Career and Technical Education
Health Care
Manufacturing
Construction
Automotive
As the Adult Technical Education Department of the Special School District, Applied Technology Services provides affordable, career-focused technical education to help our students achieve their career goals. Beginning in 1968, the school began by providing cutting-edge technical and career training to adult students throughout St. Louis County.

Today we educate and train roughly 900 students each year in a wide range of career and technical fields. Applied Technology Services offers training in four program clusters from traditional technical fields, such as precision machining and construction, to such burgeoning fields as welding, and health sciences. We can help you to join the thousands of students who began their path to success with Applied Technology Services.

**MISSION**

To work collaboratively with business and industry to equip students with the knowledge, competencies, self-confidence and self-esteem to be successful in today’s changing workplace by providing career-focused technical training that results in meaningful employment opportunities.

**VISION**

To provide a learning experience that is meaningful and valuable to both the students and the employers of our community.

**GOAL**

To be the best source of career and technical training programs and services based on the most current research, practice, and industry standards.

**WE BELIEVE**

All students are unique and have the ability to learn.

That the most powerful forms of education are meaningful, involve the student, promote critical thinking and appeal to different learning styles.

Life-long learning plays a definitive role in life-long success.

All students can attain high technical standards with practical application of knowledge.

Continuous staff development provides professional opportunities to better serve students.

Respect, honesty and open communication promote a sense of trust, well-being and foster self-esteem.
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GENERAL INFORMATION

Enrollment is on a first come, first serve basis. All students are encouraged to register for their classes as early as possible. **Tuition is due at registration.** Classes that do not have at least six students enrolled by the first night of class will be delayed or canceled.

If your employer is paying your tuition and would like to be billed by us, you must bring a letter from your employer on company letterhead stating that the employer agrees to pay for your tuition or for your tuition and books. If a third party such as a Vocational Rehabilitation or the Workforce Investment Act will be paying your tuition we must have official notification from the third party. Students whose tuition will be paid by a United Auto Workers program must present a UAW voucher at the time of registration.

Students who have a history of insufficient funds checks with us must pay by cash, money order, or credit card. Students who have an outstanding balance with us must pay off their outstanding balance before registering for classes.

**Accreditation**

Most courses are approved by the Missouri Department of Elementary and Secondary Education for Veteran’s Education and the Workforce Investment Act. Additionally, our schools are accredited by the North Central Association of Colleges and Schools (NCA) which is a regional accreditation organization recognized by the United States Department of Education and the Council for Higher Education Accreditation.

**Attendance**

Students are encouraged to maintain perfect attendance. Certificates and grades will be awarded to passing students who attend at least 90% of the total hours of a course. Apprenticeship programs and state certified programs (ex. CNA and CMT) require 100% attendance.

If a class is missed, the following policies apply:

1) Make up work must be complete within two weeks of the absence.
2) Class time may be made up on designated make up days.
3) Only 10% of the total hours of a course can be made up in a semester.
4) Make up fees will apply to courses requiring 100% attendance.

**Financial Aid**

Pell Grants and Stafford Loans are available to eligible students attending approved programs of 600 clock hours or more. Currently this includes our Practical Nursing Program.

Office: (314) 989-7583 – Closed on Fridays
GENERAL INFORMATION

Student Records

We maintain a permanent record of student participation in our classes. Although we will only issue you one certificate for each class you successfully complete, we will issue an official transcript upon your request. If you wish to have an official transcript sent to a third party you must authorize us to do so in writing. We maintain CNA and CMT records for a time period of 2 years only, as required by the Department of Health & Senior Services.

Refund Policy for Technical Courses

Allow 30 days for a refund to be processed. A full refund is given when:

1) A student withdraws from a course prior to the first night of class. The school retains a $50 registration fee.
2) A student drops within the first week of a course. The school retains a $50 registration fee and 20% of the course tuition fee.
3) No refunds will be given after the first week of a course.

Refunds for courses approved for financial aid:
- 1st week – 80%
- 2nd week – 50%

Nondiscrimination

The Board of Education is committed to a policy of nondiscrimination in relation to color, sex, religion, age, disabling conditions, ancestry, socioeconomic status, marital status, organizational memberships, or national origin. This policy will prevail in all matters concerning staff, students, educational programs, services, persons, and agencies with whom the Board does business. Contact the Adult Education Administrator with any questions regarding nondiscrimination.

