

WCTC PROGRAM LISTING

ADVANCED MANUFACTURING





WHERE CRAFTSMANSHIP MEETS INNOVATION

WCTC's manufacturing grads are some of the most sought-after in the state – and for good reason! Our students learn practical, hands-on skills using the latest technology, taught by instructors with decades of real industry experience. We're embracing trends in automation and artificial intelligence to ensure that our students graduate ready to navigate today's quickly evolving landscape of manufacturing technology.

Biomedical Electronics Technology

70-credit AAS | wctc.edu/bio-medical

POTENTIAL CAREERS:

*Biomedical Electronics Technician,
Biomedical Equipment Technician*

With a reliance on technology to test and monitor patients, biomedical electronics technicians ensure medical equipment is safe, functional and properly set up. In this program, gain skills to work with technical equipment, including bedside monitor systems, electrocardiogram (EKG) machines and other devices related to patient care. Learn to install, test, calibrate and repair biomedical equipment.

ADVANCED MANUFACTURING CERTIFICATES:

Automation - Control and Interface | 11-Credit
Automation - Industrial PLCs | 8-Credit
CNC Operator | 11-Credit
GMAW/Fabricator | 9-credit
Industrial Laser Operator | 9-Credit
Maintenance Technician 1 | 12-Credit
Maintenance Technician 2 | 9-Credit
Maintenance Technician 3 | 12-Credit



Apply Online Now

wctc.edu/apply-online

Electrical Engineering Technology

60-credit AAS | wctc.edu/electrical-eng

POTENTIAL CAREERS:

Electrical Engineering Technologist, Engineering Assistant, Electrical Technician

Electrical engineering technologists' work involves the design, development, production, testing, manufacturing and repair of electronic and electrical equipment. In this calculus-based program, gain skills necessary to apply knowledge of electrical theory to numerous settings, including research and development, manufacturing, field service engineering among others.

Electronics Systems Technology

60-credit AAS | wctc.edu/electronics

POTENTIAL CAREERS:

Electronics Technician, Electronics Repair Technician, Field Services Coordinator

Develop the skills needed to design, fabricate, test, troubleshoot and repair electronic systems. Gain hands-on skills with microcontrollers, communications, data acquisition, electronic assembly, motors and controls, programmable logic controllers and mechanical repair. Learn to effectively use hand tools and electronic test equipment.

INDUSTRIAL MAINTENANCE TECHNICIAN | PATHWAY

Industrial Maintenance Technician

59-credit TD | wctc.edu/imt

POTENTIAL CAREERS:

Industrial Maintenance Technician, Field Service Technician, Maintenance Mechanic

Industrial maintenance technicians repair and maintain commercial or industrial machinery to ensure proper functionality. In this program, gain practical experience in welding, hydraulics, electricity, mechanical fundamentals and machine alignment. Build skills in electronics, computerized equipment maintenance and preventative/predictive maintenance.

Maintenance Technician 1 | 12-credit Cert

Maintenance Technician 2 | 9-credit Cert

Maintenance Technician 3 | 12-credit Cert

Industrial Electrician Apprenticeship

28-credit APPR | wctc.edu/industrial-elec

POTENTIAL CAREERS:

Industrial Electrician, Journeyworker, Master Electrician, Electrical Engineer

Industrial electricians work to install, test, troubleshoot, maintain and repair electrical equipment in industrial/commercial settings. They ensure electrical systems run safely and efficiently, as the systems they work on power large, complex facilities. Receive high-quality, hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.



Industrial Metrology Technician Apprenticeship

16-credit APPR | wctc.edu/metrology

POTENTIAL CAREERS:

Metrology Specialist, Quality Control Inspector, Tool and Die Maker

Learn to identify measurement needs and perform measurement tasks using tools, equipment, instrumentation and software programs. Gain skills to interpret engineering prints and other technical manufacturing documentation, and learn the fundamentals of computer-aided design (CAD). Get hands-on practice using precision instruments and tools to establish measurement routines for inspecting parts.

Injection Mold Setup (Plastic) Apprenticeship

16-credit APPR | wctc.edu/injection-mold

POTENTIAL CAREERS:

Injection Mold Setup Technician

Injection mold machine setters handle the setup and operation of equipment to produce parts by injecting materials, such as plastic, into a cavity and turning the molded pieces into usable parts for a variety of industries. Receive high-quality, hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.

Robotics and Automation Engineering Technology

60-credit AAS | wctc.edu/robotics

POTENTIAL CAREERS:

Automation Systems Technician, Mechatronics Technician, System Designer

Automated systems have become standard in many industries to provide reliable ways to program and control machine movements. In this program, learn about robotics and programmable logic controllers, discover how automation principles apply to business/industry, and develop skills to work with complex computers and machinery in automated production lines.

