Course Catalog
005307-1

June 1, 2015

241 Vo-Tech Drive
McMinnville, Tennessee 37110
(931) 473-5587

A Tennessee Board of Regents Institution

For more information about TCAT McMinnville graduation rates, the median debt of students who completed the program and other information, please visit our website at http://www.tcatmcminnville.edu/fulltime-programs and select the subject.

To view the Course Catalog online, visit the TCAT McMinnville website at http://www.tcatmcminnville.edu/course-catalog.
Tennessee College of Applied Technology - McMinnville

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Short Courses


The Tennessee College of Applied Technology - McMinnville is accredited by the Commission of the Council on Occupational Education.
Mission Statement

The Tennessee Colleges of Applied Technology continue to serve as the premier providers for workforce development throughout the State of Tennessee. The colleges fulfill the mission by:

- Providing competency-based training through superior quality, traditional and distance learning instruction methods that qualify completers for employment and job advancement;
- Contributing to the economic and community development of the communities served by training and retraining employed workers;
- Ensuring that programs and services are economical and accessible to all residents of Tennessee; and
- Building relationships of trust with community, business, and industry leaders to supply highly skilled workers in areas of need.

Testing Center

The General Educational Development (GED) tests are administered as needed. The COMPASS test is required for all applicants of the Allied Health programs and is administered periodically. Automotive Service Excellence (ASE) Testing and Bridgestone Math Review are provided. Additionally, TCAT - McMinnville has signed an agreement with Pearson VUE to test candidates pursuing key industry certifications from leading IT programs, such as CISCO, CompTIA, EMC, HP, LPI, Oracle, VMware, and Microsoft.

Disclaimer

The programs as set forth in this catalog are subject to change at any time at the discretion of the Tennessee College of Applied Technology - McMinnville or the Tennessee Board of Regents. Because of the possibility of change or undetected error, important points of fact and interpretation should be confirmed by the appropriate technology center official.

Affirmative Action Institution

The Tennessee College of Applied Technology - McMinnville is an Affirmative Action/Equal Opportunity/Title IX Institution.
Highest Award: Diploma

Program Length: 12 Months

Typical Subjects Taken
Office Technology Foundations
Keyboarding/Data Entry
Computer Essentials
Word Processing Applications
Spreadsheet Applications
Employability Skills
Office Procedures I & II
Accounting
Medical Courses
Customer Service

Prepares for jobs as a receptionist, marketing assistant, administrative assistant, accounting assistant, and medical administrative assistant.

Course Description

The mission of the Administrative Office Technology (AOT) program is to serve as the premier supplier of quality administrative office technology training and workforce development in the local service area. The AOT provides technical training through traditional and distance instructional delivery systems to enable students to become successful in the administrative, accounting, and medical administrative support fields. Interpersonal skills and professional attitudes are taught along with computer skills and office procedures. The classroom simulates an office environment. Each student is assigned a personal workstation and interacts with the instructor and other students as she/she would with a supervisor and co-workers. Students have the opportunity to gain experience through extensive “hands-on” training with modern office equipment and computer software. Each phase of the program has been carefully structured so that every student may reach the maximum skill level regardless of whether or not the student has had prior office training or experience. Additionally, the program incorporates training that focuses on the integration and reinforcement of previously acquired skills and attitudes in order to support the currently employed trainee’s attainment of an advanced level of proficiency.

Enrollment and Class Schedule

Persons may apply at any time. Classes are held from 8 a.m. to 2:40 p.m. Monday through Friday.

Awards

General Office Assistant
Office Software Specialist
Accounting Assistant
Administrative Assistant
Medical Administrative Assistant

432 hours/Certificate
864 hours/Certificate
1296 hours/Diploma
1296 hours/Diploma
1296 hours/Diploma
AUTOMOTIVE TECHNOLOGY

Highest Award: Diploma

Program Length: 20 Months

Typical Subjects Taken
Brake Systems
Suspension & Steering
Automotive Powertrains
Automatic transmissions
Automatic Transaxles
Engine Repair
Engine Performance
Electrical/Electronic Systems
Climate Control Systems
Automotive Math
Prepares for jobs related to servicing and repairing automotive vehicles.

Course Description

The purpose of the Automotive Technology program is to graduate a technician with a thorough understanding of the methods of servicing and repairing automotive vehicles. Training is offered in the following specialty areas: (1) Automatic Transmission/Transaxle; (2) Brakes; (3) Electrical Systems; (4) Engine Performance; (5) Engine Repair; (6) Heating and Air Conditioning; (7) Manual Drive Train and Axles; (8) Suspension and Steering. Students are taught to make the proper diagnosis using test equipment, precision measuring tools, service manuals and specifications.

