer software or hardware operation to resolve problems.
Enter commands and observe system functioning to verify correct operations and detect errors.	Set up equipment for employee use, performing or ensuring proper installation of cables, operating systems, or appropriate software.
Install and perform minor repairs to hardware, software, or peripheral equipment, following design or installation specifications.	Maintain records of daily data communication transactions, problems and remedial actions taken, or installation activities.
Read technical manuals, confer with users, or conduct computer diagnostics to investigate and resolve problems or to provide technical assistance and support.	Refer major hardware or software problems or defective products to vendors or technicians for service.
Develop training materials and procedures, or train users in the proper use of hardware or software.	Confer with staff, users, and management to establish requirements for new systems or modifications.
Prepare evaluations of software or hardware, and recommend improvements or upgrades.	Hire, supervise, and direct workers engaged in special project work, problem solving, monitoring, and installing data communication equipment and software.
Inspect equipment and read order sheets to prepare for delivery to users.	Read trade magazines and technical manuals, or attend conferences and seminars to maintain knowledge of hardware and software.
Modify and customize commercial programs for internal needs.	Conduct office automation feasibility studies, including workflow analysis, space design, or cost comparison analysis.
Back up network data.	Configure security settings or access permissions for groups or individuals.
Configure wide area network (WAN) or local area network (LAN) routers or related equipment.	Install network software, including security or firewall software.
Evaluate local area network (LAN) or wide area network (WAN) performance data to ensure sufficient availability or speed, to identify network problems, or for disaster recovery purposes.	Monitor industry websites or publications for information about patches, releases, viruses, or potential problem identification
Install and configure wireless networking equipment.	Create or revise user instructions, procedures, or manuals.
Run monthly network reports.	Document network support activities.

Technology

Web platform development software	Operating system software
Database user interface and query software	Development environment software

Available Certifications

CompTIA A+ (6 Points)	CompTIA IT Fundamentals (6 points)
Microsoft Technology Associate IT Infrastructure	
(6 Points)	

Possible College Credits

College Credit Plus in English, Math, Social Studies, or Science Career Technical Credit Transfer (Up to 9 semester hours)	Must be preapproved. Must pass a college course at an Ohio college or College Credit Plus class. 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: 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.
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^{*}Additional college or post-secondary education may be required in this field

Computer repair technician	Cable installer
Network administrator	Web designer/developer
Applications specialist	Programmer
IT manager	

Large Animal Science Essential Skills Profile

These are the essential skills for a student to have a successful transition into the workforce.

These skills are not a requirement for participation into the program.

Rating Key: Lo	w = Slightly Essential	Medium = Essential	High = Very I	Essential
Key Vocational Factors				Rating
Visual Acuity The ability to detect differences/details visually		Medium		
Depth Perception The ability to detect the physical distance/depth of objects in space		Medium		
	and time			
Oral	Oral The ability to express/explain ideas.			High
Communication				
Written	The ability to communicate	in a written format and re	cord	Medium
Communication	information accurately			
Physical	Bending, lifting more than 2	20 pounds, standing, lifting	cages and	High
Mobility/Strength	equipment			
Eye-hand	The ability to use tools			Medium
Coordination				
Auditory Acuity	The ability to detect differe	ences in pitch and sound		Low
Worker Trait Skil	ls			Rating
Ability to get along	with others			Medium
Ability to work inde	ependently, without close su	pervision		High
Ability to work toward work including tasks of minimal interest		Medium		
Ability to work acc	Ability to work accurately, recheck and correct work, to an industry standard		Medium	
Dependability (Attendance and Punctuality)		High		
Ability to follow and retain:				
Multi step oral i	Multi step oral instructions		High	
Written instruct	ions/technical manuals-mult	i step		Medium
Simple to comp	lex diagram instructions			Low
Visual models of	or demonstrated instructions			Medium
Ability to use tools	Ability to use tools of trade (reins, pet grooming products, leashes or leads, harnesses or		High	
its accessories, dor	mestic pet training kits, etc.)			
Ability to use nume	erical data (count, measure, d	compute, etc.) in applied se	etting	Low
Ability to discrimin	ate between objects of similar	ar:		
Size				Medium
Shape				Medium
Color				Medium
Spatial Relationship		Medium		
Ability to organize	work process/follow defined	procedures		Medium
Ability to follow se	quence or to determine sequ	ence of actions to a succes	sful conclusion	High
Dexterity (fine fing	er)			Medium
Instructing: Teachi	ng others how to do somethi	ng.		High
Learning Strategies: Selecting and using training/instructional methods and procedures			High	
appropriate for the	e situation when learning or t	eaching new things.		
Speaking: Talking t	o others to convey informati	on effectively.		High