Automation - Industrial PLCs | 8-credit Cert

Automation - Control and Interface | 11-credit Cert



ACTUATE HAND OR FOOT SWITCH AND

Step 1 Of 1
Qty Done 0
Rpts. 1 Of 1

#	Mode	EndAng	YCorr	YBend	TonTrg	YTop
1	Mode	80.0	1.5000	25.0	3.0000	

Keyboard interface with function keys (F1-F12) and a numeric keypad.

ACCURPRESS

DANGER
OPERATE WITH
EXTREME
CAUTION
NEVER PLACE
YOUR HANDS
OR ANY PART
OF YOUR BODY
IN THIS MACHINE

WARNING
TOO BIG
AND HEAVY
TO BE
LIFTED BY
ONE
PERSON.
TO AVOID
INJURY,
TWO
PEOPLE
SHOULD
LIFT THE
MACHINE.
ENSURE
THE
MACHINE
IS
PROPERLY
SECURED
BEFORE
LIFTING.

ETS CONTROL panel with buttons for START, STOP, BANK, and various function keys.



Machinist Apprenticeship

16-credit APPR | wctc.edu/machine-appr

POTENTIAL CAREERS:

Machinist

Machinists operate a variety of computer- and mechanically controlled machine tools to produce intricate, precision parts that are used in different industries. They possess the skills to take a single part through an entire operational procedure to completion. Receive high-quality, hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.

Machinist Mechanic/ Millwright Apprenticeship

16-credit APPR | wctc.edu/millwright

POTENTIAL CAREERS:

*Maintenance Mechanic, Millwright,
Maintenance Technician*

Maintenance mechanics/millwrights install, dismantle, repair, maintain and move heavy industrial equipment based on blueprints, layouts or other drawings. Machine tools, conveyor systems and specialized maintenance equipment are among the types of machinery repaired by maintenance mechanic/millwrights. Receive high-quality, hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.

Manufacturing Integration Engineering Technology

60-credit AAS | wctc.edu/miet

POTENTIAL CAREERS:

*Automation Engineer, Manufacturing Systems
Analyst, Robotics Technician*

Gain essential skills in sensor integration, IoT connectivity, data management, machine learning, PLCs and robotics. Learn to enhance manufacturing operations, ensuring safety, quality and efficiency while driving innovation and adaptability through hands-on, data-driven training.

Manufacturing Engineering Technology

60-credit AAS | wctc.edu/mfg-eng

POTENTIAL CAREERS:

*Engineering Technician, Process Technician,
Quality Control Engineering Technician*

Manufacturing engineering technology blends knowledge from multiple subject areas, such as science, math, computers and mechanical/electrical engineering to solve problems in manufacturing. Technicians assist engineering and management in the creation of new products and improvement of production processes. In this program, develop a comprehensive background in manufacturing and lean processes, automated manufacturing and modern design methods.

Maintenance Technician

Apprenticeship

24-credit APPR | wctc.edu/maint-tech

POTENTIAL CAREERS:

*Maintenance Mechanic, Millwright,
Maintenance Technician*

Maintenance technicians perform tasks involving the maintenance, modification and repair of electrical and mechanical systems. Learn safety practices, machine operation and repair, metallurgy, electricity, hydraulics, pneumatics, blueprint reading, motor and logic controls, transformers, electrical codes and how to interpret schematics. Receive high-quality, hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.

Mechanical Design Technology

60-credit AAS | wctc.edu/mech-design

POTENTIAL CAREERS:

*Mechanical Designer, Mold Designer,
CAD Drafter*

Mechanical designers combine design skills with mechanics to develop complex visual plans that assist engineers in creating specific products. These technical renderings show intricate details, dimensions and structures, and indicate materials and procedures. In this program, study computer-aided drafting using current computer-aided design applications, and learn about manufacturing processes, material strength, basic mechanisms and three-dimensional modeling.

Mechanical Engineering Technology

66-credit AAS | wctc.edu/mech-eng

POTENTIAL CAREERS:

Engineering Technician, Senior Designer, CAD Drafter, Design Technician

Mechanical engineers solve problems and determine functional solutions through math, science and technology. In this program, learn how to model design concepts in two and three dimensions. Use calculus to analyze forces, determine how they influence motion, and assess the combined stresses they produce within materials. Specify engineering design parameters and select materials for given applications.

Mechatronics Technician Apprenticeship

24-credit APPR | wctc.edu/mechatronics

POTENTIAL CAREERS:

Mechatronics Technician

Automated systems have become standard in many industries to provide reliable ways to program and control machine movements. Explore robotics and programmable logic controllers, and discover how automation principles apply to business/industry. Receive high-quality, hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.