Textbooks

Most classes require the purchase of textbooks. Textbooks are available at the Adult Education Office. Textbooks are not included in tuition costs.

School Closings

Adult Education classes may meet even though the day school is closed. To learn of weather or emergency closings phone the following Adult Education locations:

SCHOOL CLOSING HOT LINES

- North Tech (314) 989-7707
- South Tech (314) 989-7502

Or visit our website: www.appliedtech-stl.com

Smoking Policy

All School District campuses are “smoke-free”. Smoking is not permitted on School District property.

Health and Safety

Safety glasses and protective clothing must be worn in designated areas. The cost of medical care is borne by the individual.
CONTACT INFORMATION

Main Office

SOUTH TECH
12721 West Watson Road
Sunset Hills, MO 63127

From interstate 44 exit onto Lindbergh and go south to West Watson Road. This will be the third traffic light on Lindbergh if you were going east on 44 and the fourth traffic light if you were going west on 44. There is an “Enterprise Bank” on the left and the Sunset Hills police station is on the right on the south side of West Watson Road at this intersection. Take a right on West Watson Road (if you were to go left you would be on “Eddie and Park”) and come down about ¾ of a mile. You will see the school on your right.

NORTH TECH
1700 Derhake Road
Florissant, MO 63033

From Interstate 270 exit north onto Washington / Elizabeth exit. Proceed north on Washington to the first stop sign. Turn right onto Derhake and go east for approximately two miles. You will pass Special School District’s Northview and Ackerman schools. The next school on the right will be North Tech.

MET CENTER
6347 Plymouth Ave.
Wellston, MO 63133

From Page Avenue go south on Sutter to Plymouth. Take a left on Plymouth. Cross the Metrolink tracks. The Metropolitan Education and Training Center will be on your left.

ADULT EDUCATION OFFICE HOURS/PHONE NUMBERS

SOUTH TECH  9:00am - 5:00pm
PHONE  (314) 989-7500

NORTH TECH  4:30pm – 9:30pm
PHONE  (314) 989-7700

LPN – SOUTH 7:30am – 4:00pm
PHONE (314) 989-7570

LPN – MET 7:30am – 4:00pm
PHONE (314) 746-0788

It is advisable to call the office before you come in, as there are exceptions occasionally to our hours.
Center for Business Excellence

With over 15 years of experience participating in the Missouri Customized Training Program, we develop and deliver training in technical, managerial, and interpersonal skills such as:

- Lean Manufacturing
- Six Sigma
- Team Leadership
- Team Effectiveness
- Coaching
- Statistical Process Control
- Manufacturing Math
- Blueprint Reading
- Geometric Dimensioning and Tolerancing

Our staff includes technical writers, facilitators, quality specialists, and trainers experienced in manufacturing and business. In addition to training, we provide assistance in the development and implementation of quality systems meeting the registration requirements of international standards.

What is the Missouri Customized Training Program?

The Missouri Customized Training Program is a state funded program designed to help organizations offset the cost of training employees. The program is administered by the Division of Workforce Development (DWD) which provides financial support for delivery and administration of training we provide to you. Organizations that are creating new jobs in Missouri or organizations that are making capital investments in their facilities are excellent candidates for the program.

What we can do for your Company

We Can:

- Organize and Supervise Training Activities
- Provide Qualified Personnel
- Process Transactions
- Develop/Produce Customized Instructional Materials and Deliver Customized Training
- Evaluate Student and Program Process
- Provide Financial Management
- Provide Facilities (if required)
- Prepare Year-end Project Reports

Our mission is to provide training and technical support which meets your needs, increases productivity, improves product quality, and maximizes human resources to lead toward future growth.

Contact the Center for Business Excellence (314) 989-7580
HEALTH CAREERS

Certified Nurse Assistant (CNA)

Course Length: 175 hours

Prerequisite: None

The Department of Health and Senior Services approved curriculum is used to provide students with the 175 hours of instruction and application required to become a Certified Nurse Assistant which prepares individuals for employment in a long-term care facility. The program teaches skills in resident care under the direct supervision of a licensed nurse. Instruction consists of 75 hours of classroom instruction and 100 hours of practicum (on-the-job) training in a nursing home. Some of the topics covered include: basic nursing skills; fire safety; disaster training; resident safety and rights; and social and psychological problems of residents and the methods of caring for the mentally confused residents, such as those with Alzheimer’s disease.