Required Academic Skills

Math	Literacy	
 Solve problems that require one type of mathematical operation. They add or subtract either positive or negative numbers (such as 10 or -2). They multiply or divide using only positive numbers (such as 10). Convert a familiar fraction (such as ½ or ¼ to a decimal) and convert from a decimal to a common fraction; OR convert between decimals to percentages (such as 0.75 to 75%). Convert between familiar units of money and time (such as one hour equals 60 minutes or ½ of a dollar equals \$0.50). Add the prices of several products together to find the total, and calculate the correct change for a customer. 	 Identify the main idea Identify specific details Choose when to perform a step in a series of shot steps Apply information/instructions to a situation that is the same as the situation described in the document Locate information in a graphic using information found in a second graphic Compare two or more pieces of information Identify a trend/pattern/relationship Make an inference or decision Identify the graphic that accurately represents the data 	

Additional Abilities Required

Problem Sensitivity	The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.	
Oral Expression	The ability to communicate information and ideas in speaking so	
	others will understand.	
Oral Comprehension	The ability to listen to and understand information and ideas	
	presented through spoken words and sentences.	

Knowledge Required in Equine Science and Management Field

Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.	
Education and Training	Knowledge of principles and methods for curriculum and training	
	design, teaching and instruction for individuals and groups, and the	
	measurement of training effects.	
Psychology	Knowledge of human behavior and performance; individual	
	differences in ability, personality, and interests; learning and	
	motivation; psychological research methods; and the assessment	
	and treatment of behavioral and affective disorders.	

Additional Considerations

Must be dependable	Must like working with large animals
Must like getting dirty and wearing gloves	Does not mind animal and chemical smells
Must not be allergic to pet, animal, and hay	Does not mind handling unfamiliar animals

Activities

Train horses or other equines for riding, harness, show, racing, or other work, using knowledge of breed characteristics, training methods, performance standards, and the peculiarities of each animal.	Conduct training programs to develop or maintain desired animal behaviors for competition, entertainment, obedience, security, riding, or related purposes.
Talk to or interact with animals to familiarize them to human voices or contact.	Use oral, spur, rein, or hand commands to condition horses to carry riders or to pull horse-drawn equipment.
Retrain horses to break bad habits, such as kicking, bolting, or resisting bridling or grooming.	Feed or exercise animals or provide other general care, such as cleaning or maintaining holding or performance areas.
Observe animals' physical conditions to detect illness or unhealthy conditions requiring medical care.	Evaluate animals to determine their temperaments, abilities, or aptitude for training.
Advise animal owners regarding the purchase of specific animals.	Place tack or harnesses on horses to accustom horses to the feel of equipment.
Administer prescribed medications to animals.	Organize or conduct animal shows.
Keep records documenting animal health, diet, or behavior.	Evaluate animals for trainability and ability to perform.

Technology

Word processing software	Project management software
Presentation software	Data base user interface and query software
Calendar and scheduling software	

Available Certifications

CPR/First Aid Certification (1 Point)	(OSHA-10 for Agriculture (1 Point))

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.
Career Technical Credit Transfer (up to 6 semester hours)	 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: 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.

