

CENTER FOR ADVANCED
TRAINING & APPRENTICESHIPS

COURSE CATALOG

FY 2025



SOUTH TEXAS
COLLEGE

WELCOME

To the Center for Advanced Training & Apprenticeships

At the Center for Advanced Training & Apprenticeships (CATA), we are dedicated to transforming lives, strengthening communities, and empowering the workforce through fast-track, skills-driven training programs. Whether you're an individual seeking a new career, an experienced professional looking to upskill, or an employer aiming to strengthen your team, CATA provides accessible, high-quality workforce training tailored to meet the needs of our community and industries alike.

Why Choose CATA?

At CATA, we believe in building opportunities for everyone—from job seekers to career changers, from young learners to seasoned professionals, and from small businesses to large employers.

- **Career-Ready Training for Individuals:** Get the skills needed to secure a stable, well-paying job in high-demand industries.
- **Flexible & Hands-On Learning:** Gain real-world experience using industry tools, preparing you for success.
- **Support for Job Seekers & Career Changers:** We help connect participants with career counseling, job placement support, and upskilling opportunities.
- **Empowering Local Employers:** Our training is designed with businesses in mind, ensuring a strong, skilled workforce for the region.
- **Stronger Communities Through Education:** By investing in accessible workforce training, CATA helps create economic mobility and long-term prosperity for individuals and families.

Building Stronger Communities

CATA is committed to helping individuals thrive, supporting local businesses, and strengthening the economy. Through partnerships with workforce agencies, businesses, and educational institutions, we provide affordable and accessible training that leads to better jobs, career advancement, and stronger communities.

Join Us on Your Journey

Thank you for considering CATA as your workforce training and career development partner. Whether you're starting fresh, looking to advance, or growing your business, we have the right training to help you achieve your goals.

Sincerely,
The CATA Team



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1. GENERAL INFORMATION

1.1 Contact Information

For inquiries or assistance, please reach out to the Center for Advanced Training & Apprenticeships (CATA):

Main Office:

South Texas College
Technology Campus – Building E.
Center for Advanced Training & Apprenticeships

Address: 3900 W. Military Hwy, McAllen, TX 78503

Phone: 956-872-6197 or 956-872-2507

Email: cata@southtexascollege.edu

Website: <https://www.southtexascollege.edu/cata/>

Office Hours:

Monday to Thursday: 8:00AM – 6:00PM

Friday: 8:00AM – 12:00PM (Closed on Fridays during June, July, and August)

1.2 Location and Facilities

CATA training programs are offered at various locations equipped with state-of-the-art facilities to ensure hands-on, real-world learning experiences.

Primary Locations

- **STC Technology Campus: 3900 W. Military Hwy, McAllen, TX 78503**
Offers labs and equipment for advanced manufacturing, welding, electrical, heating ventilation & air conditioning, construction, and robotics
- **STC Mid-Valley Campus: 400 N. Border, Weslaco, TX 78596**
Offers labs and equipment for welding and heating ventilation & air conditioning.
- **STC Starr County Campus: 142 FM 3167, Rio Grande City, TX 78582**
Offers labs and equipment for welding.
- **STC Pecan Campus: 3201 W. Pecan Blvd, McAllen, TX 78501**
Offers labs and equipment for information technologies.

For specific course locations, please contact our office.

1.3 How to Register for Courses

Step 1: Review the Course Catalog

- Explore our programs and select the course(s) that align with your career goals.

Step 2: Complete the Registration Form

- You can register in one of three ways:
 1. Visit Our Office: Complete the form in person at the Technology Campus - Building E.
 2. Register Online: Access the registration form through our website at <https://www.southtexascollege.edu/cata/open-enrollment.html>
 3. Use the Catalog Form: Complete the form located in Appendix C of this catalog and the instructions for submission.

Step 3: Submit Payment or Funding Documentation

- Ensure payment or funding arrangements are completed before the start date. Financial assistance may be available for eligible students/employers.

Step 4: Attend Orientation (if required)

- Some programs require an orientation session before classes begin. Details will be provided upon registration.

Need Assistance?

If you have any questions or need assistance with registration, please contact us at 956-872-6197, 956-872-2507, or email us at cata@southtexascollege.edu. You can also visit us at our Technology Campus.

