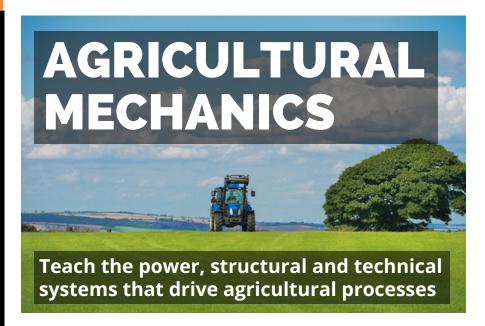


QUALITY CTE ADDRESSES THE GOALS OF COLLEGE AND CAREER READINESS. IT NOT ONLY PREPARES STUDENTS FOR THE FUTURE, BUT EXCITES THEM ABOUT ITS POSSIBILITIES.

FIND THE RIGHT TECHNOLOGIES AND EQUIPMENT TO PROVIDE WORKPLACE EXPERIENCES AND TEACH VALUABLE EMPLOYABILITY SKILLS FOR JOBS IN FIELDS LIKE AGRISCIENCE, MANUFACTURING, AUTOMOTIVE TECHNOLOGY, AND MORE.



Agricultural mechanics is a key component of strong, relevant agriscience programs that guide students toward prominent STEM jobs.

Give students the opportunity to apply physical science principles to their studies with an agricultural mechanics career track that covers agricultural equipment, power systems, alternative fuel sources and precision technology, as well as woodworking, metalworking, welding and project planning for agricultural structures.

SHOW HOW TO CONSTRUCT AND REPAIR EQUIPMENT, BUILDINGS AND FACILITIES BY FOLLOWING ARCHITECTURAL AND MECHANICAL PLANS

Welding Booths, Welding Tables and Cutting Tables

Help students learn to construct and repair metal structures and equipment using heavy gauge steel welding booths and tables available in a variety of sizes and configurations and meet most installation requirements.

Greene Manufacturing Inc.'s enclosed bottom cutting tables feature a clean out door and exhaust port with manual damper and are designed to connect to a central exhaust system.

Augmented Reality Welding Trainer



Without investing in the equipment, consumables and traditional welding facilities, you can train several welders simultaneously

with a Miller trainer that combines real objects with virtual computer-generated images for simulated welding training.

→ CNC Plasma Systems



Utilize easy-to-use, professional grade CNC plasma tables from Arclight equipped with CNC software, torch height control, and a

water table so that students can hit the ground running in a safe learning environment.

DEMONSTRATE MECHANICAL EQUIPMENT AND POWER SYSTEMS

Engine Rotation Stands



This heavy duty engine build/rotation stand from Greene Manufacturing Inc. helps you teach how to analyze, troubleshoot and repair internal combustion

engines while covering the concepts of steering, suspension, traction and vehicle performance.

TEACH HYDRAULIC AND PNEUMATIC SYSTEMS SERVICE AND REPAIR

Basic Hydraulics Training Systems



Introduce the fundamental hydraulic principles, such as pressure and flow, while simultaneously teaching industry-relevant hydraulic skills.

Portable Hydraulics Training Systems



This learning system allows learners to study and practice how to read a pressure gauge, as well as liquid level and temperature in the reservoir, connecting hydraulic circuits, operating a bi-directional hydraulic motor, converting between absolute and gauge pressure, and connecting and adjusting the pressure setting of a pressure relief valve (PRV).

→ Metal Cutting CNC Router



Whether teaching to construct with wood or metal, the Denford Compact 1000 Pro is ideal for cutting a range of resistant materials

such as hard and soft wood, plastic, modelling foam, acrylic and non-ferrous metals. This compact metal cutting 3-axis CNC router is totally enclosed making it safe for student use.

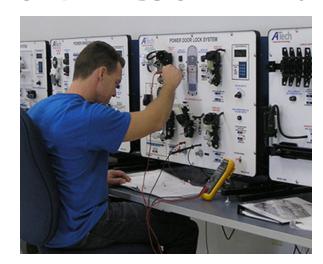
AUTOMOTIVE TECHNOLOGY

Prepare students for industry standards and market trends

Automotive programs are up against new challenges, like shifting to the new NATEF model for automobile standards or introducing students to the newest technologies and trends in the automotive market.

