



TENNESSEE COLLEGE
OF APPLIED TECHNOLOGY
—MCMINNVILLE—

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 on line, visit the TCAT McMinnville website at <http://www.tcatmcminnville.edu/course-catalog>.

Tennessee College of Applied Technology - McMinnville

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Short Courses

In addition to full-time classes, TCAT McMinnville offers a wide variety of short-term computer and technical courses. Short-term courses include Introduction to Windows 7, Introduction to Office 2010, Word 2010, Excel 2010, Access 2010, PowerPoint 2010, Web Design, Photoshop, Publisher 2010, iPad training, Child Care, Certified Nurse Assistant, Phlebotomy and ECG Technician. Evening programs include Industrial Maintenance, Nursing Math and Anatomy and Physiology.

*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.

ADMINISTRATIVE OFFICE TECHNOLOGY

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	432 hours/Certificate
Office Software Specialist	864 hours/Certificate
Accounting Assistant	1296 hours/Diploma
Administrative Assistant	1296 hours/Diploma
Medical Administrative Assistant	1296 hours/Diploma

AUTOMOTIVE TECHNOLOGY

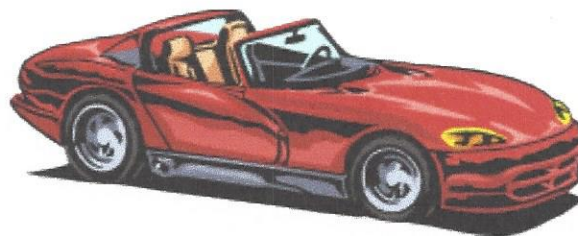
Highest Award: Diploma

Program Length: 20 Months

Typical Subjects Taken

Brake Systems
Suspension & Steering
Automotive Powertrains
Automatic Transmissions
Automotive 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

COMPUTER INFORMATION TECHNOLOGY

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

Desktop Technician	432 hours/Certificate
Security Specialist	864 hours/Certificate
Networking Technician	864 hours/Certificate
Microcomputer Support Specialist	1296 hours/Diploma

CULINARY/HOSPITALITY

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



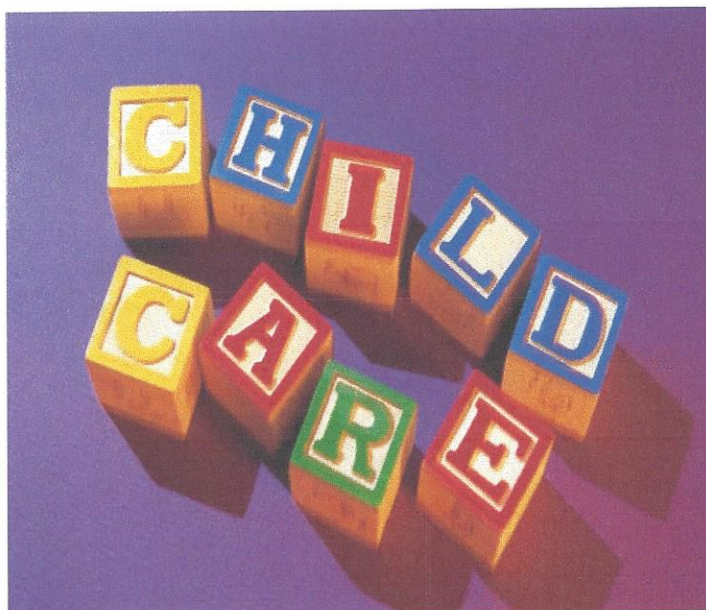
EARLY CHILDHOOD EDUCATION

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

Child Care Attendant	432 hours/Certificate
Child Care Assistant	864 hours/Certificate
Child Care Leader	1296 hours/Diploma

ELECTRONICS TECHNOLOGY

Highest Award: Diploma

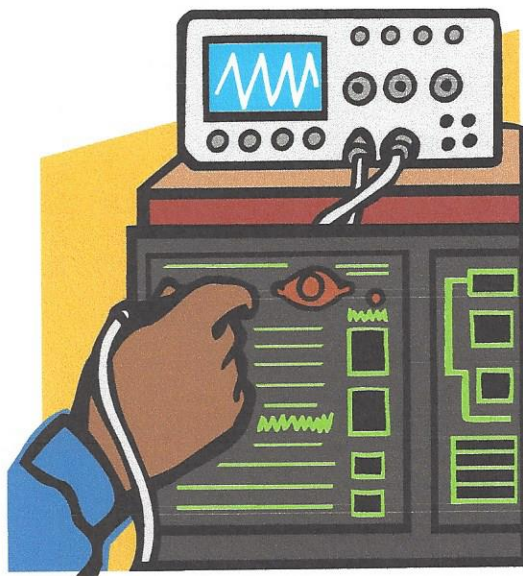
Program Length: 20 Months

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, fire-burglar 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.

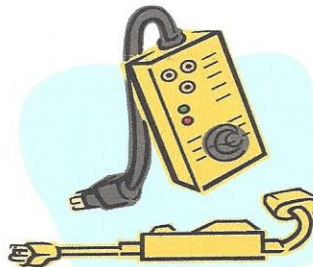


Enrollment and Class Schedule

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

Awards

Electronics Assembler	432 hours/Certificate
Electronics Tester	864 hours/Certificate
Electronics Technician Apprentice	1296 hours/Diploma
Electronics Technician Apprentice with Electrician	2160 hours/Diploma
Electronics Technician Apprentice with Supplemental Training	2160 hours/Diploma



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.

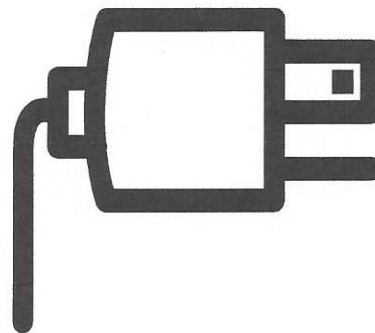


Enrollment and Class Schedule

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

Awards

Electrician Helper	432 hours/Certificate
Electrician Apprentice I	864 hours/Certificate
Electrician Apprentice II	1296 hours/Diploma
Industrial Electrician	1728 hours/Diploma



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

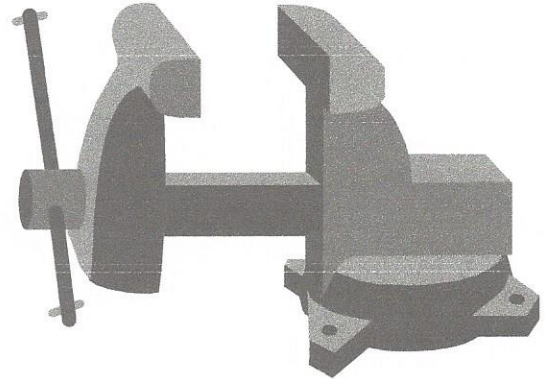
Highest Award: Diploma

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



PRACTICAL NURSING

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:

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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.

Pell Grant	\$208/\$1925
SEOG	\$100
TSAA	\$333/\$334
Wilder-Naifeh	\$666/\$667

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

Map