1.4 General Policies and Guidelines

Attendance Policy

As a premier higher education institution, student attendance and participation are paramount to academic success. Regular and punctual attendance in class and laboratories is expected of all students. It is the student's responsibility to communicate with the faculty member concerning any absence as specified by the respective course syllabus.

- **Make-Up Work:** Students may be required to present evidence to support an absence, and make-up work will only be permitted as specified by the faculty.

- **Dropping a Course:** It is the responsibility of the student to formally drop a course if necessary; failure to do so may result in a "U" for the course.

Student Code of Conduct:

The Code of Student Conduct outlines South Texas College's expectations for students, promoting an environment that recognizes and supports the rights of all individuals. It provides guidance on acceptable behavior and defines actions considered inappropriate.

- For detailed information, refer to the [Student Code of Conduct](#) in the Student Handbook (pg. 58) or contact the Office of Student Rights and Responsibilities at 956-872-2180.

Grading Policy

Non-credit courses at CATA follow an "S/U" (Satisfactory/Unsatisfactory) grading policy:

- **Satisfactory (S):** Indicates the student has completed the course at a satisfactory level.
- **Unsatisfactory (U):** Indicates performance was below satisfactory standards.

Key Points About the S/U Grading System:

- **No Impact on GPA:** S/U grades are not calculated into a student's grade point average.
- **No Academic Credit:** Non-credit courses do not count toward degree requirements.
- **Purpose:** This system is ideal for professional development and skill-building courses where academic credit is not required.

Disability Services

CATA is committed to providing equal access to education for students with disabilities. Accommodations such as adaptive technology, extended testing times, and accessible facilities are available. For assistance, contact the [Student Accessibility Services](#) at 956-872-2173.

Health and Safety Policy

For courses requiring hands-on training or lab work, students must adhere to health and safety guidelines:

- Proper use of personal protective equipment (PPE).
- Compliance with safety protocols provided during the first-class session.

Tuition Payment Policy

Students are responsible for paying the full tuition cost of their course before the start date. Payments can be made using credit/debit cards, checks, or through an approved payment plan.

Financial Assistance:

In some cases, students may qualify for financial aid or grants. Limited funding is available based on eligibility for:

- Workforce development grants.
- Employer-sponsored training reimbursement programs.
- Scholarships or other financial aid initiatives.

For more information, contact our CATA team. All funding must be approved prior to course registration.

Technology Requirements

For online or hybrid courses, students are required to meet the following minimum technology specifications:

- A reliable internet connection.
- A laptop or desktop computer with an updated operating system.
- Software required for the course (details provided upon enrollment).

Refund and Cancellation Policy

CATA has established policies to ensure fair and transparent handling of refunds and cancellations for both students and employers. These policies help maintain operational efficiency and minimize disruptions to scheduled programs.

Refund Policy

- **100% Refund:** Provided prior to or on the business day before the first-class day.
- **No Refunds:** Issued on or after the first-class day.
- **Course Cancellations by CATA:** A 100% refund will be issued if the course is canceled by South Texas College.
- **Other Course Changes:** Refund requests due to course modifications will be reviewed on a case-by-case basis.

Cancellation Policy

CATA requires a minimum of **24 - 72 hours' notice** for cancellations or rescheduling of training requests or course enrollments. This policy applies to both students and employers.

- **For Employers:**

Employers sponsoring training must provide notice at least **72 hours prior** to the course start date.

- Failure to provide timely notice may result in:

- **Fee Responsibility:** a fee of 25% of the total course cost along with additional rescheduling fees.
- **For Students:**

Students must notify CATA at least **24 hours prior** to the course start date if withdrawing.

 - Failure to provide notice may result in the forfeiture of tuition, except for documented extenuating circumstances.

Why This Policy is Important

CATA invests significant time and resources into coordinating instructors, facilities, and approvals to deliver high-quality training. Timely cancellations and refund requests ensure the availability of resources for other participants and minimize disruptions.

How to Cancel or Request a Refund

To cancel a course or request a refund:

- **Employers:** Contact your assigned training specialist or email us at cata@southtexascollege.edu.
- **Students:** Notify our office at 956-872-6197, 956-872-2507, or email us at cata@southtexascollege.edu. Include course details and reason for cancellation.

2. PROGRAMS & PATHWAYS

2.1 Overview of Career Pathways

CATA offers a variety of career-focused training programs designed to meet the workforce needs of high-demand industries. These programs prepare individuals for careers through hands-on training, industry-recognized certifications, and apprenticeship opportunities. Whether you are entering the workforce or upskilling, our programs provide a clear pathway to success.