Augment your training program with training systems that cover the eight NATEF ASE technician areas (Engine Repair, Automatic Trans/Transaxle, Manual Drive Train and Axles, Suspension and Steering, Brakes, Engine Repair, Electrical Systems and Engine Performance) -- all while also covering core concepts related to hybrid technologies and STEM.

OFFER HANDS-ON TRAINING WITH ATECH



ATech Automotive Trainers

ATech Training, Inc. trainers feature advanced automotive engineering technology with real-world faults, emphasizing diagnostic troubleshooting.. These hands-on trainers cover:

- Alternative Energy
- Cutaways
- Medium / Heavy Duty Truck
- Engine Repair
- Manual Drive Train & Axles
- Automatic Transmission & Transaxle
- Heating & Air Conditioning
- Brakes
- Suspension & Steering
- Engine Performance
- Electrical / Electronic Systems



ALIGN YOUR PROGRAM WITH THE LATEST MLR, AST AND MAST NATEF STANDARDS WITH LJ CREATE TRAINERS + CURRICULUM

Sectioned Components

Exposing the inner workings of components provides a safe and accessible way of viewing how complex systems are constructed – key components are color-coded for easy identification. These cut-aways are fitted with hand cranks to enable students and teachers to see how components interact with each other to create a fully working system.

Autotronics Panel Trainers

These innovative computer-linked panel trainers simulate a range of complex vehicle operations that can be used in a safe classroom environment. These trainers are lightweight, freestanding and are a great resource for front-of-class teaching and group activities.

Autotrotronics Boards

These unique autotronics boards provide students with a practical approach to theoretical learning. Diagnostic and fault finding skills can be developed from the safety of the classroom with these desktop systems... it's just like the real thing!

System and Component Rigs

Many automotive technology concepts are best taught using fully functioning vehicle component rigs, where an instructor can show students a wide variety of diagnostic and maintenance techniques. Students are also able to perform tasks on systems without the need for a complete vehicle, which in some cases means practical tasks can also take place in the classroom



Medium/Heavy Truck Rigs

Just like LJ Create's light vehicle system and component rigs but bigger, these medium/heavy truck rigs are fitted with casters to enable transportation around the workshop.



Whether you teach cabinetmaking and woodworking, or residential and commercial construction, students need a solid understanding of hand tools, portable power tools and other equipment common in the carpentry profession.

Adequate preparation for future careers requires a blend of classroom theory and hands-on experience that covers skills, like surveying, safety, rough and finished carpentry, material estimation, and tool management and use.

BUILD REAL-WORLD PROJECTS

→ Large format CNC routers



Available in the following dimensions:

- 24" x 24"
- 48" x 24"
- 48" x 48"
- 48" x 96"
- 60" x 120"

The Forest Scientific HS CNC Router features closed loop hybrid servo technology for reliable rapid speeds in excess of 500 IPM.

COVER RESIDENTIAL AND INDUSTRIAL WIRING

(a) Industrial Wiring Training Systems



Amatrol's Basic Electrical Machines Learning System teaches electric machines commonly found in industrial, commercial, and residential applications: single phase AC motors, three-phase AC electric motors, and DC electric motors.

→ Table Saws



Exact rip cuts as well as precise cross, mitre and format cuts with the smooth operation of format sliding table saws from Felder.





This planer's 3 knife quick-change, self-setting cutterblock enables planer knife changes in seconds for a finish that pleases the most critical eye.

Bandsaws



Standard features include saw-blade guides, saw blade tension indicator, tilting machine table and more – a comprehensive package at a great price!



Dust Extractors

Felder offers an array of air filters, clean air extractors and filtration systems for efficient chip extraction and air cleaning.

ORGANIZE YOUR SHOP AND CLASSROOM

○ Cabinets, shelving, and racking to organize and secure



Steel, all-welded cabinets and shelving from Greene Manufacturing Inc. are a sturdy way to store tools and equipment. Cantilever

storage racks provide the perfect storage solution for bar stock, piping and lumber.



Consider a modular shelving system that handles the storage of large bulk items, small parts, tooling, and supplies all in one unit.

This Greene Manufacturing Inc. system is available in multiple drawer and shelf configurations.



Whether you need vertical steel or lumber racks or side loading plywood sheet racks, there are a number of space-saving storage

solutions available from Greene Manufacturing Inc. to meet the needs of your shop or lab.