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

Assistant trainer	Riding instructor
Trainer	Farm manager

Veterinary Science

Essential Skills Profile

These are the essential skills for a student to have a successful transition into the workforce.

These skills are not a requirement for participation into the program.

Rating Key:	Lov	w = Slightly Essential	Medium = Essential	High = Very	Essential
Key Vocational Factors			Rating		
Visual Acuity The ability to detect differences/details visually		Medium			
Depth Perception The ability to detect the physical distance/depth of objects in space and time		Medium			
Oral Communication	· · · · ·		Medium		
Oral Expressio	n	The ability to verbally expla manner so others will unde		telligible	Medium
Written		The ability to communicate	in a written format and re	cord	Medium
Communication	n	information accurately			
Physical		Standing, stooping, bending	g, restraining/holding anim	als, and lifting	High
Mobility/Stren	igth	animals/cages weighing mo	ore than 20 pounds		
Safety		Able to comprehend hazard	ds of working with animals,	diseases,	High
Understanding	3	blood/animal fluids, tools,	materials, equipment, and	environmental	
		conditions; able to wear pe	ersonal protective equipme	nt suitable for	
task					
Worker Trait Skills			Rating		
· · ·	Ability to get along with others			Medium	
Ability to work independently, without close supervision		Medium			
Ability to work toward work including tasks of minimal interest		Medium			
			Medium		
	Ability to follow and retain:				
Multi step oral instructions		Medium			
Written instructions/technical manuals-multi step		Medium			
		lex diagram instructions			Medium
	Visual models or demonstrated instructions		Medium		
Ability to use tools of trade (blades, clippers, grooming clippers, muzzles, x-rays, etc.)		High			
Ability to use numerical data (count, measure, compute, etc.) in applied setting		Medium			
Ability to discriminate between objects of similar:					
Size			Medium		
Shape		Medium			
			Medium		
Spatial Relationship		Medium			
		High			
Ability to organize work process/follow defined procedures		Medium			
			High		
Able to sequence events or follow a sequence as necessary			Medium		

Active Listening: Give full attention to what other people are saying, taking time to understand the points being made, asking appropriate questions and not interrupting

Academic Skills

High

Math	Literacy
 Convert a familiar fraction (such as ½ or ¼ to a decimal) and convert from a decimal to a common fraction; OR convert between decimals to percentages (such as 0.75 to 75%). Convert between familiar units of money and time (such as one hour equals 60 minutes or ½ of a dollar equals \$0.50). Add the prices of several products together to find the total, and calculate the correct change for a customer. Solve problems that require one or two mathematical operations. They can add, subtract, or multiply using positive or negative numbers (such as 10 or -2), and they can divide positive numbers (such as 10). Calculate the average or mean of a set of numbers (such as (10+11+12) /3)). Figure out simple ratios (such as ¾), simple proportions (such as 10 mph). Add commonly known fractions, decimals, or percentages (such as ½, 0.75, or 25%). Add or subtract fractions with a common denominator (such as ¼ + ¾ + ¼). Multiply a mixed number (such 12 1/8) by a whole number or a decimal. Put information in the right order before performing calculations. 	 Identify the main idea Identify specific details Choose when to perform a step in a series of shot steps Apply information/instructions to a situation that is the same as the situation described in the document Locate information in a graphic using information found in a second graphic Compare two or more pieces of information Identify a trend/pattern/relationship Make an inference or decision Identify the graphic that accurately represents the data

Additional Abilities

Strong memorization skills	Handle chemical and animal smells and contacts
Consideration and understanding of allergies	Handling excrement, getting dirty, urine, and
such as pet/animal/hay	other conditions associated with working with
	animals

Handling unfamiliar, dangerous, large and small
animals

Other Knowledge

Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
Biology	Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Activities