*The full tuition payment is due when registering. Tuition does not include the certification fee.*

A background check will be completed on each student through the Family Care Registry System as required by state regulations. A student who is not currently registered on the system will be required to register per our instructions. A registration fee will need to be paid.

CNA Challenge

A student may become a CNA by successfully challenging the CNA examination. To challenge the CNA examination, students must have a permission letter from the Department of Health and Senior Services. To obtain your permission letter from the State of Missouri call the Department of Health and Senior Services at (573) 522-6203.

CNA challenges are administered once a month at South Tech. Please call for the monthly test schedule. The test is limited to four students.

*The full tuition payment is due two weeks prior to the test date. Tuition does not include the certification fee.*
HEALTH CAREERS

Certified Medication Technician (CMT)

Course Length: 68 hours with your instructor supervising practicum

Prerequisites:

- High School Diploma or GED
- Six months of employment as a CNA
- Letter of recommendation from current employer signed by the DON or facility administrator
- Passing score on the TABE test level 9D

The purpose of the Certified Medication Technician (CMT) training program is to prepare individuals for employment as a CMT in an intermediate care or skilled nursing facility. The program is designed to teach skills in administration of non-parenteral medications that will qualify students to perform this procedure to assist licensed practical nurses or registered professional nurses in medication therapy.

Long term care facilities employing students enrolled in the CMT program must sign an agreement with Adult Education to work with our instructor to provide the eight hour practicum, final, and practicum exam. This course uses the curriculum required by the Missouri Department of Health and Senior Services.

The course consists of at least 60 classroom hours of instruction and a minimum of 8 hours of clinical practice under the direct supervision of an instructor. The class consists of instruction in basic review of body systems and medication effect on each system; medical terminology; infection control; and medication classifications.

An individual must successfully complete a final written examination and a minimum two-hour final practicum exam before a certificate can be issued and that individual’s name placed on the Missouri State Certified Medication Technician (CMT) Registry.

The full tuition payment is due when registering. Tuition does not include the cost of the certification fee.

TABE Test

Applicants to the CMT class must pass the vocabulary and reading comprehension tests of Form 9-Level D of the test of Adult Basic Education (TABE) with a score of 8.9 or higher and the math concepts and application tests with a score of 7.0 or higher. (See schedule for times and dates.)
HEALTH CAREERS

CMT Challenge

A student may become a CMT by successfully challenging the CMT examination. To challenge the CMT examination, students must have been a CNA for at least six months and have a permission letter from the Department of Health and Senior Services. To obtain your permission letter call the Department of Health and Senior Services at (573) 522-6203. We will then arrange a CMT examination for you with a certified CMT instructor.

The full tuition payment is due two weeks prior to the test date. Tuition does not include the cost of the certification fee.

Insulin Administration

Course Length: 12 hours

Prerequisite: Current CMT or Level One Medication Aide from DHSS

The Insulin Administration training program prepares Certified Medication Technicians (CMTs) to administer insulin in a skilled or intermediate care facility; or medication aides to administer insulin in a residential care facility (RCF) or assisted living facility (ACF). The program is designed to present information on diabetes as it relates to symptoms and implications of proper or improper treatment and to teach skills in insulin administration in order to qualify students to perform this procedure in long term care facilities in Missouri.

The curriculum content includes procedures and instruction in diabetes and its treatment and complications; types of insulin; techniques of insulin administration; and methods of monitoring blood sugar levels.

A student shall not administer insulin without the instructor present until he/she has successfully completed the course.

The full tuition payment is due when registering. Tuition does not include the cost of the certification fee.

For questions or additional information for the CNA, CMT or the Insulin Administration programs please call (314) 989-7500.
PRACTICAL NURSING

Applied Technology Services offers a one year program to prepare you for a career as a Licensed Practical Nurse.

Fully approved by the Missouri State Board of Nursing, this program will prepare you to take the state examination to become a Licensed Practical Nurse (LPN). A licensed practical nurse works under the supervision of a registered nurse and assists in the planning, implementation, assessment, and evaluation of patient care.