COMPUTER AIDED DESIGN & DRAFTING (CADD)

Help students master mechanical, civil, and architectural drafting skills

Selecting the right CAD package for your school can be overwhelming. There are dozens of different software packages available at a range of different prices – some of which are advertised as "free". "Free" software, however, may end up costing your program more in the long run.

Before you invest, be sure you look into support, training, industry certifications and what they cost per student, and when your "free" contract will expire. Taking all of these factors into consideration will give you a much clearer picture of what CAD package is the best fit for your program.

ARM STUDENTS WITH INDUSTRY RECOGNIZED SOFTWARE CERTIFICATION

→ 3D CAD Software



In today's competitive job market, CAD professionals need every advantage they can get.

SOLIDWORKS is the industry standard for CAD drafting and design. The software provides all the resources you need to adequately prepare your students for and successfully administer the certification exam.

Moreover, SOLIDWORKS features key capabilities ideal for high school programs, like simulation for virtual analysis and testing as well as sustainability testing for identifying comparable materials with a smaller environmental footprint.

SOLIDWORKS also features an active user community and variety of online resources and tutorials that help educators teach fundamental design and modeling concepts.

OUTFIT DRAFTING LABS WITH DEPENDABLE FURNITURE

Drafting Work Stations



This two person drafting station from Greene Manufacturing, Inc.comes with dual 10 position adjustable drafting surfaces. A center computer area will accommodate dual CAD stations. The wire management tray runs the full length of the work station.

GMI offers varying configurations of several different types of drafting work stations depending on your needs.

Drafting Tables



Greene Manufacturing, Inc. offers a variety of traditional style drafting stations in several configurations.

Select from two-in-one space saving options, modular workstations with large corner work areas, or drafting combination stations with adjustable drafting surfaces.

BRING TECHNICAL DRAWINGS TO LIFE WITH 21ST CENTURY FABRICATION TECHNOLOGIES

→ 3D Printers



The Stratasys F123 Series combines powerful FDM technology with design-to-print GrabCAD software so you can produce highly accurate reliable prototypes, student projects, and

end-use parts in multiple materials. Easy to use, it includes remote print monitoring, a built-in camera, auto calibration, and more.

Laser Cutters



The Universal Laser VLS3.60 is a free-standing platform designed to be the ideal entry point into light-duty manufacturing.

Fully enclosed and safe for classroom use, it is a popular choice for educational architecture and drafting programs.

CNC Machines



The Denford Compact 1000 Pro is ideal for cutting a range of resistant materials such as hard and soft wood, plastic, modelling foam,

acrylic and non-ferrous metals. This compact metal cutting 3-axis CNC router is totally enclosed making it safe for student use.



HIGH QUALITY COSMETOLOGY WORKSPACE AND STORAGE SOLUTIONS

Amtek Company's consultants will design a custom cosmetology lab unique to your program's needs. Our lab equipment and furniture is sourced from Greene Manufacturing Inc., a leading provider of durable, reliable educational furniture.

From lab design and layout to installation, we'll help you offer a real-work environment where students can master their skills before entering the workforce.

Styling Chairs



Styling stations and chairs are available in multiple configurations and layouts to suit your project needs. Work with our consultants to create

a customized solution for your cosmetology program.

Hair Wash/Dryer Stations



Select from a wide variety of hair washing, drying and styling stations and accessories, including:

- Hair washing stations
- Back wash stations
- Hair dryer chairs
- Wig dryers, available as small or large cabinets

→ Facial Beds



This traditional facial bed has thick foam foot, seat and backrest cushions which are covered with a comfortable white PVC vinyl material for years of

durability. Its lightweight design provides all the comforts of a large bed but also provide complete flexibility. It features a face cut-out pillow and fully removable armrests.

Full Featured Styling Stations



Our unique styling stations feature several styles and configurations to choose from including inline, wall mounted, and back to back stations.

Power can drop into the station from above, or along the lower wire tunnel up from the floor.

Manicure Stations



Manicure stations and accessories are designed and manufactured to meet the needs of educational environments.

- Manicure station chairs
- Deluxe manicure stations
- Portable manicure stations
- Pedicurist stools
- lacuzzi pedicure spas

Reception areas



Choose from several types and styles of reception desks for your cosmetology reception area, including inline and curved desks.

All come standard with laminate and steel construction, storage drawers and a wire management systems with optional custom sizes and configurations.



Students should understand the electricians' and electronics technicians' role in any industry, from construction to HVAC, as well as the safety procedures and best practices that go along with the trade.