Hold or restrain animals during veterinary	Clean and maintain kennels, animal holding
procedures.	areas, examination or operating rooms, or animal
	loading or unloading facilities to control the
	spread of disease.
Fill medication prescriptions.	Bathe animals, clip nails or claws, and brush or
	cut animals' hair.
Administer anesthetics during surgery and	Assist veterinarians in examining animals to
monitor the effects on animals.	determine the nature of illnesses or injuries.
Monitor animals recovering from surgery and	Examine animals to detect behavioral changes or
notify veterinarians of any unusual changes or	clinical symptoms that could indicate illness or
symptoms.	injury.
Clean, maintain, and sterilize instruments or	Dust, spray, or bathe animals to control insect
equipment.	pests.
Administer medication, immunizations, or blood	Educate or advise clients on animal health care,
plasma to animals as prescribed by veterinarians.	nutrition, or behavior problems.
Collect laboratory specimens, such as blood,	Prepare surgical equipment and pass instruments
urine, or feces for testing.	or materials to veterinarians during surgical
	procedures.
Prepare feed for animals according to specific	Provide emergency first aid to sick or injured
instructions, such as diet lists or schedules.	animals.
Perform routine laboratory tests or diagnostic	Exercise animals or provide them with
tests, such as taking or developing x-rays.	companionship.
Prepare examination or treatment rooms by	Perform enemas, catheterizations, ear flushes,
stocking them with appropriate supplies.	intravenous feedings, or gavages.
Provide assistance with animal euthanasia and	Record information relating to animal genealogy,
the disposal of remains.	feeding schedules, appearance, behavior, or
	breeding.
Perform office reception duties, such as	Perform hygiene-related duties, such as clipping
scheduling appointments or helping customers.	animals' claws or cleaning and polishing teeth.

Perform accounting duties, such as bookkeeping,	Write reports, maintain research information, or
billing customers for services, or maintaining	perform clerical duties.
inventories.	
Sell pet food or supplies to customers.	Maintain instruments, equipment, or machinery
	to ensure proper working condition.
Observe the behavior and condition of animals	Prepare animals for surgery, performing such
and monitor their clinical symptoms.	tasks as shaving surgical areas.

Use of Technology

Word processing software	Spreadsheets, Databases
Medical software	Label making software
Calendar and scheduling software	

Available Certifications

NAVTA (12 point credential

Possible College Credits

College Credit Plus in English, Math, Social	Must be preapproved. Must pass a college
Studies, or Science	course at an Ohio college or College Credit Plus
	class at Great Oaks.

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

Veterinary assistant	Groomer/bather/brusher
Laboratory animal caretakers	Kennel operator
Pet shop employee	Zoo animal caretaker
Pet stylist	Veterinarian

Welding Essential Skills Profile

Essential Skills Needed to Successfully Complete the Program					
Rating Key: Low = Slightly Essential Medium = Essential High = Very Essential			Essential		
Key Vocation	al Fa	actors			Rating
Visual Acuity				High	
Depth Percepti	ion	The ability to detect the physical distance/depth of objects in space and time			
Oral		The ability to express/explain ideas. Medium			
Communicatio	n				
Oral Expression	า	The ability to verbally explain and express self in an intelligible Medium manner so others will understand			
Written		The ability to communicate	in a written format and re	cord	Medium
Communicatio	n	information accurately			
Physical Mobility/Stren	gth	Extended standing, bending, stooping, use of ladders, working inside and outside, working at high levels (heights), and working on roofs or at high levels above the ground, lifting and maneuvering welding equipment and materials			
Eye-hand		The ability to use tools			High
Coordination					
Auditory Acuity	у	The ability to detect differences in pitch and sound		Medium	
Safety		Able to comprehend hazards of working with tools, materials, High		High	
Understanding	;	equipment, and environmental conditions; able to wear personal			
protective equipment suitable for task					
Worker Trait Skills R			Rating		
Ability to get a	long	with others			Medium
Ability to work				High	
		High			
		High			
Attendance, dependability and punctuality		High			
		High			
Ability to follow	w and	d retain:			
Multi step oral instructions			Medium		
Written instructions/technical manuals-multi step		Medium			
·			Medium		
			Medium		
Ability to use to	Ability to use tools of trade (welding masks, man lift or personnel lift, gas welding or High			High	
brazing or cutting apparatus, electrode holder, drill press or radial drill, hammers,					
calipers, measuring devices, etc.)					
Ability to use n	ume	rical data (count, measure, c	compute, etc.) in applied se	etting	Medium
Ability to discri	mina	ate between objects of simila	ar:		
Size, shape,	colo	r and spatial relationships			Medium
Dexterity-fine f	finge	r			Medium
Ability to organize work process/follow defined procedures High			procedures		High