2.2 Areas of Study

Our programs are categorized into key areas of study to address industry demands and workforce needs:

- **Advanced Manufacturing Processes:**
Gain skills in modern manufacturing techniques, including CNC machining and production systems.
- **Animal Healthcare**
Explore careers in veterinary assistance and animal care with hands-on training and expert guidance.
- **Building Construction**
Learn essential skills such as blueprint reading, project planning, and construction management for the building industry.
- **Electrical & Electronic Systems**
Train in electrical wiring, troubleshooting, and working with advanced electronic and control systems.
- **Information Technologies**
Build expertise in IT support, cybersecurity, and emerging technologies to meet the needs of today's digital economy.
- **Logistics and Supply Chain**
Prepare for careers in supply chain management, transportation, and logistics with a focus on operational efficiency.
- **Operations & Organizational Management**
Leadership and management training designed to equip professionals with the skills to oversee teams and optimize operations.
- **Robotic Systems and Automation**
Develop skills in robotics programming, system integration, and maintenance of

automated systems. Gain hands-on experience in robotic systems to prepare for careers in advanced automation industries.

- **Welding Technologies**
Learn advanced welding techniques, safety protocols, and prepare for industry-recognized certifications.
- **Workplace Safety and Health**
Complete OSHA-compliant training and other safety certifications to ensure safer work environments.
- **Youth Camp Programs**
Introduce students to STEM careers, trades, and other high-demand industries through engaging, hands-on experiences.

2.3 Apprenticeship Programs

CATA specializes in apprenticeship training, which combines classroom instruction with paid on-the-job training. Apprenticeships are an excellent way to gain experience and earn nationally recognized certifications while preparing for in-demand careers.

Since 2018, South Texas College has been a registered apprenticeship sponsor, actively collaborating with industry partners to develop and gain approval for high-demand apprenticeship programs through the Department of Labor (DOL). This commitment ensures that our programs align with workforce needs and provide a valuable pathway to career success.

Apprenticeship Opportunities

Below are apprenticeship programs currently registered with the Department of Labor (DOL):

- Commercial Driver's License
- Computer Network Specialist
- Computer User Support Specialist
- Construction Superintendent
- Construction Technician
- Early Childhood Education Associate Teacher
- Heating & Air Conditioner Installer
- Hotel Associate
- Industrial Maintenance Mechanic
- Machinist
- Numerical Control Machinist Operator
- Paralegal Assistant
- Phlebotomy
- Professional Brewer
- Registered Nurse
- Tool Programmer Numerical
- Veterinary Technician

By partnering with local industries, South Texas College ensures that these programs not only meet the needs of employers but also empower apprentices with the skills and certifications required to succeed in their chosen fields.

For more details on a particular apprenticeship program, please contact our Apprenticeship Navigator – Christabel Jasso at cgalleg4@southtexascollege.edu or at 956-872-6307

2.4 Customized Workforce Training

CATA partners with businesses to design **tailored training programs** that address specific workforce challenges and skill gaps. These customized programs are developed in close collaboration with employers to ensure alignment with industry standards and organizational goals.

Key Features of Customized Training:

- **Employer-Specific Course Content:** Training programs are designed to meet the unique needs of each organization, with a focus on practical, job-related skills.
- **Flexible Delivery Options:** Courses can be delivered on-site, online, or at CATA's state-of-the-art facilities, with schedules that accommodate the demands of your business.
- **Subsidized Training Opportunities:** CATA can help businesses explore funding options to offset training costs, including workforce development grants and other financial assistance programs.

Benefits of Customized Training:

- Improve employee productivity and performance.
- Address skill gaps in critical areas.
- Increase employee satisfaction and retention.

For more information or to discuss your organization's training needs, contact us at cata@southtexascollege.edu

2.5 Industry-Recognized Certifications

CATA is proud to offer a range of industry-recognized certifications designed to enhance employability, validate technical skills, and meet the demands of today's competitive job market. These certifications serve as proof of expertise in specialized fields, making students and employees more valuable to their organizations and more marketable in their careers.

CATA partners with nationally recognized organizations to provide certifications across multiple industries, including advanced manufacturing, logistics, healthcare, IT, and automation. These certifications not only meet but exceed industry standards, ensuring graduates are equipped to succeed in high-demand fields.