Applicants to our Practical Nursing Program must take a pre-entrance examination and hold a high school diploma or GED. Admission to the program is competitive. Successful applicants are selected on the basis of test scores and other admission criteria.

Class Locations

The Metropolitan Education & Training Center
6347 Plymouth Road
Wellston, MO 63133

Please call (314) 746-0788

South Tech
12721 West Watson Road
Sunset Hills, MO 63127

Please call (314) 989-7570

Great teachers, affordable tuition, and a commitment to excellence.

Joseph R. - PN Program Graduate

The instructors here were amazing and made us the wonderful nurses we are today.

Jessica M. - PN Program Graduate
Students who complete Auto Collision Repair Technology I, II, III, and IV or Auto Collision Paint Technology I, II, III, and IV will be ready for entry level employment in the auto body repair industry. These courses are based on the instructional standards developed by the ASE (auto service excellence) and I-CAR (the auto collision repair industry training program).

Auto Collision Repair Technology I

**Prerequisite:** None  
**Course length:** 48 hours

Students learn about the career opportunities in auto body repair, vehicle construction, and how to use the power and hand tools used in the trade. General safety, the safe use of chemicals, and the legal and regulatory requirements that apply to auto body repair are also covered. Students will also learn to diagnose and analyze vehicle damage and write a damage report.

Auto Collision Repair Technology II

**Prerequisite:** Auto Collision Repair Technology I  
**Course length:** 48 hours

Students learn the auto body MIG welding process, the kinds of welds required, and the welding techniques necessary to repair vehicles to industry standards. Upon successful completion of this course students will be prepared to pass the I-CAR welding test. Students will also learn metal cutting techniques using both oxyacetylene and plasma equipment.

Auto Collision Repair Technology III

**Prerequisite:** Auto Collision Repair Technology II  
**Course Length:** 48 hours

Students learn to remove and replace welded and bolted panels, finish metal, prepare metal for body fillers, and mix and apply body fillers. Students also learn to repair and replace plastic body components, interior components, and auto glass.

Auto Collision Repair Technology IV

**Prerequisite:** Auto Collision Repair Technology III  
**Course length:** 48 hours

Students learn to analyze, diagnose, and perform structural repairs on unibody and full frame vehicles as well as analyze, diagnose, remove, and replace damaged mechanical and suspension components.
Auto Collision Paint Technology I

Prerequisite: None  
Course Length: 48 hours

Students learn the regulations governing the auto body repair industry, safe shop practices, protective clothing requirements, and chemical safety. Students also learn how to use finishing and paint equipment safely and effectively.

Auto Collision Paint Technology II

Prerequisite: Auto Collision Repair Technology I  
Course Length: 48 hours

Students learn to prepare surfaces for primers, primer surfacers, and primer sealers as well as identify and apply primers and primer surfacers. Students also learn how to mask a vehicle for different painting applications.

Auto Collision Paint Technology III

Prerequisite: Auto Collision Repair Technology II  
Course Length: 48 hours

Students learn how to find vehicle paint codes and look them up in a database. Students also learn how to mix paint and apply both single and multi-stage paints.

Auto Collision Paint Technology IV

Prerequisite: Auto Collision Repair Technology III  
Course Length: 48 hours

Students learn how to repair painted surfaces, blend paint, and match color. Students also learn how to buff and detail a painted vehicle and remove and apply stripes and details.

Auto Repair and Maintenance I

Prerequisite: None  
Course Length: 72 hours

The Automotive Technology program uses a variety of tools and equipment to diagnose, services, and repair automobiles. Students will be able to “do it yourself” or talk knowledgeably to your mechanic about what needs (and does not need) to be done.

Auto Repair and Maintenance II

Prerequisite: Auto Repair and Maintenance I  
Course Length: 72 hours

This course emphasizes a systematic approach to troubleshooting the various systems that make up an automobile and repairing those systems.
CARPENTRY PROGRAM

CERTIFICATE OF TRAINING

Complete Carpentry I, Carpentry II, Carpentry III, and Carpentry IV

Carpentry I - Framing

Prerequisite: None
Course Length: 72 hours

Learn the basics of carpentry and the safe use of hand and power tools while learning how to frame up a building and use a framing square to layout and construct a roof system.

Carpentry II – Exterior Finish and Trim

Prerequisite: Carpentry I
Course Length: 72 hours

Learn how to apply a shingle roof, install doors and windows, siding, and exterior trim.

