



Machine Tool Technology

The Machine Tool Technology program develops basic skills in machine tool operations and provides experience on a variety of machine tools such as lathes, milling machines, computer numerical control (CNC) machines, and the CAD-CAM. Related math, blueprint reading, precision measuring, basic metallurgy, and heat treating are included. Graduates of the Machine Tool Technology program will be able to operate the lathe, milling machines such the CNC machine, surface grinders, and perform heat treating operations.

Program/Location	Length	Days	Time
Day Program/ Knoxville Campus	16 Months	Monday-Friday	8:00am—2:30 pm
Night Program/Knoxville Campus	16 Months	Monday-Thursday	3:30 pm—10:30 pm

COURSE OUTLINE

Orientation & Practical Safety
Technology Foundations
OSHA 10 Training
Worker Ethics I
Math Concepts I
Engineering Drawings I
Shop Theory I
Benchwork and Manual Machine Tools
Worker Ethics II
Math Concepts II
Engineering Drawings II/CAD
Shop Theory II
Manual Lathe
Manual Milling Machine
Grinding and Abrasive Machines
Manufacturing Materials and Processes
Introduction to Computer Numerical Control
Worker Ethics III
Engineering Drawings III/CAM
Shop Theory III
Precision Grinding
Computer Numerical Control Machining
Employability Skills
Worker Ethics IIII
Introduction to Additive Manufacturing
Shop Theory IIII
CNC Turning Center
CNC Machining Center
Electrical Discharge Machining

Typical Job Opportunities

Machinist
CNC Operator

Diplomas & Required Clock Hours

Machinist I—1,728
General Machinist—1,296

Certificates & Required Clock Hours

Machine Set-up Operator-864
Production Machine Tender—432

Total Completion Rate 2015: 88%

Total Placement Rate 2015: 100%

HOW TO APPLY

All Documents Must be Presented Together to Apply

- 1. FAFSA—Provide Proof of Completed FAFSA**
School Code = 004025
- 2. Immunizations—Provide Proof of Required**
Immunizations (Form is Attached)
- 3. Complete TCAT Application for Enrollment**
(Form is Attached)
- 4. Provide proof of official transcripts of education**
from high school, high-school equivalency or
other colleges & universities.



Machine Tool Technology

Book, Tool, and Supply List

1st Trimester				
Tuition		Cost	Total	
Tuition*		\$ 1,139.00		
Technology Access Fee*		\$ 67.00		
Student Activity Fee*		\$ 10.00		
TOTAL				\$1,216.00

Supplies	Needed By	Cost	Required	
Denim Jeans	First day of class	\$ 35.00	x	
3 Black Short Sleeve Polo Shirts with Pocket	First day of class	\$ 60.00	x	
Steel Toe Work Boots	First day of class	\$ 140.00	x	
USB Flash Drive 2 GB	First day of class	\$ 12.00	x	
Safety Glasses	First day of class	\$ 10.00	x	
TOTAL				\$257.00

Book & Tool Kit	ISBN	Cost	Required	
Elementary Blueprint Reading for Machinists, 5th edition	9781401862565	\$ 156.00	x	
Machining Fundamentals, 9th Ed.	9781619602090	\$ 110.00	x	
Machinist Ready Reference , 10th edition	9780970339850	\$ 32.00	x	
Machining Fundamentals Workbook, 9th Ed.	9781619602144	\$ 30.00	x	
Machinist Calc Pro Calculator	no isbn	\$ 80.00	x	
TCAT Machine Shop Tool Kit Includes the below items	no isbn	\$ 64.00		
<i>Thread Gauge (Included in Kit)</i>			x	
<i>Machinist Rule (Included in Kit)</i>			x	
<i>Pocket Scribe (Included in Kit)</i>			x	
<i>Center Drill #4 (Included in Kit)</i>			x	
<i>Center Drill #5 (Included in Kit)</i>			x	
<i>2 Tool Blanks (Included in Kit)</i>			x	
TOTAL				\$472.00