Key Benefits of Certifications Offered by CATA:

- **Enhanced Employability:** Certifications open doors to better job opportunities and career advancement.
- **Validated Skills:** Employers recognize these certifications as proof of expertise in technical and specialized areas.
- **Alignment with Industry Standards:** Certifications are developed in collaboration with industry leaders to ensure they reflect current and future workforce needs.

Below is our current list of industry certifications we currently offer:



American Welding Society (AWS)

- **AWS D1.1 FCAW 3G & 4G**
Description: This certification focuses on Flux Cored Arc Welding techniques and is essential for those looking to work in high-demand construction and manufacturing roles.
- **AWS D1.1 SMAW 3G & 4G**
Description: Specializes in Shielded Metal Arc Welding, a crucial skill for industrial and construction projects.



Cisco

- **Cisco Certified Network Associate (CCNA)**
Description: This certification validates the ability to install, configure, operate, and troubleshoot medium-size routed and switched networks.



CompTIA

- **CompTIA A+**
Description: Entry-level certification for IT technicians, covering maintenance of PCs, mobile devices, laptops, operating systems, and printers.
- **CompTIA Network+**
Description: Validates essential knowledge and skills needed to design, configure, manage, and troubleshoot wired and wireless networks.
- **CompTIA Server+**
Description: Focuses on server hardware and software technologies, including installation, management, and troubleshooting.



FANUC

- **FANUC Certified Robot Operator (FCR-01)**

Description: Certification for operating FANUC robots, focusing on programming and operational skills.



Manufacturing Skills Standards Council (MSSC)

- **Certified Production Technician (CPT)**

Description: Recognizes core competencies of advanced manufacturing production workers, including safety, quality practices, and maintenance.

- **Certified Logistics Technician (CLT)**

Description: Focuses on foundational logistics concepts, such as supply chain management, warehouse operations, and transportation.

- **Certified Technician in Supply Chain Automation (CT-SCA)**

Description: Validates the skills required to work with automated technologies in supply chain environments, including robotics, sensors, programmable logic controllers (PLCs), and advanced data analytics. This certification equips individuals with the knowledge to manage, troubleshoot, and maintain automated systems used in modern warehouses, distribution centers, and manufacturing facilities.



National Center for Construction Education & Research (NCCER)

- **NCCER Core**

Description: Entry-level certification covering basic construction skills and safety protocols.

- **NCCER Electrical Level 1**

Description: Introduces fundamental electrical concepts, wiring techniques, and safety practices.

- **NCCER HVAC Level 1**

Description: Focuses on heating, ventilation, and air conditioning systems, including installation, maintenance, and troubleshooting.

- **NCCER Construction Craft Laborer Level 1**

Description: Covers essential skills for construction craft laborers, including tool usage, safety, and basic construction techniques.

- **NCCER Scaffolding Level 1**

Description: Focuses on the safe and effective erection, use, and dismantling of scaffolding systems.



National Customs Brokers & Forwarders Association of American Educational Institute (NEI)

- **Certified Customs Specialist (CCS)**
Description: Certification for professionals involved in customs brokerage and trade compliance, focusing on regulations and procedures.
- **Certified Export Specialist (CES)**
Description: Covers the key aspects of export regulations, documentation, and logistics management.
- **Certified Zone Specialist (CZS)**
Description: This certification focuses on the expertise required for managing Foreign-Trade Zones (FTZs). It covers the regulations, procedures, and best practices for operating within these zones.
- **Master Customs Specialist (MCS)**
Description: The Master Customs Specialist certification is designed for advanced professionals in customs brokerage. It provides in-depth knowledge of customs regulations, classification, valuation, and trade agreements.
- **Master Export Specialist (MES)**
Description: This certification provides advanced training in export regulations, documentation, and logistics management. It is intended for professionals seeking to deepen their expertise in international trade and export compliance.



National Institute of Metalworking Skills

- **Measurement, Materials & Safety**
Description: Fundamental certification focusing on precise measurement techniques, material properties, and safety in metalworking.
- **Job Planning, Benchwork & Layout**
Description: Introduces essential skills for job planning, manual benchwork, and layout procedures in metalworking.
- **Drill Press I**
Description: Focuses on the operation and safety of drill press machines, including drilling techniques and tool maintenance.
- **Milling I**
Description: Covers the basics of milling operations, including setup, tool selection, and machining techniques.
- **Turning Operations: Turning Between Centers**
Description: Provides skills for turning operations on a lathe, focusing on precision and accuracy.