Amatrol's electrical training systems feature world-class online curriculum, skill assessment, and real-world components for an unmatched offering of skill-building possibilities. Many of these systems also offer fault troubleshooting training through Amatrol's FaultPro, the industry's premier electronic fault insertion product.

COVER PLCS FOR ELECTRONICS

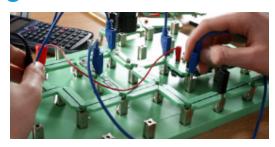
PLC Training



Teach the basics of how PLCs work with a training system from Amatrol that covers operating, programming and troubleshooting modern Allen-Bradley and Siemens PLC-controlled systems.

EXPLORE ELECTRONICS RELATED CAREERS

Matrix Locktronics



Locktronics is a range of products that simplifies the process of learning and teaching electricity and electronics. The core range consists of more than 200 electronic components (ANSI and DIN) mounted on rugged plastic carriers which are printed with the corresponding circuit symbol. Students use the carriers, in conjunction with a baseboard with interconnecting metal pillars to build up a working circuit, then use the worksheets provided to carry out experiments. All solutions are provided in sturdy storage solutions and with up to date curriculum always available online. Each kit is design to accommodate up to two students. A demo panel is also available.



EXAMINE ELECTRICAL THEORY AND SKILLS

Portable Electric Relay
 Control Learning System



Amatrol's Portable Electric Relay Control Learning System (990-EC1) covers concepts widely used in industrial, commercial, and residential applications to regulate electric motors and fluid power actuators. Electric relay control also forms the building block of other automation systems such as programmable controllers. This portable control circuit learning system brings customers flexibility and convenience when there's a need to use a trainer in multiple locations or where space is too small for a full-size trainer.

Portable AC/DC Electrical Learning System



Amatrol's Portable AC/DC Electrical Learning System (990-ACDC1) teaches the fundamentals of AC and DC electrical systems used for power and control in industrial, commercial, agricultural, and residential applications. The 990-ACDC1 offers industry-relevant skills including how to operate, install, design, and troubleshoot basic AC and DC electrical circuits for various applications. This portable AC/DC electrical learning system brings flexibility and convenience when there's a need to use a trainer in multiple locations or where space is too small for a full-size trainer.

Portable Electronic Sensors Learning System



Amatrol's Portable Electronic Sensors Learning System (990-SN1) is designed to teach the operation of electronic, noncontact sensors and their applications in industry, such as sensing movement, detecting metal from non-metal, and determining speed. Designed for situations when there's a need to use a trainer in multiple locations or where space is too small for a full-size trainer, the 990-SN1 is small and light enough to move with one hand, yet offers a depth and breadth of knowledge and skills that far exceeds its physical size.

ENGINEERING & ADVANCED MANUFACTURING

Create a dynamic learning environment

Develop an advanced manufacturing career pathway that allows students to learn skills that can be applied to college or help them directly enter the workforce. For high school CTE and dual-enrollment programs alike, the combination of mechatronics, robotics, instrumentation, fluid power, process control, automation and 3D engineering in a two-year program will give students a solid foundation in today's manufacturing technologies.

The creation of dedicated teaching and laboratory spaces will create a flexible learning environment where students have access all the software and hardware they need to acquire 21st century skills. Additional online learning components facilitate independent study that allows students to learn at their own pace.

AUTOMATED SYSTEMS FOR EMERGING MECHATRONICS PROGRAMS

Pegasus II Robotic Learning System



The Pegasus II Robotic Learning System teaches articulated arm servo robotics and their

industrial applications. With features like a powerful programming language, industrial controller, and high repeatability, it is ideal for teaching a wide variety of applications including: assembly, material handling, machine tending, gluing, and inspection.

Mechanical Drive Systems Trainer



Amatrol's Mechanical Drives Learning System covers the operation, installation,

performance analysis, and basic design of mechanical transmission systems using chains, v-belts, spur gears, bearings, and couplings. Learners will practice industry-relevant skills to prepare for real-world industrial applications in fields such as agriculture, automotive, mining, and more.

Process Control Trainers



Amatrol offers four major process control systems, each covering a different

process control application: level and flow, temperature, analytical, and pressure.
Amatrol also offers a variety of training options for related process control applications such as HART communication protocol, Foundation Fieldbus, and SCADA.