This program is divided into eight instructional units as developed by the National Institute for Automotive Service Excellence. A certificate may be awarded at the successful completion of all units. The program has received ASE certification in all eight areas of training.

Program completion time will vary with the individual student depending upon past experience, education, aptitude and the desired skill level to be attained.

Enrollment and Class Schedule

Persons may apply at any time. Classes are held from 8 a.m. to 2:40 p.m. Monday through Friday.

Awards

Brake Technician | 180 hours/Certificate
Suspension & Steering Technician | 180 hours/Certificate
Engine Repair Technician | 216 hours/Certificate
Manual Drive Train & Axles Technician | 180 hours/Certificate
Automatic Transmission/Transaxle Technician | 216 hours/Certificate
Heating & Air Conditioning Technician | 162 hours/Certificate
Electrical/Electronic Systems Technician | 508 hours/Certificate
Engine Performance Technician | 518 hours/Certificate
Automotive Technician | 2160 hours/Diploma
Highest Award: Diploma
Program Length: 12 Months

Typical Subjects Taken
Orientation and Safety
Keyboarding (if needed)
Computer Concepts
Introduction to Operating Systems
Introduction to Applications
Hardware and Troubleshooting
A+ Certification Preparation
Networking Certification Preparation
Security+ Certification Preparation
Advanced Networking
Web 2.0
Microsoft Windows 7
Prepares for jobs in computer maintenance, help desk operator, CIT security specialist, network operator.

Course Description

The goal of the Computer Information Technology program is to inspire and educate students by equipping them with the concepts, skills, and work ethics required to meet the vocation-related challenges of today and tomorrow. This is accomplished by providing training in the use of technologically-current operating systems, application software, and hardware. By providing resources, expertise, and opportunities for on-going learning about computing and information technology, and by training graduates who are equipped to research and solve the outstanding problems of information systems and their applications, we help insure our students will become proficient with information and technology skills.

National Certifications

Students are strongly encouraged/required to take and pass the following certification exams in order to achieve some of the program awards.

- CompTIA A+
- CompTIA Network+
- CompTIA Security+

Enrollment and Class Schedule

Persons may apply at any time. Classes are held from 8 a.m. to 2:40 p.m. Monday through Friday.

Awards

<table>
<thead>
<tr>
<th>Certification</th>
<th>Hours/Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desktop Technician</td>
<td>432</td>
</tr>
<tr>
<td>Security Specialist</td>
<td>864</td>
</tr>
<tr>
<td>Networking Technician</td>
<td>864</td>
</tr>
<tr>
<td>Microcomputer Support</td>
<td>1296</td>
</tr>
<tr>
<td>Specialist</td>
<td></td>
</tr>
</tbody>
</table>
Highest Award: Diploma

Program Length: 12 Months

Typical Subjects Taken
Sanitation and Safety
Recipes, Nutrition and Food Science
Baking and Menu Planning
Purchasing and Cost Control
Procedures and Production
Operational Systems
Communication

Prepares for jobs in the food service industry.

Course Description

The culinary and hospitality program focuses on the general study of cooking and related culinary arts that may prepare individuals for a variety of jobs within the food service industry. Includes instruction in food preparation, cooking techniques, equipment operation and maintenance, sanitation and safety, communication skills, applicable regulations, and principles of food service management.

Individuals may work in restaurants, hotels, and conference centers. Certified food handlers will have good employment opportunities.

Enrollment and Class Schedule

Persons may apply any time. Classes are held from 8 a.m. to 2:40 p.m., Monday through Friday, and nights and weekends as required at Warren County High School.

Awards

Sanitation and Safety Culinary/Hospitality 864 hours/Certificate
1296 hours/Diploma
**Highest Award:** Diploma

**Program Length:** 12 Months

**Typical Subjects Taken**
- Language and Communication
- Family Dynamics and Community Involvement
- Guidance and Behavior
- Music and Creative Movement
- Math and Science
- Health and Safety
- Professionalism
- Parenting/Parent Involvement
- Clinical Practicum
- Theory of Play
- Nutrition
- Developmental Assessment
- Classroom Environment
- Child Development

Prepares for jobs as childcare attendant, teacher assistant and childcare leader

**Course Description**

The Early Childhood Education program offers three avenues of training for persons who desire a rewarding career in the early childhood profession. They include childcare attendant, teacher assistant and childcare leader. CDA training is included in the curriculum for the Early Childhood Education program. However, CDA lab training is available to individuals currently working in early childhood education.