Carpentry III – Maintenance Carpentry

Prerequisite: Carpentry II
Course Length: 72 hours

Job site safety using ladders, scaffolding, and platforms is stressed in this advanced course. The repair and placement of locksets, door closers, vinyl siding, drywall, resilient flooring, and plastic laminate is also covered. Students learn to install drop ceiling, set up foundation forms, install steel door and window frames, and use metal framing components. Using insulation for thermal efficiency and sound control is also covered.

Carpentry IV – Finish Carpentry

Prerequisite: Carpentry III
Course Length: 72 hours

Students learn to use shop tools; table saw, jointer, band saw, router, router table, dovetail jig, and mitre saw to build simple cabinets and repair cabinet doors and drawers. Cabinet installation is covered along with wood finishing and installing interior trim.
General Building Maintenance I

*Prerequisite: None*

*Course Length: 72 hours*

Learn the basics of plumbing, electrical wiring, and carpentry as they relate to the repair and maintenance of residential structures. This is a great course for homeowners, rental property owners and managers, and custodial and maintenance workers.

General Building Maintenance II

*Prerequisite: General Building Maintenance I*

*Course Length: 72 hours*

More advanced instruction in maintenance plumbing, carpentry, and electrical wiring.

PLUMBING

Plumbing I, II, and III

*Prerequisite: None*

*Course Length: 72 hours per course*

Tools, materials, fittings, and practices are shown and discussed. Designing pipe system layouts, proper venting, installing, testing, and connecting plumbing systems is covered for both residential and commercial applications. Cost estimating and code requirements are also covered.

BLUEPRINT READING

Blueprint Reading (Construction Trades)

*Prerequisite: None*

*Course Length: 36 hours*

Reading the architectural blueprints used in residential and light commercial construction is explained in detail. Learn to read and understand the plot plan, foundation plan, floor and framing plan, and steel, electrical and HVAC-R drawings included in a set of architectural blueprints. Basic material estimating is also covered.
**Electrical Theory I – DC Theory**

*Prerequisite: None*

*Course Length: 90 hours*

Beginning with the theories used to explain electricity, this course introduces the student to Ohm’s Law and Kirchhoff’s Laws on voltage and current. The student will learn DC electrical theory circuits and equivalent circuit progression. Resistors, voltage and current dividers, direct current meters, network theorems, conductors and insulators, and batteries are also covered. Classroom instruction and demonstration are used to present and thoroughly explain the material.

**Electrical Theory II – AC Theory**

*Prerequisite: Electrical Theory I*

*Course Length: 90 hours*

This course covers magnetism, a comparison of AC and DC generation, capacitive and inductive reactance, Ohm’s AC Law and the AC applications of Kirchhoff’s Laws. The phase relations of AC circuits and power in AC circuits are also covered along with transformers and AC generators. The student is introduced to three phase power, solid state devices, digital logic, and integrated circuits. Classroom instruction and demonstration are used to present and thoroughly explain the material.

**Residential Wiring**

*Prerequisite: Electrical Theory I & II*

*Course Length: 72 hours*

Learn to read electrical blueprints and install residential wiring, electrical equipment and devices in compliance with the 2008 National Electric Code. Students use Ohm’s Law to calculate electrical loads, wire size, and circuit protection requirements. Using wiring boards, students learn to install and troubleshoot feeder and branch circuits including those with 3-way and 4-way switches. Sizing an entry service and basic conduit bending is also covered.
ELECTRICAL PROGRAM

Industrial Wiring

Prerequisite: Electrical Theory I & II, Commercial Wiring
Course Length: 90 hours

Learn to layout and construct industrial wiring systems in compliance with the 2008 National Electrical Code. Subjects covered include interpreting drawings and specs, the unit substation, feeder bus systems, panel boards, trolley bus ways, using wiring tables and calculating conductor sizes, signaling equipment, system protection, lighting protection, site lighting, PLC’s, and hazardous locations. A working knowledge of right angle trigonometry is helpful but not required.

Industrial Troubleshooting

Prerequisite: Electrical Theory I & II
Course Length: 72 hours

Learn to use a systematic and logical approach to troubleshooting complex electrical control circuits. This course is designed for industrial electricians, maintenance mechanics, and equipment installers.