Ability to solve problems through a logical process/sequence of steps	High
Coordination (eye-hand)	High
Able to sequence events or follow a sequence as necessary	High
Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of	
alternative solutions, conclusions or approaches to problems.	
Operation and Control: Controlling operations of equipment or systems.	High
Monitoring: Monitoring/Assessing performance of yourself, other individuals, or	
organizations to make improvements or take corrective action.	

Academic Skills

Math	Literacy
 Convert a familiar fraction (such as ½ or ½ to a decimal) and convert from a decimal to a common fraction; OR convert between decimals to percentages (such as 0.75 to 75%). Convert between familiar units of money and time (such as one hour equals 60 minutes or ½ of a dollar equals \$0.50). Add the prices of several products together to find the total, and calculate the correct change for a customer. Solve problems that require one or two mathematical operations. They can add, subtract, or multiply using positive or negative numbers (such as 10 or -2), and they can divide positive numbers (such as 10). Calculate the average or mean of a set of numbers Figure out simple ratios (such as ¾), simple proportions (such as 10/100 cases), or rates (such as 10 mph). Add commonly known fractions, decimals, or percentages (such as ½, 0.75, or 25%). Add or subtract fractions with a common denominator (such as ¼ + ¾ + ½). Multiply a mixed number (such 12 1/8) by a whole number or a decimal. Put information in the right order before performing calculations. 	 Identify the main idea Identify specific details Apply information/instructions to a situation that is the same as the situation described in the document Locate information in a graphic using information found in a second graphic Compare two or more pieces of information Identify a trend/pattern/relationship Make an inference or decision Identify the graphic that accurately represents the data

Additional Abilities Required

Near Vision	The ability to see details at close range (within a few feet of the observer).
Arm-Hand Steadiness	The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
Control Precision	The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.

Knowledge Required in Welding Field

Production and Processing	Knowledge of raw materials, production	
	processes, quality control, costs, and other	
	techniques for maximizing the effective	
	manufacture and distribution of goods.	
Design	Knowledge of design techniques, tools, and	
	principles involved in production of precision	
	technical plans, blueprints, drawings, and models.	
Administration and Management	Knowledge of business and management	
	principles involved in strategic planning, resource	
	allocation, human resources modeling, leadership	
	technique, production methods, and	
	coordination of people and resources.	
Welding and Cutting Process	Knowledge of Safety, Setup and Application of	
	the following Welding and Cutting Processes:	
	SMAW, GMAW, GTAW, FCAW, OAC, and Thermal	
	Cutting	

Additional Considerations

Detail oriented	May get dirty
May work in harsh environments: water,	NEED strong computer skills
heat, cold, snow, ice, heights, below ground,	
etc.	
Must be an independent and dependable	Creative
worker	
Enjoy Science and Math	Strong Math background

Welding Work Activities

Weld components in flat, vertical, or overhead	Operate safety equipment and use safe work
positions.	habits.