Electric MotorControl Trainers



Amatrol's Electric Motor Control Learning System covers electric relay control of AC electric motors f

ound in industrial, commercial, and residential applications. Learners study industry-relevant skills including how to operate, install, design, and troubleshoot AC electric motor control circuits for various applications.

Tabletop Mechatronics



Amatrol's Tabletop Mechatronics is a portable, durable, affordable learning system that forms a fully automated line to teach real-world mechatronics skills. A pick-and-place, gauging, and inventory station, all of which fit on a standard tabletop.

PLCs



Prepare students on the most widely used automatic products in the industry with PLC-controlled systems from Allen-Bradley and Siemens that teach operating, programming and troubleshooting skills.

PREPARE FOR A NEW WAVE OF ADVANCED MANUFACTURING TECH

3D Scanners



Build on students' understanding of CAD software with an introduction to reverse engineering. Use 3D scan data from the

Geomagic Capture Scanner to generate a CAD model from a physical object that has any kind of complex or freeform shape.

3D Printers



The Stratasys F123 Series combines powerful FDM technology with design-to-print GrabCAD software so you can produce highly accurate reliable prototypes, student projects, and end-use

parts in multiple materials. Easy to use, it includes remote print monitoring, a built-in camera, auto calibration, and more.

CNC Systems



Give students the opportunity to practice CNC G-code programming and editing, learn to operate mill components, controls

and tools, and follow the steps necessary to machine a part to programmed specifications. Teach computer-aided manufacturing (CAM) using the Denford VMC 1300.

GRAPHIC COMMUNICATION ARTS

Cover a full spectrum of relevant technologies, processes and procedures

Printing technologies have evolved, and students must learn modern digital printing processes in order to understand their current impact on society. While this includes offset lithography, digital, and screen printing processes, it can also include new fabrication technologies like 3D printing and laser etching.

3D scanning adds a layer of hands-on learning that allows students to visualize objects and learn how three-dimensional design is made possible.

ADD TEXTURE AND STYLE TO MAT BOARD, PAPER AND CARDSTOCK WITH LASER ENGRAVING

Desktop and Professional Laser Cutters



With a laser cutter, students can produce specialty die cuts and perform multiple processes in the same work area, including through-cutting, kiss-cutting, perforating and scoring. Students who focus on product marketing communications can create mock-ups,

packaging and P-O-P displays without dies. Universal Laser Systems scalable systems feature options for smaller and larger table sizes as well as laser wattage options for cutting materials of different thicknesses.

PRINT LARGE SCALE DESIGNS

Wide Format Color Printers



Create colorful decals, labels, banners, posters, vehicle and floor graphics, apparel decoration and just about any sign imaginable with the Roland VersaCAMM Wide Format Color Printer.

BRING GRAPHIC DESIGNS TO LIFE WITH THE MAGIC OF 3D PRINTING

(3) Affordable, Professional 3D Printers



With a massive build volume and the best price to performance ratio in the extra-large, professional 3D printer category, the MakerBot Replicator Z18 3D Printer solution is ideal for hands-on and technically adept users. Each printer is backed by a six-month warranty and includes a one-year MakerBot MakerCare® Protection Plan.

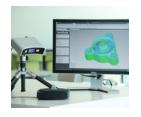
→ Reliable, Accurate 3D Printers



The Stratasys F123 Series combines powerful FDM technology with design-to-print GrabCAD software so you can produce highly accurate reliable prototypes, student projects, and end-use parts in multiple materials. Easy to use, it includes remote print monitoring, a built-in camera, auto calibration, and more.

GIVE FLATBED SCANNING A THIRD DIMENSION

→ High Quality 3D Scanning with Low Learning Curve

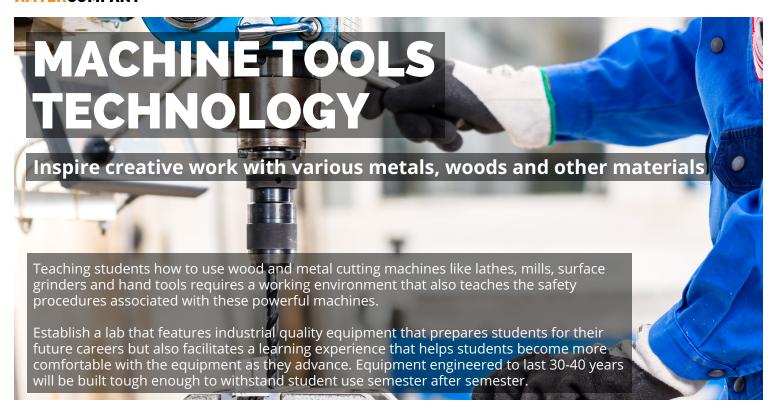


The Geomagic Capture 3D Scanner brings physical objects directly into CAD without students needing to learn a new software program. The scanner plugs directly into SOLIDWORKS or SpaceClaim CAD software so students can get started scanning immediately.