Commercial Wiring

Prerequisite: Electrical Theory I & II
Course Length: 90 hours

Learn to layout and construct commercial wiring systems in compliance with the 2008 National Electrical Code. Installation procedures, understanding plans and specifications, and calculating loads are covered. Subjects include branch and feeder circuits, appliance circuits, light fixtures, panel boards, the electric services, emergency power systems, overload protection, short circuit calculations, low voltage lighting, and the cooling system. A working knowledge of basic algebra is helpful but not required.
ELECTRICAL PROGRAM

National Electric Code

Prerequisite: Electrical Theory I & II  
Course Length: 42 hours

This clear and systematic explanation of the Code is the quickest and easiest way to become familiar with this important document. Students taking this course need to have a good working knowledge of electricity in order to gain the greatest possible benefit from the material covered.

Designing Electrical Systems

Prerequisite: National Electric Code  
Course Length: 72 hours

Based on the current National Electric Code, this course covers residential, commercial, and industrial electrical design, hazardous locations, sizing motors and controls, correct wiring methods and materials, grounding, and selecting the correct service. Anyone preparing to take the Electrician’s License Exam (Block Test) should take this course.

INDEPENDENT ELECTRICAL CONTRACTORS PROGRAM (IEC)

A four year electrical apprenticeship program is offered through the Independent Electrical Contractors of Greater St. Louis (IEC). People enrolled in this program must complete 152 hours of classroom instruction and 2000 hours of on-the-job training each year for four years. People successfully completing this program which is approved by the Department of Labor’s Bureau of Apprenticeship and Training are classified as journeymen electricians. Enrollment in the IEC Apprenticeship Program is handled by the Independent Electrical Contractors Association.

Once you are enrolled in the apprenticeship program, the IEC will enroll you in class at South Tech.

These 76 hour courses begin in August and meet one night a week from 6:00pm-10:00pm.

CONTACT INFORMATION FOR THE INDEPENDENT ELECTRICAL CONTRACTORS PROGRAM

IEC  
12704 Pennridge Drive  
Bridgeton, MO 63044  
Phone: (314) 739-4650
HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION (HVAC-R)

CERTIFICATE OF TRAINING

Complete HVAC-R I, HVAC-R II, HVAC-R III, and HVAC-R IV

HVAC-R I – Basic Refrigeration Theory

Prerequisite: None
Course Length: 90 hours

Students learn refrigeration fundamentals, thermodynamic laws and principles of the refrigeration cycle as this is the heart of the industry. Students will also learn and practice the industry standards for cutting, flaring, swaging, and soldering copper tubing. Students will be able to safely install refrigeration service gauges, read system pressures, and remove gauges from working systems. Students will also practice procedures for pressure checking systems, evacuating, and charging systems. Students must provide their own basic hand tools.

HVAC-R II – Basic Electrical Theory

Prerequisite: None
Course Length: 90 hours

Students learn the basic electrical theory as it applies to the HVAC-R industry. An understanding of electrical motor operation will allow students to work on complete air conditioning systems. Students will also learn to read electrical schematics and ladder diagrams. Emphasis on building electrical circuits, installing electrical components, and troubleshooting working systems will also be taught. Students must provide their own basic hand tools.

HVAC-R III – Home Heating and Cooling

Prerequisite: HVAC-R I and II
Course Length: 90 hours

Students will learn the principles of combustion for gas and oil as used in home and light commercial systems. Electric furnaces will also be taught. In the shop, students will be able to work “total” heating and cooling systems. Strong emphasis on electrical as it relates to these systems will be presented on actual equipment and interactive computer programs. Students must provide their own basic tools.

HVAC-R IV – Commercial Refrigeration

Prerequisite: HVAC-R I and II
Course Length: 90 hours

Students will work with systems and accessories to accomplish a deeper understanding of the refrigeration cycle. With the aid of interactive computer programs, students will be able to read single and three phase commercial electrical schematics, troubleshoot them, and apply these principles in the shop. Installation problems and trouble-shooting controls and systems are also covered.