Miscellaneous Cost	Cost	Required	
OSHA 10 Training	\$ 25.00	x	
TOTAL			\$25.00

2nd Trimester				
Tuition		Cost	Total	
Tuition*		\$ 1,139.00		
Technology Access Fee*		\$ 67.00		
Student Activity Fee*		\$ 10.00		
TOTAL				\$1,216.00

3rd Trimester				
Tuition		Cost	Total	
Tuition*		\$ 1,139.00		
Technology Access Fee*		\$ 67.00		
Student Activity Fee*		\$ 10.00		
TOTAL				\$1,216.00

All Costs are Estimated and Subject to Change Without Notice Revised: 8/4/2016

*Denotes costs that can be covered by TN Promise and TN Reconnect

4th Trimester			
Tuition		Cost	Total
Tuition*		\$ 1,139.00	
Technology Access Fee*		\$ 67.00	
Student Activity Fee*		\$ 10.00	
TOTAL			\$1,216.00

Miscellaneous Cost		Cost	Required
Graduation Supplies		\$ 40.00	x
TOTAL			\$ 40.00
TOTAL PROGRAM COST			\$5,658.00

All Costs are Estimated and Subject to Change Without Notice Revised: 8/4/2016

*Denotes costs that can be covered by TN Promise and TN Reconnect

TCAT - Knoxville Certification of Immunization Measles, Mumps, and Rubella (MMR)

Student's name: _____ Program of Enrollment: _____

PART I (TO BE COMPLETED BY STUDENT)

Proof of MMR immunization is not required for the following reason:

- ☐ I graduated from a Tennessee public or private high school in 1999 or after. (transcript attached)
- ☐ I attended a Tennessee public or private high school in 2001 or after. (transcript attached)
- ☐ I was born prior to January 1, 1957. (copy of photo ID or birth certificate attached)
- ☐ I am active duty or former military personnel. (copy of DD214 or active military ID attached)

IF THE ABOVE IS CHECKED, PLEASE SIGN BELOW.

PART II (TO BE COMPLETED BY STUDENT)

Proof of MMR immunization is not required for the following reason:

- ☐ I refuse immunization because of religious doctrine. (Reason affirmed under the penalties of perjury. Please attach statement.)

IF THE ABOVE IS CHECKED, PLEASE SIGN BELOW.

PART III—MMR (TO BE COMPLETED BY PHYSICIAN)

Please circle the number that applies to this patient:

1. Patient has received two doses of measles vaccination since the age of 12 months:

Month/year _____ Month/year _____

2. Vaccination is medically contraindicated because of pregnancy, allergy to vaccine, etc. (Please list reasons.)

3. Patient had disease, as confirmed by medical record:

Month/year _____

4. Patient is immune to disease, as confirmed by laboratory.

Comment _____

ATTEST

(Must be signed by an M.D. or D.O.)

Name of physician (Please print) _____

Office telephone _____

Physician's signature _____ Date _____

Student's signature _____ Date _____

TCAT - Knoxville Certification of Immunization

Varicella (Chicken Pox)

Student's name: _____ Program of Enrollment: _____

PART I (TO BE COMPLETED BY STUDENT)

Proof of varicella (chicken pox) immunization is not required for the following reason:

- ☐ I attended a Tennessee public high school between 1999 and May 2016. **(Must provide proof of second varicella vaccine dose from your physician office.)** (transcript attached)
- ☐ I was born prior to January 1, 1980. (copy of photo ID or birth certificate attached)
- ☐ I am active duty or former military personnel. (copy of DD214 attached)

IF THE ABOVE IS CHECKED, PLEASE SIGN BELOW.

PART II (TO BE COMPLETED BY STUDENT)

Proof of varicella (chicken pox) immunization is not required for the following reason:

- ☐ I refuse immunization because of religious doctrine. (Reason affirmed under the penalties of perjury. Please attach statement.)

IF THE ABOVE IS CHECKED, PLEASE SIGN BELOW.