**Enrollment and Class Schedule**

Persons may apply at any time. Classes are held from 8 a.m. to 2:40 p.m. Monday through Friday at Warren County High School.

**Awards**

<table>
<thead>
<tr>
<th>Award</th>
<th>Hours/Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care Attendant</td>
<td>432 hours/Certificate</td>
</tr>
<tr>
<td>Child Care Assistant</td>
<td>864 hours/Certificate</td>
</tr>
<tr>
<td>Child Care Leader</td>
<td>1296 hours/Diploma</td>
</tr>
</tbody>
</table>
ELECTRONICS TECHNOLOGY

Highest Award: Diploma

Program Length: 20 Months

Typical Subjects Taken
Safety
Motors, Generators & Magnetism
Digital Electronic Concepts
Digital Electronic Applications
Analog Circuits
Microprocessor Concepts & Application
Robotics
Circuit Design
Motor Controls
Fundamentals of Instrumentation
NEC Wiring
Electronic Security
Access Control
Closed Circuit TV
Prepares for jobs as maintenance technician, fireburglar alarm technician, home automation tech, instrumentation technician.

Course Description

Students first learn the basics of electronics: direct and alternating current theory, semiconductor devices, digital techniques and circuitry, electronic components, electronic circuits, and the basics of microprocessors. The use of test equipment such as multimeters, oscilloscopes, function generators, and transistor testers is used in this area. Advanced students learn to use ladder logic diagrams, schematics, and programmable logic controllers to control machining and manufacturing processes. Motors and motor controls are included in the study of Industrial Electronics. Training is also provided in fiber optics termination and testing, computer network structure, terminating and testing. Electronic security and fire alarms, as well as access control, closed circuit television, and telephone systems also will be studied.

Enrollment and Class Schedule

Persons may apply at any time. Classes are held from 8 a.m. to 2:40 p.m. Monday through Friday.

Awards

<table>
<thead>
<tr>
<th>Program</th>
<th>Hours/Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics Assembler</td>
<td>432 hours/Certificate</td>
</tr>
<tr>
<td>Electronics Tester</td>
<td>864 hours/Certificate</td>
</tr>
<tr>
<td>Electronics Technician Apprentice</td>
<td>1296 hours/Diploma</td>
</tr>
<tr>
<td>Electronics Technician Apprentice with Electrician</td>
<td>2160 hours/Diploma</td>
</tr>
<tr>
<td>Electronics Technician Apprentice with Supplemental Training</td>
<td>2160 hours/Diploma</td>
</tr>
</tbody>
</table>
INDUSTRIAL ELECTRICITY

Highest Award: Diploma

Program Length: 16 Months

Typical Subjects Taken
Safety
Motor Control
Variable Speed Drives
Relay Logic
Transformers
Service Entry Panels
Programmable Logic Controllers
Residential Wiring
National Electrical Code
Basic Electronics
Meters
Timers/Drives
Prepares for jobs as construction electrician, maintenance electrician, service electrician.

Course Description

The Industrial Electricity student will learn the National Electrical code and how it applies to industrial, commercial and residential wiring. Among the topics that will be covered are motor control, variable speed drives, relay logic, transformers, service entrance panels, PLC's and residential wiring. Training equipment used include various meter types, common hand tools, conduit benders, motor control trainers, PLC trainers, assorted wiring devices, service entrance simulator, remote control hoist simulator, power tools, small robot, tachometer and megger. Each student has his or her own computer with the necessary programs to learn about ac/dc, motors, troubleshooting motor control systems, to name a few. The course includes bookwork, computer, and hands-on training. The object of the course is to prepare the student to pass the state Limited License Electrician Test and be ready to enter the workforce.

Enrollment and Class Schedule

Persons may apply at any time. Classes are held from 8 a.m. to 2:40 p.m. Monday through Friday.

Awards

<table>
<thead>
<tr>
<th>Award</th>
<th>Hours/Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrician Helper</td>
<td>432</td>
</tr>
<tr>
<td>Electrician Apprentice I</td>
<td>864</td>
</tr>
<tr>
<td>Electrician Apprentice II</td>
<td>1296</td>
</tr>
<tr>
<td>Industrial Electrician</td>
<td>1728</td>
</tr>
</tbody>
</table>
INDUSTRIAL MAINTENANCE

Highest Award: Diploma

Program Length: 16 Months

Typical Subjects Taken
Basic Welding
Fluid Power
Basic Electricity/Electronics
PLC Programming
Mechanical Maintenance
Machine Shop (Optional)
Robotics (Optional)
Prepares for jobs as industrial maintenance specialist, facility maintenance specialist, industrial maintenance technician/helper.