EPA Review and Exam

Prerequisite: HVAC-R I or higher
Course Length: 8 hour

Students will review information and practice procedures to prepare for the EPA examination. The exam will be given during the second night of class. Course cost includes exam fee.
Machine Shop I

Prerequisite: None
Course Length: 72 hours

Learn how to set up and operate an engine lathe, take precision measurements with the six inch scale, micrometer, and Vernier caliper, grind tool bits, cut threads, turn to tolerances, and knurl by completing a series of hands-on projects. Shop safety is stressed throughout the course.

Machine Shop II

Prerequisite: Machine Shop I
Course Length: 72 hours

Learn advanced engine lathe techniques and the basics of setting up and operating the vertical mill. Through a series of projects you will learn how to cut single point threads, use thread wires, and drill and tap. Shop safety is stressed throughout the course.

Machine Shop III

Prerequisite: Machine Shop II
Course Length: 72 hours

Through a series of hands-on projects, the student will learn advanced vertical mill operations and the basics of the horizontal mill. Feeds and speeds for a variety of materials, basics of surface grinding, interpreting shop blueprints, and shop safety are also covered.

Machine Shop IV

Prerequisite: Machine Shop III
Course Length: 72 hours

By completing a series of advanced projects, the student will develop and refine the skills learned in I, II, and III. Additionally, basic CNC programming, linear and circular interpolation, milling and drilling, lathe programming, turning, boring and threading, advanced blueprint reading and precision measurements are covered along with math principles required to accurately set up machines. Shop safety is stressed throughout the course.
**TOOL AND DIE PROGRAM**

**CERTIFICATE OF TRAINING**


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**Tool and Die I**

*Prerequisite: None  
Course Length: 72 hours*

Learn to use the Machinery’s Handbook and Machinist’s Ready Reference. Reading the tables and charts, a review of basic mathematics, blueprint reading, measuring systems, and machine tool technology are also covered.

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**Tool and Die II**

*Prerequisite: Tool and Die I  
Course Length: 72 hours*

Learning to use the Machinery’s Handbook continues. The use of trigonometric functions as they relate to blueprints, safety, measuring devices, and additional types of equipment are also covered.

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**Tool and Die III**

*Prerequisite: Tool and Die II  
Course Length: 72 hours*

Advanced application of trigonometry to machine operations and blueprints using tables from the Machinery’s Handbook is covered. The physical and chemical properties of various metals and abrasives are also covered.

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**Tool and Die IV**

*Prerequisite: Tool and Die III  
Course Length: 72 hours*

The basic techniques of die design and construction including forming and cutting operations, die components, and stock strip layout methods are covered.
We offer a variety of welding courses which are taught in our well equipped welding shops by highly skilled and experienced instructors. If you have specialized training needs, we can tailor our welding instruction to meet them.

**Arc Welding I**

*Prerequisite: None*

*Course Length: 72 hours*

Learn to weld beads in the flat and horizontal position on mild steel plate using a hand held electrode in this introductory course. Welding safety, electrode selection and use, and reading welding symbols and blueprints are also covered.

**Arc Welding II**

*Prerequisite: Arc Welding I*

*Course Length: 72 hours*

Make vertical and overhead welds on mild steel plate using a hand held electrode. Learn welds in the 1F, 2F, 3F, and 4F positions. Welds are examined for strength, penetration, and uniformity.

**Arc Welding III**

*Prerequisite: Arc Welding II*

*Course Length: 72 hours*

Make 100% penetration with 6010 drop through and 7018 filler and cap in all positions. Welds are examined for strength, penetration, and uniformity.

**Oxyacetylene Welding**

*Prerequisite: None*

*Course Length: 72 hours*

Learn to set up and operate manual feed gas welding equipment correctly and safely. Reading gas welding symbols and blueprints, welding mild steel in all positions, braising, cast iron braising, and flame cutting mild steel are covered.
WELDING PROGRAM

CERTIFICATE OF TRAINING
Complete Pipe Welding I, Pipe Welding II, and Pipe Welding III

Pipe Welding I

Prerequisite: None
Course Length: 72 hours

Students spend the first 30 hours learning edge preparation and practicing welds on mild steel plate. The remaining time is spent welding mild steel schedule 40 pipe in the 1G and 2G position. Tuition does not include the cost of pipe.

Pipe Welding II

Prerequisite: Pipe Welding I
Course Length: 72 hours

Learn to weld schedule 40 mild steel pipe in the following positions: 2G horizontal fixed, 5G – flat – vertical – overhead fixed, and 6G – pipe fixed at 45 degrees. Tuition does not include the cost of pipe.