Tool and Die Making

59-credit TD | wctc.edu/tool-die

POTENTIAL CAREERS:

*Tool and Die Operator, Machinist, CNC Operator,
Tool and Die Maker, Moldmaker*

A tool and die maker's craft is an exacting one; the parts they make enable machines to produce various products for different industries. In this program, use state-of-the-art equipment to learn complex and conventional machining, computer numerical control machining and grinding operations. Develop skills in precision work, and make molds/dies..

Machine Tool Operation

32-credit TD | wctc.edu/machine-tool

POTENTIAL CAREERS:

CNC Operator, Tool Room Machinist, Machine Tool Operator

Machinists, or machine tool operators, produce parts to precise specifications, generally from setup to operation. In this program, acquire skills for the safe operation of engine lathes, vertical milling machines and surface grinders. Learn to operate computer numerical control (CNC) machines, interpret engineering drawings and use applied mathematics.

Pathway continues →

Tool and Die Apprenticeship

16-credit APPR | wctc.edu/tool-appr

POTENTIAL CAREERS:

Tool and Die Operator, Machinist, CNC Operator, Tool and Die Maker

Tool and die makers create precision tools or dies that are used to form, cut and shape metal and other materials. They make jigs and fixtures, which hold metal while it is bored, stamped or drilled, along with gauges and other devices. Receive high-quality, hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.

CNC Setup Technician

20-credit TD | wctc.edu/cnc-setup-tech

POTENTIAL CAREERS:

CNC Setup Technician, Machine Operator, CNC Programmer, CNC Operator

CNC setup technicians read blueprint drawings and convert them to machine code. They operate machines that produce precision parts used in numerous products for various industries. In this program, learn how to interpret prints and make parts to accepted tolerances, and develop skills to program computer numerical control machines.

CNC Operator | 11-credit Cert



"Every class, every instructor and nearly **every minute** of my education has been important in preparing me for my job."

Joel Beskow, CNC Setup Technician '20



Metal Fabrication/Welding - Advanced

60-credit AAS | wctc.edu/metal-fab-adv

POTENTIAL CAREERS:

*Fabricator, Laser Operator, Assembler,
Welder/Press Operator, Welder*

Metal fabrication manipulates metal from one form to another for a particular purpose, while welding fuses parts together. In this program, develop advanced skills involving the intricate planning and preparing a part for cutting, fabrication and welding, and produce parts by employing new techniques and using a variety of materials.

Metal Fabrication/Welding

33-credit TD | wctc.edu/metal-fab

POTENTIAL CAREERS:

*Fabricator, Laser Operator, Assembler,
Welder/Press Operator, Welder*

Metal fabrication involves preparing and manipulating materials, while welding fuses parts together. In this program, learn to read prints; create the shape of a part for cutting, fabrication and welding; and produce quality parts. Develop skills to program/operate computer-controlled press brakes/shears, plasma arc cutting machines and microprocessor-based power sources.

Pathway continues →

Welding Apprenticeship

12-credit APPR | wctc.edu/welding-appr

POTENTIAL CAREERS:

Welder, Cutter

Welders work in a wide variety of industries – from automobile manufacturing, shipbuilding, aerospace and many others. Their duties include joining metal parts by fusing them together and creating a permanent bond using different welding techniques. Receive high-quality, hands-on classroom instruction that complements on-the-job apprenticeship training critical for success in the industrial trades.

Welding Technician

19-credit TD | wctc.edu/welding-tech

POTENTIAL CAREERS:

Welder, Fitter/Welder

Welders fuse metal parts together to create a permanent bond. In this program, develop knowledge of print reading; learn safe handling techniques for gas cylinders, manual and machine oxy-fuel cutting, plasma cutting and air carbon arc cutting; and become introduced to gas metal arc welding/flux core arc welding techniques.

GMAW/Fabricator | 9-Credit Cert

Industrial Laser Operator | 9-credit Cert

READY TO TAKE **A CLOSER LOOK?**

We'd love to show you around! Explore our state-of-the-art training facilities, cutting-edge technology, helpful student resources and more - in person or online.

TAKE A CAMPUS TOUR

Join us for a guided walking tour to get a first-hand look at our facilities and learn about all WCTC has to offer.



wctc.edu/visit

CONNECT WITH AN ENROLLMENT COUNSELOR

Our friendly enrollment counselors are here to help you navigate the process of becoming a WCTC student.

enroll@wctc.edu | 262.691.5129



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COUNTY TECHNICAL
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Higher Ed