Course Description

The Industrial Maintenance program is designed to give students general skills in a variety of areas common to industry. Cross training enables a student to have knowledge in several areas and not be limited to one field of expertise that could become outdated. Bringing multiple skills to the workplace enhances the employee’s value to the employer. The industrial maintenance technician is responsible for the troubleshooting, disassembly, repair, and assembly of hydraulic, pneumatic, mechanical, and electrical systems on industrial machinery. The curriculum consists of training in the following areas:

- Welding: The student is instructed in the common forms of welding and metal cutting procedures.
- Electricity/Electronics: Instruction covers introduction to electricity through Programmable Logic Controllers.
- Mechanical Maintenance: Students are trained in basic terms of maintenance through lubrication techniques, bearing maintenance and installation, pumps, gearing, etc.
- Fluid Power: The student will learn hydraulic and pneumatic fundamentals.
- Machine Shop: The student will learn basic shop theory. Training on milling machines and lathes is also included. Machine Shop is an elective for industrial maintenance.
- Robotics: The student will learn entry-level robotics programming. Robotics is an elective for industrial maintenance.

Enrollment and Class Schedule

Persons may apply at any time. Classes are held Monday through Friday from 8 a.m. to 2:40 p.m., and Monday through Thursday from 4 p.m. to 7:45 p.m.

Awards

| Industrial Maintenance Helper | 864 hours/Certificate |
| Industrial Maintenance Technician | 1728 hours/Diploma |
MACHINE TOOL TECHNOLOGY

Highest Award: Diploma

Program Length: 20 Months

Typical Subjects Taken
Drilling and Sawing, Bench Work
Technology Foundations, Blueprint Reading
Milling Machines, Surface Grinders
Drilling and Reaming
Lathe Work, Design Projects
Tech Foundations (Math)
CNC Machining and Operations
CNC Programming—Gibbs Cam
Haas CNC Training—Mill/Lathe
Haas Machine CNC Training—VF-1 Mill
Haas Machine CNC Training—TL-1 Lathe
Prepares for jobs as machinist, machine setup operator, CNC operator.

Course Description

The work of machine tool operators, machinists, tool and die makers, industrial maintenance personnel, and related occupations requires skill in machining metal by machine tools such as milling machines, lathes, grinders, and drill presses, and the ability to use precision measuring tools. The course in Machine Tool Technology is designed to give the student experience on a variety of machine tools similar to those on which he/she will work after graduation including computerized numerical controlled machines. Instruction is given in related blueprint reading, mathematics, precision measuring, and basic metallurgy. Program completion time will vary with the individual student depending upon experience, education, aptitude, and the desired level to be attained.

Enrollment and Class Schedule

Persons may apply at any time. Classes are held from 8 a.m. to 2:40 p.m. Monday through Friday.

Awards

Production Machine Tender  432 hours/Certificate
Machine Setup Operator  864 hours/Certificate
General Machinist  1728 hours/Diploma
Machinist I  2160 hours/Diploma
CNC Machine Setup/Operate  Supplemental Certificate
CNC Milling Machine Setup and Operate  Supplemental Certificate
CNC Lathe Machine Setup and Operate  Supplemental Certificate
Gibbs Cam Programming  Supplemental Certificate
Highest Award: Diploma

Program Length: 12 Months

Typical Subjects Taken
Vocational Relationships
Anatomy & Physiology
Nutrition
Nursing Principles
Pharmacology
Math for Medications
Common Emergencies
Medical Surgical Nursing
Obstetrics
Pediatrics
Geriatrics
Mental Health
Clinical Practice
Prepares for jobs in hospitals, clinics, physician’s offices, home health, schools, long-term care facilities, dialysis facilities, correction facilities.

Course Description

The practical nursing student studies basic nursing skills and related subjects such as body structure and function, conditions of illness, nutrition, and medications. The clinical experience provides supervised nursing care of medical, surgical, obstetric, pediatric, and geriatric patients.

The practical nurse works under the supervision of the registered nurse or physician or as an assistant of the professional nurse. Classroom work and clinical experiences provide the graduate, who has completed all of the necessary requirements, eligibility to take the State Board examination for Practical Nursing.

Enrollment and Class Schedule

The program normally begins in May. Persons may apply at any time. Classes are held from 8 a.m. to 2:40 p.m. Monday through Friday. Hours vary by clinical schedule.

Award

Practical Nurse 1296 hours/Diploma

Accreditation

The TTCM Practical Nursing program is accredited by the Tennessee State Board of Nursing.
WELDING

Highest Award: Diploma

Program Length: 12 Months

Typical Subjects Taken
Shop Orientation and Safety
Cutting Processes
Shielded Metal Arc Welding
Welding Theory
Blueprint Theory
Gas Metal Arc Welding
Oxy-Acetylene Welding
Prepares for jobs in shops, industries and general facility maintenance.