Smart Automation Certification Alliance (SACA)

- **Certified Industry 4.0 Associate I – Basic Operations**
Description: Covers the fundamentals of Industry 4.0, including basic operations and smart manufacturing concepts.
- **Certified Industry 4.0 Associate II – Advanced Operations**
Description: Builds on basic operations with advanced Industry 4.0 technologies and smart manufacturing systems.
- **Certified Industry 4.0 Associate IV – IIoT, Network and Data Analytics**
Description: Focuses on Industrial Internet of Things (IIoT), networking, and data analytics for smart manufacturing.



South Texas College Center for Advanced Training & Apprenticeships

- **Forklift Training & Certification**
Description: Provides comprehensive training in the safe operation of forklifts, including practical and theoretical components.

3. SELF-PACED LEARNING

3.1 Overview of Self-Paced Learning

CATA's Self-Paced Learning programs provide students and professionals with the flexibility to gain industry-relevant skills at their own pace. Through partnerships with leading learning management system (LMS) providers—including **Manufacturing Skills Standards Council (MSSC)**, **Amatrol**, **Smart Automation Certification Alliance (SACA)**, **National Customs Brokers & Forwarders Association of America (NCBFAA)**, **ToolingU** and the **South Texas College's Blackboard LMS**—we offer a diverse range of high-quality online courses tailored to meet the demands of today's industries.

Key Benefits of Self-Paced Learning

- **Flexibility:** Learn anytime, anywhere, and at a pace that fits your schedule.
- **Industry-Relevant Content:** Access courses developed by trusted LMS providers, ensuring you gain up-to-date knowledge and skills.
- **Interactive Tools:** Engage with multimedia content, virtual labs, and real-world simulations to enhance your learning experience.
- **Certification Opportunities:** Many programs lead to industry-recognized certifications, increasing your value in the workforce.

Please note that some self-paced courses may include additional fees to access their e-learning platforms, which are separate from tuition costs. These fees cover access to exclusive training content, interactive tools, and certification exams provided by our LMS partners.

Our self-paced programs are ideal for individuals seeking to upskill, reskill, or gain specialized knowledge in areas like advanced manufacturing, automation, logistics, and global trade compliance. Whether you are a student, a working professional, or an employer looking to enhance your workforce, CATA's self-paced learning offerings provide the flexibility and quality you need to succeed.

3.2 Manufacturing Skills Standards Council (MSSC) Offerings



The **Manufacturing Skills Standards Council (MSSC)** is a nationally recognized leader in workforce development, providing certifications that validate critical skills in advanced manufacturing and logistics. At CATA, we currently offer four MSSC certification programs—**Certified Production Technician (CPT)**, **Certified Logistics Associate (CLA)**, **Certified Logistics Technician (CLT)**, and **Certified Technician-Supply Chain Automation (CT-SCA)**—each consisting of multiple courses designed to meet industry standards.

Available Programs

1. Certified Production Technician (CPT)

The CPT program prepares individuals for careers in manufacturing by developing foundational and technical skills through the following courses:

- **Safety Awareness:** Emphasizes workplace safety standards and practices.
- **Quality Practices & Measurement:** Focuses on inspection techniques, continuous improvement, and maintaining quality standards.
- **Manufacturing Processes & Production:** Provides an overview of production processes and material handling.
- **Maintenance Awareness:** Covers preventive maintenance and troubleshooting for manufacturing equipment.

2. Certified Logistics Associate (CLA)

The CLA program introduces participants to the core skills needed for entry-level positions in logistics and supply chain management. Key topics include:

- Supply chain and logistics fundamentals.
- Material handling and equipment operations.
- Product storage, packaging, and shipment.

3. Certified Logistics Technician (CLT)

Building on the CLA certification, the CLT program focuses on advanced logistics operations, preparing individuals for mid-level roles in logistics and distribution. Key courses include:

- Inventory control and warehouse operations.
- Transportation and distribution systems.
- Logistics data tracking and performance monitoring.

4. Certified Technician-Supply Chain Automation (CT-SCA)

The CT-SCA program prepares individuals to operate and maintain advanced automated systems used in warehouses and distribution centers. Key topics include:

- **Mechatronics Fundamentals:** An introduction to the mechanical, electrical, and computerized systems used in supply chain automation.
- **Automated Equipment Operation:** Covers the safe and efficient operation of automated machinery, such as conveyor belts, robotics, and sorting systems.
- **Preventative Maintenance:** Teaches participants to troubleshoot and maintain supply chain automation systems to minimize downtime.