PART III—VARICELLA (TO BE COMPLETED BY PHYSICIAN)

Please circle the number that applies to this patient:

1. Patient has received two doses of varicella (chicken pox) vaccination since the age of 12 months:
Month/year _____ Month/year _____
2. Vaccination is medically contraindicated because of pregnancy, allergy to vaccine, etc. (Please list reasons.)

3. Patient had disease, as confirmed by medical record:
Month/year _____
4. Patient is immune to disease, as confirmed by laboratory.
Comment _____

ATTEST

(Must be signed by an M.D. or D.O.)

Name of physician (Please print) _____

Office telephone _____

Physician's signature _____ Date _____

Student's signature _____ Date _____



TENNESSEE COLLEGES OF APPLIED TECHNOLOGY

ENROLLMENT APPLICATION

Applicants must complete every item on this form, sign and date and return it to the College.

Personal Information	Full Legal Name _____ Last First Middle
	Address _____ City _____
	County _____ State _____ Zip _____ Email Address _____
	- - / / Gender: ☐ M ☐ F
	Social Security _____ Date of Birth _____ Age _____
	Marital Status: ☐ Married ☐ Single Preferred Phone Number: _____
	Race: Do you consider yourself to be Hispanic/Latino/Spanish origin? ☐ Yes ☐ No
	Select one or more of the following racial categories to best describe you: ☐ American Indian/Alaska Native ☐ Native Hawaiian/Pacific Islander ☐ Asian ☐ White ☐ Black or African American
	Citizenship status: ☐ US Citizen or US National ☐ US Dual Citizen ☐ US Permanent Resident or Refugee ☐ Other
	US Forces Status: ☐ Currently Serving ☐ Previously Serving ☐ Current Dependent ☐ N/A
ALL MALES 18 OR OLDER MUST be registered with Selective Service. Have you registered for Selective Service? ☐ Not required to register ☐ Registered ☐ Required to register, but not registered	
Prior Education/ Training	Education (insert highest level of education completed): _____
	Name of last high school attended: _____
	High school graduation date (mm/yyyy): _____ GED Diploma Date _____
	Are you seeking credit for prior education, training or work experience? ☐ Yes ☐ No
Program	Please review the campuses website and provide the program name choice for career training (Example: Administration Office Technology) _____
	When will you be available to enroll in class? ☐ Fall ☐ Spring ☐ Summer
	Do you plan to apply for financial aid? ☐ Yes ☐ No

Signature of Applicant: _____ Date of Application: _____

The Tennessee Colleges of Applied Technology (TCATs) do not discriminate on the basis of race, color, religion, creed, ethnic or national origin, sex, sexual orientation, gender identity/expression, disability, age, status as a covered veteran, genetic information and any other category protected by federal or state civil rights law with respect to all employment, programs and activities sponsored by the TCATs.



Application for Enrollment

The information is for Office use only:

ADMISSIONS REQUIREMENTS

- ☐ FAFSA ☐ I will not be filing financial aid. I will be paying for my education. Students Initials: _____
- ☐ Immunizations ☐ Education Transcripts

SPECIAL ADMISSIONS REQUIREMENTS

Cosmetology:

- ☐ Photo ☐ Proof of Age ☐ Copy of SS Card ☐ RT/LT Handed ☐ Manicuring Only

Dental Assisting, Medical Assisting, and Surgical Technology

Compass required scores: Math 30 and Reading 70

- ☐ COMPASS or ACT – Scores: _____ Math _____ Reading (Date: _____)
- ☐ CPR Documentation (BLS for Healthcare Providers)

Practical Nursing:

Compass required scores: Math 50 and Reading 80

- ☐ Notarized Declaration of Citizenship ☐ Copy of ID Used to Declare Citizenship
- ☐ CPR Documentation (BLS for Healthcare Providers)
- ☐ COMPASS or ACT – Scores: _____ Math _____ Reading (Date: _____)

Truck Driving:

- ☐ MVR ☐ DOT Physical ☐ Valid Driver's License
- ☐ U.S. Citizenship / Residency

Staff Signature: _____

Date: _____