	,
Lay out, position, align, and secure parts and assemblies prior to assembly, using straightedges, combination squares, calipers, and rulers.	Examine workpieces for defects and measure workpieces with straightedges or templates to ensure conformance with specifications.
Recognize, set up, and operate hand and power tools common to the welding trade, such as shielded metal arc and gas metal arc welding equipment.	Clamp, hold, tack-weld, heat-bend, grind or bolt component parts to obtain required configurations and positions for welding.
Weld separately or in combination, using aluminum, stainless steel, cast iron, and other alloys.	Select and install torches, torch tips, filler rods, and flux, according to welding chart specifications or types and thicknesses of metals.
Ignite torches or start power supplies and strike arcs by touching electrodes to metals being welded, completing electrical circuits.	Determine required equipment and welding methods, applying knowledge of metallurgy, geometry, and welding techniques.
Connect and turn regulator valves to activate and adjust gas flow and pressure so that desired flames are obtained.	Monitor the fitting, burning, and welding processes to avoid overheating of parts or warping, shrinking, distortion, or expansion of material.
Operate manual or semi-automatic welding equipment to fuse metal segments, using processes such as gas tungsten arc, gas metal arc, flux-cored arc, plasma arc, shielded metal arc, resistance welding, and submerged arc welding.	Analyze engineering drawings, blueprints, specifications, sketches, work orders, and material safety data sheets to plan layout, assembly, and welding operations.
Mark or tag material with proper job number, piece marks, and other identifying marks as required.	Chip or grind off excess weld, slag, or spatter, using hand scrapers or power chippers, portable grinders, or arc-cutting equipment.
Remove rough spots from work pieces, using portable grinders, hand files, or scrapers.	Preheat work pieces prior to welding or bending, using torches or heating furnaces.
Prepare all material surfaces to be welded, ensuring that there is no loose or thick scale, slag, rust, moisture, grease, or other foreign matter.	Develop templates and models for welding projects, using mathematical calculations based on blueprint information.
Signal crane operators to move large work piece.	Use fire suppression methods in industrial emergencies.
Position and secure work pieces, using hoists, cranes, wire, and banding machines or hand tools.	Guide and direct flames or electrodes on or across work pieces to straighten, bend, melt, or build up metal.
Detect faulty operation of equipment or defective materials and notify supervisors.	Clean or degrease parts, using wire brushes, portable grinders, or chemical baths.
Cut, contour, and bevel metal plates and structural shapes to dimensions as specified by blueprints, layouts, work orders, and templates, using powered saws, hand shears, or chipping knives.	Repair products by dismantling, straightening, reshaping, and reassembling parts, using cutting torches, straightening presses, and hand tools.
Fill holes, and increase the size of metal parts	Set up and use ladders and scaffolding as necessary to complete work.

Estimate materials needed for production and	Check grooves, angles, or gap allowances, using
manufacturing and maintain required stocks of	micrometers, calipers, and precision measuring
materials.	instruments.
Operate metal shaping, straightening, and	Mix and apply protective coatings to products.
bending machines, such as brakes and shears.	
Join parts such as beams and steel reinforcing	mantle metal assemblies or cut scrap metal, using
rods in buildings, bridges, and highways, bolting	rmal-cutting equipment such as flame-cutting
and riveting as necessary.	ches or plasma-arc equipment.
Gouge metals, using the air-arc gouging process.	Hammer out bulges or bends in metal work
	pieces.
Operate brazing and soldering equipment.	Melt lead bars, wire, or scrap to add lead to joints
	or to extrude melted scrap into reusable form.

Technology

Computer aided design CAD software	Spreadsheet software
Calendar and scheduling software	Data base user interface and query software

Available Certifications

American Welding Society Qualifications (AWS)	OHSA 10-General Industry (1 Point)
(9 pts each)	
NCCER Core (6 points)	Aerial Lift Certification (10 points)
Fork Lift Certification (1 point	First Aid/CPR (1 point)

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
Career Technical Credit Transfer (Up to 3 semester hours)	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: 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.

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

Welder	Inspector
Robotic welding operator/programmer	Metal fabricator