Course Description

The welding program provides students with the basic and advanced techniques of the welding procedures and processes common in industry. Specific operations such as grinding, flame cutting, metal preparation and the use of tools and equipment related to welding are included. Instruction in related math, blueprint reading, physical properties of metal, effects of heat shrinkage, basic joint designs, structural shapes, material design, layout and fabrication is included. Basic electric arc, advanced electric arc, oxyacetylene cutting and welding, MIG, and TIG welding practices are taught using stainless steel, aluminum and other metals. Practical work experience prepares students in the safe use of welding equipment while emphasizing the four basic positions of welding: flat, horizontal, vertical, and overhead.

Welders may work indoors in metal-working shops or outdoors at construction sites. Industries that hire welders include heavy construction companies, metal fabricating plants, steel mills, auto assembly plants, auto repair shops, ornamental iron shops, barges and shipyards. Certified welders, especially those certified in more than one process, will have good employment opportunities.

Enrollment and Class Schedule

Persons may apply any time. Classes are held from 8 a.m. to 2:40 p.m., Monday through Friday subject to change as required.

Awards

- Tack Welder: 432 hours/Certificate
- Shielded Metal Arc Welder: 648 hours/Certificate
- Gas Metal Arc Welder: 972 hours/Certificate
- Combination Welder: 1296 hours/Diploma
Tennessee College of Applied Technology - McMinnville
241 Vo-Tech Drive
McMinnville TN 37110

Student Financial Aid Information

School Code 005307

Purpose

This information sheet is developed to help answer some of the questions you may have while enrolled at the Tennessee College of Applied Technology - McMinnville. The information is current as of the date at the bottom of the back page. Additional information about Federal Student Aid may be available by contacting the U.S. Department of Education at 1-800-433-3243. You may access their web site by going to http://www.studentaid.ed.gov.

Eligibility for Federal Student Aid

Persons enrolled in any approved program on our campus may qualify for Federal Student Aid if the student has completed a Free Application for Federal Student Aid (FAFSA) and met the eligibility requirements. Contact our Financial Aid office or access http://www.studentaid.ed.gov/eligibility for a list of the eligibility requirements you must meet to qualify for student aid.

Types of Student Aid

We are approved for three Federal Student Aid programs. They are the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (SEOG), and the Federal Work-Study Program (FWSP).

State financial aid is available through the Tennessee Student Assistance Award (TSAA) program and the Wilder-Naifeh Technical Skills Grant. Also, the governor’s Drive to 55 initiative includes Tennessee Promise (graduating high school seniors) and Tennessee Reconnect (adults). To qualify for these programs, your FAFSA has to be processed before the program deadline.

Other sources of student aid may be available from organizations such as:

---Continued---
Tennessee Department of Vocational Rehabilitation (Voc Rehab) – Each county has a representative who is usually located in the Department of Human Services office.

Workforce Investment Act (WIA) – There is a local office in your county. Check with Student Services for assistance with locating the office.

**Grant Amounts**

The results of your processed FAFSA helps determine how much you may receive in grant funds. If your school year 2015-2016 Federal Student Aid Report expected family contribution (EFC) number is above 5198, you may only qualify for work-study or Wilder-Naifeh. For persons enrolled full-time with an EFC of 5198 and below the following minimum/maximum amounts are possible per term.

<table>
<thead>
<tr>
<th>Grant</th>
<th>Minimum/Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pell Grant</td>
<td>$208/$1925</td>
</tr>
<tr>
<td>SEOG</td>
<td>$100</td>
</tr>
<tr>
<td>TSAA</td>
<td>$333/$334</td>
</tr>
<tr>
<td>Wilder-Naifeh</td>
<td>$666/$667</td>
</tr>
</tbody>
</table>

The amount of educational funds you receive from Voc Rehab, WIA, or other sources such as private scholarships may cause you to not receive SEOG, FWS or TSAA.

**Federal Work-Study Program**

Students who work on the FWS program are paid $9 per hour. Jobs on campus usually are five to seven hours a week. The work must be done before or after class. This is an excellent way to build a good work history.

**Frequently Asked Questions**

Please ask our Student Services office for a copy of our information sheet titled *Tennessee College of Applied Technology - McMinnville Financial Aid Available* if you do not find it with this handout.

For more information contact our Student Services office at 931-473-5587 or email at mike.garrison@tcatmcminnville.edu.

May 7, 2015