



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	TCAT Knoxville Main Campus	16 Months	Monday-Friday	8:00am—2:30 pm
Day Program	TCAT Knoxville at Anderson County Campus	16 Months	Monday-Friday	8:00am—2:30 pm
Night Program	TCAT Knoxville Main Campus	16 Months	Monday-Friday	3:30 pm—10:00 pm

Curriculum/Courses

MTT 0001	Worker Characteristic
MTT 1010	Technology Foundations
MTT 1020	Orientation & Practical Safety
MTT 1030	Math Concepts I
MTT 1040	Engineering Drawings I
MTT 1050	Shop Theory I
MTT 1060	Benchwork & Manual Machine Tool
MTT 0002	Worker Characteristic
MTT 2010	Math Concepts II
MTT 2020	Engineering Drawings II CAD
MTT 2030	Shop Theory II
MTT 2040	Manual Lathe
MTT 2050	Manual Milling Machine
MTT 2060	Grinding and Abrasive Machines
MTT 2070	Mfg Materials & Processes
MTT 2080	Intro to Comp Numerical Ctrl Machining
MTT 0003	Worker Characteristic
MTT 3010	Engineering Drawings III CAM
MTT 3020	Shop Theory III
MTT 3030	Precision Grinding
MTT 3040	Comp Numerical Ctrl Machining

MTT 0004	Worker Characteristic
MTT 4010	Employability Skills
MTT 4020	Intro to Additive Mfg
MTT 4030	Shop Theory IV
MTT 4040	CNC Turning Center
MTT 4050	CNC Machining Center
MTT 4060	Electrical Discharge Machining

Typical Job Opportunities

Machinist
CNC Operator

Completion Award

Required Hours

Production Machine Tender	Certificate	432
Machine Set-up Operator	Certificate	864
General Machinist	Diploma	1296
Machinist I	Diploma	1728

HOW TO APPLY

All Documents Must be Presented Together to Apply

⇒ Complete the **Free Application For Federal Student Aid (FAFSA)** online – the website is www.fafsa.ed.gov and our school code is 004025.

⇒ Complete **TCAT Knoxville Application for Enrollment** online at <https://apply.tbr.edu/?tcat=knoxville>

Total Completion Rate 2017: 93%



Machine Tool Technology

Book, Tool, and Supply List

1st Trimester				
Tuition		Cost		Total
Tuition*		\$	1,169.00	
Technology Access Fee*		\$	67.00	
Student Activity Fee*		\$	10.00	
OSHA 10 Training		\$	25.00	
TOTAL				\$1,271.00
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	\$ 162.00	x
Machining Fundamentals, 9th Ed.		9781619602090	\$ 116.00	x
Machinist Ready Reference , 10th edition		9780970339850	\$ 43.00	x
Machining Fundamentals Workbook, 9th Ed.		9781619602144	\$ 30.00	x
Machinist Calc Pro 2 Calculator		no isbn	\$ 90.00	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				\$505.00
2nd Trimester				
Tuition		Cost		Total
Tuition*		\$	1,169.00	
Technology Access Fee*		\$	67.00	
Student Activity Fee*		\$	10.00	
TOTAL				\$1,246.00
3rd Trimester				
Tuition		Cost		Total
Tuition*		\$	1,169.00	
Technology Access Fee*		\$	67.00	
Student Activity Fee*		\$	10.00	
TOTAL				\$1,246.00
Supplies				
		Needed By	Cost	Required
Flashdrive		First day of class	\$ 10.00	x
3 Ring Binder		First day of class	\$ 3.00	x
25 Sheet Protectors		First day of class	\$ 5.00	x

All Costs are Estimated and Subject to Change Without Notice Revised: 8/24/2017

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

TOTAL	\$18.00
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4th Trimester

Tuition	Cost	Total
Tuition*	\$ 1,169.00	
Technology Access Fee*	\$ 67.00	
Student Activity Fee*	\$ 10.00	
TOTAL		\$1,246.00

Miscellaneous Cost	Cost	Required
Graduation Supplies	\$ 40.00	x
TOTAL		\$ 40.00

TOTAL PROGRAM COST	\$5,829.00
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