



The **Machining Technology** program of study is designed for students interested in becoming a computer-controlled machine tool operator, a CNC machining tool programmer, or a machinist. This program focuses on safety practices concerning: machining technology; proper measurement and layout techniques; reading and interpreting specification drawings and blueprints; production design processes; quality control procedures; machine parts to specifications using both manual and computer-controlled machine tools; and measuring, examining, and testing completed products to check for defects and conformance to specifications. Upon completion of this program, proficient students will be prepared to pursue industry certification at a technology college or more advanced coursework at a two-year or four-year postsecondary institution.

The **Welding** program of study is designed to prepare and certify students as entry-level welders. Students will learn safe practices, career exploration, leadership development, and basic arc welding and thermal cuttings skills. Basic arc welding and thermal cutting skills are developed over a series of two courses which will prepare students for *Entry Level Welder* Certification, as defined by American Welding Society QC10.

The **Residential & Commercial Construction** program of study prepares students for the various disciplines of construction, providing students with the opportunity to develop a holistic understanding of the building systems and components required for a construction project. Students will be able to interpret construction drawings, perform basic math skills, demonstrate the construction crafts required for each phase of a construction project and safely use and maintain appropriate tools, equipment, and resources to accomplish construction project goals. Course content covers industry specific business concepts, project management, and career opportunities. In the third level course, programs have the option to select a focus area.

The **Architectural & Engineering Design** program of study prepares students for a variety of engineering and design professions including architectural, civil, or mechanical design. Students will develop problem solving and critical thinking skills by identifying the relationship between available resources and requirements of a project/problem to accomplish realistic planning. Students create design solutions for increasingly sophisticated problem sets as they progress through the program of study, presenting information through various modes of visual communication such as drawing, rendering, and modeling in combination with verbal and written communication. In the third level course, students may focus in architectural or mechanical design.

**Teaching as a Profession** is designed for students interested in becoming a teacher, school counselor, librarian, or speech-language pathologist. While in this program of study, students will learn teaching and classroom management strategies, lesson planning, special populations, how to use educational technology, how to become a professional, and more!

**Veterinary and Animal Science** is designed to prepare students to further their education for rewarding careers related to both companion and farm animals. This program of study provides rigorous technical skills, academic knowledge, higher-order reasoning, problem-solving skills, work attitudes, and employment skills. Course content covers such topics as principles of health and disease, basic animal care and nursing, clinical and laboratory procedures, and the anatomical/physiological systems of a range of small and large animals. Upon completion of this program of study, students will be prepared to pursue further study in the veterinary and animal sciences at the postsecondary level.

**Horticulture Science** is a broad and diverse program of study ranging from improving human environment to producing fruits and vegetables to managing of recreational and sports turf. Upon completion of this program of study, proficient students will be prepared for careers in the management of greenhouse operations, horticulture production, landscape design and maintenance, and turf management industries or further study in the horticultural, or plant sciences. This course is available as a statewide dual credit course which can count as the introduction to plant science course at the post secondary level.

**Therapeutic Nursing Services** is designed to prepare students to pursue careers in the field of nursing. Upon completion of this program, a proficient student will be able to implement communication and interpersonal skills, maintain residents' rights and independence, provide care safely, prevent emergency situations, prevent infection through infection control, and perform the skills required of a nursing assistant.

**Hospitality & Tourism Management** prepares students with the skills to pursue careers within the hospitality industry. Courses cover topics that range from discovering business concepts and operations, careers in the hospitality and tourism services, and customer relations, developing marketing plans and promotional concepts, and focusing on human relations and professional communications while refining leadership, teamwork, and management skills in a practicum setting. Upon completion of this program of study, students will have applied a full range of knowledge and skills in hospitality and tourism management and developed a professional portfolio in preparation for future training at the postsecondary level.

**Culinary Arts** equips students with the foundational skills necessary to pursue careers in the culinary field as a banquet chef, caterer, executive chef, and food and beverage manager. Courses cover topics that range from kitchen safety and sanitation, history of the foodservices industry, careers, nutrition, recipe basics, proper kitchen tools and equipment, and kitchen staples, to food presentation, advanced cooking principles, bakeshop preparation skills, professionalism, and business opportunities.

The **Automotive Collision Repair** program of study prepares students for entry into careers as professional service technicians. Content emphasizes customer service skills, proper use of tools and equipment, safety, shop operations, engine fundamentals, damage analysis, cost estimation, painting and refinishing, and structural and non-structural repair in a hands-on environment. Upon completion of this program of study, students will be eligible to take the examination for I-CAR ProLevel 1 in Refinish Technician or Non-Structural Technician and be prepared to pursue further study in collision repair at postsecondary institutions.

The **Automotive Maintenance and Light Repair** program of study prepares students for entry into the automotive service industry with an ASE Student Certification. Students study and service automotive HVAC systems, engine performance systems, automatic and manual transmission/transaxle systems, and practice workplace soft skills.

### **Industry Credentials**

Certified Nursing Assistant  
Certified Medical Assistant  
ICAR Non-Structural Technician ProLevel 1  
ICAR Refinish Technician ProLevel 1  
NC3 Festo Fundamentals of Electricity - AC/DC  
NC3 Snap-On Multimeter Certification  
NC3 Snap-On Precision Measurements Instruments Certification  
OSHA 10 Construction  
OSHA 10 General Industry  
OSHA 30 Construction  
OSHA 30 General Industry  
ServSafe Certification  
ServSafe Manager Certification  
Incident Command Level 1

### **Tennessee Student Industry Certificaton**

Animal Science  
Dietetics & Nutrition  
Horticulture Science  
Human & Social science

### **Dual Enrollment**

Welding  
Machining  
Industrial Maintenance Technology  
Automotive Collision Repair  
Architectural & Engineering Design  
Veterinary Science

### **Statewide Dual Credit**

Criminal Justice  
Introduction to Plant Science