Handheld 3D Scanner with Color Capabilities



With its large field of view, the Creaform Go!SCAN 50 model is ideal for scanning medium to large objects quickly and effortlessly. It provides a very fast measurement rate and does not require manual data post-processing. You can even capture 3D data in full color.



TEACH THE FUNDAMENTALS OF MACHINING PROCESSES



Lathes

Clausing/Colchester variable speed, manual lathes are built to withstand rugged, heavy duty use as well as the precision required for educational facilities, giving students industry experience in a safe working environment.



Drill Presses

Clausing drill presses feature low/high variable speeds of 150-2000 RPM, variable speeds of 200-1300 RPM, and variable speeds of 300-2000 RPM.



(A) Mills

Clausing EVS CNC vertical knee mills boast a large range of CNC control options, are available with programmable spindle speeds, and feature manual operation with DRO, semi-automatic operation, or full 2 or 3 axes CNC operation.



Surface Grinders

Clausing offers a variety of precision manual, hydraulic and automatic surface grinders to not only train skilled surface grinder operators but also round out a students' broad learning experience with working with a variety of metals, including metal.

INTRODUCE THE NEW ERA OF PROTOTYPING AND FIXTURING

→ Reliable, Accurate 3D Printer



The Stratasys F123 Series combines powerful FDM technology with design-to-print GrabCAD software so you can produce highly accurate reliable prototypes, student projects, and end-use parts in multiple materials. Easy to use, it includes remote print monitoring, a built-in camera, auto calibration, and more.

UNCOVER THE MAGIC OF PRECISION METALWORKING

Welding Booths, Welding Tables and Cutting Tables



Heavy gauge steel welding booths and tables are available in a variety of sizes and configurations to meet most installation requirements.

Enclosed bottom cutting tables from Greene Manufacturing Inc. feature a clean out door and exhaust port with manual damper and

are designed to connect to a central exhaust system.

WELDING

Teach the fundamentals of welding in a safe environment

The two most significant factors of any high school welding program are ensuring student health and safety, and managing program size and budget.

When creating a state-of-the-art welding training program, it's important to establish a lab with appropriate ventilation that eliminates smoke and particulate buildup. This ensures a safer working environment so that students can focus on the task at hand – becoming skilled welders.

Want to expand your program but don't have the space? Augmented reality training is an option that allows students to practice the motion of welding before hopping into a welding both. This saves on consumables and resources while students become comfortable with their skills.

Students should leave your program with an understanding of manufacturing processes and systems common to careers in welding and related industries.



PRODUCE SKILLED INDIVIDUALS WHO MEET INDUSTRY'S DEMAND FOR QUALIFIED, CERTIFIED WELDERS



(A) Welding Booths, Welding Tables and Cutting Tables

Heavy gauge steel welding booths and tables are available in a variety of sizes and configurations to meet most installation requirements.

Enclosed bottom cutting tables from Greene Manufacturing Inc. feature a clean out door and exhaust port with manual damper and are designed to connect to a central exhaust system.

PREPARE STUDENTS FOR THEIR FIRST WELD ON A BUDGET

Augmented Reality Welding Trainer

Without investing in the equipment, consumables and facilities needed for traditional welding training, you can train several welders simultaneously with a trainer that combines real objects with virtual computer-generated images. With this Miller AugmentedArc trainer you will:



- Prepare students for their first weld by establishing a strong foundational knowledge before using real equipment
- Decrease the costs associate with consumables
- Reduce safety risks in the classroom

ESTABLISH A SAFE, SMOKE-FREE ENVIRONMENT

(a) Lab Design & Layout



Amtek consultants are available to help you design and layout a welding lab customized to your certificate program, including a complete fume extraction system that ensures a safe and efficient metal fabrication environment.

Your students will learn on industry standard equipment

while following industry standard safety method they will enter the job market as expert welding technicians.