Pipe Welding III

Prerequisite: Pipe Welding II
Course Length: 72 hours

Students weld schedule 40 mild steel pipe in all positions and bend-test welds. Procedures for the safe fabrication of certified welds are taught. Tuition does not include the cost of pipe.

Metal Inert Gas (MIG) Welding I

Prerequisite: None
Course Length: 36 hours

Learn to set up and operate a MIG wire feed welder. Students are instructed on mild steel. Students who wish to concentrate on stainless steel will have to pay an additional $100 for materials. More than 36 hours of instruction is required to learn MIG welding on more than one metal.

Metal Inert Gas (MIG) Welding II

Prerequisite: MIG Welding I
Course Length: 36 hours

Continue skill development in MIG welding using various metals and positions.
# WELDING PROGRAM

**Tungsten Inert Gas (TIG) Welding I**

*Prerequisite: None  
Course Length: 36 hours*

Learn to set up and operate TIG welding equipment. Students may select instruction on either stainless steel or aluminum. Students who select stainless steel will have to pay an additional $100 for materials. Thirty-six hours of instruction is required to learn TIG welding on each metal.

**Tungsten Inert Gas (TIG) Welding II**

*Prerequisite: TIG Welding I  
Course Length: 36 hours*

Continue skill development in TIG welding using various metals and positions.

**Metal Inert Gas (MIG) Pipe Welding I**

*Prerequisite: None  
Course Length: 36 hours*

Learn to weld schedule 40 mild steel pipe in a variety of positions. *Tuition does not include the cost of pipe.*

**Metal Inert Gas (MIG) Pipe Welding II**

*Prerequisite: MIG Pipe Welding I  
Course Length: 36 hours*

Continue skill development in MIG pipe welding using various metals and positions. *Tuition does not include the cost of the pipe.*

**Tungsten Inert Gas (TIG) Pipe Welding I**

*Prerequisite: None  
Course Length: 36 hours*

Learn to weld schedule 5 and schedule 40 steel, aluminum, or stainless steel pipe in a variety of positions. *Tuition does not include the cost of pipe.*

**Tungsten Inert Gas (TIG) Pipe Welding II**

*Prerequisite: TIG Pipe Welding I  
Course Length: 36 hours*

Continue skill development in TIG pipe welding using various metals and positions. *Tuition does not include the cost of pipe.*
REGISTRATION FORM

Application

Please Print Clearly

There are two ways to register:

1. By check or money order: Complete this application and mail it with a check or money order made out to SSD for the full tuition. We will mail you a receipt.

2. Credit Card: Complete this application and provide your VISA, Master Card, or Discover card information. We will mail you a receipt.

Name: ___________________________________________ Soc. Sec. #: _______ - ___ - _______
   (Last, First, Middle)
Address: __________________________________________
          (Number and Street)                           (City, State, Zip Code)
Home Phone: ___________ Cell Phone: _______________ Birth Date: _____ / ____ / _____
Email Address: __________________________________________

ETHNICITY
Race/Ethnicity information is optional. Information you provide will not be used in a discriminatory manner.

Are you Hispanic or Latino?  [ ] Yes  [ ] No (country of family’s origin______________________)

How would you describe your racial background? (select one or more of the following categories):
[ ] Asian (country of family’s origin______________________)
[ ] Native Hawaiian or Other Pacific Islander
[ ] Black or African American
[ ] White
[ ] American Indian or Alaska Native (enrolled_________)
   Tribal affiliation __________________________

Gender:  ____Male       ____Female

Please check the box indicating the location you would like to attend (make sure the location offers the course):

[ ] North Tech   [ ] South Tech   [ ] MET Center

List the courses you would like to attend below:

Course      Days & Time   Tuition
__________________________________ _________ __________________________ _______________
__________________________________ _________ __________________________ _______________

How did you hear of our program? ____________________________________________________________

If you would like us to charge your tuition to your credit card, please provide the following information:

[ ] Master Card   [ ] Visa   [ ] Discover

Card Number: ___________________________________ Expiration Date: ______/_______

Please place this form in an envelope with your payment and mail it to:

South Tech - Adult Education
12721 West Watson Road
Sunset Hills MO 63127
Providing a valuable learning experience for life-long success