- **Data-Driven Decision Making:** Focuses on analyzing data to improve logistics efficiency and performance.

Program Features

- **Self-Paced Learning:** Learners have the flexibility to progress through the content at their own pace.
- **Stackable Certifications:** Students can begin with the CLA certification, then advance to the CLT program, creating a clear pathway for career progression.
- **Interactive Content:** Programs include multimedia resources, assessments, and practical applications to reinforce learning.

Additional Information

Additional fees may apply for accessing the MSSC e-learning platform and certification exams. These costs are separate from tuition fees. For more details or to enroll, contact us at cata@southtexascollege.edu

3.3 Amatrol Offerings



Amatrol is a leading provider of technical training solutions, specializing in online and hands-on courses for advanced manufacturing, automation, and industrial systems. At CATA, we partner with Amatrol to offer self-paced courses designed to develop critical technical skills that meet industry demands. These courses combine theoretical knowledge with practical application, preparing participants for successful careers in high-demand technical fields.

Available Programs

1. **PLC Programming Fundamentals**
Learn the essentials of programmable logic controllers (PLCs), including programming, troubleshooting, and applications in industrial automation systems.
2. **Electrical Systems and Troubleshooting**
Explore electrical circuits, safety protocols, and diagnostic techniques. Students gain hands-on experience with tools and equipment used to maintain and repair electrical systems.
3. **Hydraulics and Pneumatics Essentials**
Covers fluid power systems, focusing on the operation, maintenance, and troubleshooting of hydraulic and pneumatic systems in industrial settings.
4. **Robotics Integration and Troubleshooting**
Provides in-depth training in robotic systems, emphasizing programming, maintenance, and integration into automated manufacturing processes.
5. **Mechanical Systems and Alignment**

Focuses on the fundamentals of mechanical systems, including machine alignment, gear systems, and preventive maintenance.

Program Features

- **Comprehensive Learning:** Courses include interactive simulations, virtual labs, and assessments for real-world application.
- **Self-Paced Format:** Learners can progress at their own speed, balancing education with work or personal commitments.
- **Industry-Relevant Skills:** Training content is aligned with current industry standards, ensuring participants gain valuable skills for technical roles.

Additional Information

Amatrol courses may include additional fees for accessing the e-learning platform and interactive tools, which are separate from tuition costs. For more information on course enrollment or pricing, contact us at cata@southtexascollege.edu

3.4 Smart Automation Certification Alliance (SACA) Offerings



The **Smart Automation Certification Alliance (SACA)** is a global leader in Industry 4.0 certifications, providing cutting-edge training in advanced manufacturing, industrial automation, and smart technologies. At CATA, we offer SACA's self-paced courses to prepare students for high-demand roles in the evolving landscape of digital manufacturing and automation.

Available Programs

1. **Basic Smart Automation**
This course introduces foundational concepts in Industry 4.0, including IoT (Internet of Things), digital data management, and the integration of smart devices into manufacturing processes.
2. **Industrial Sensors and Control Systems**
Focuses on the operation and maintenance of industrial sensors, including their application in automated systems for monitoring and control.
3. **Advanced Manufacturing Processes**
Covers smart manufacturing techniques, such as additive manufacturing, robotics, and digital production planning, with a focus on automation technologies.
4. **Cyber-Physical Systems and Networking**
Teaches the fundamentals of interconnected systems, emphasizing networked control and data exchange between physical devices in smart factories.

5. Data Analytics for Smart Manufacturing

Provides training in data collection, analysis, and visualization for improving manufacturing performance and decision-making.

Program Features

- **Industry 4.0 Focus:** Courses are designed to meet the needs of smart manufacturing and advanced automation industries.
- **Self-Paced Format:** Participants can complete the courses on their schedule, making it ideal for working professionals or students.
- **Certification Opportunities:** SACA's stackable credentials validate skills in specific areas of automation and smart manufacturing, creating clear pathways for career advancement.

Additional Information

SACA courses may include additional fees for accessing the e-learning platform and certification exams, which are separate from tuition costs. For detailed pricing or enrollment inquiries, contact us at cata@southtexascollege.edu

3.5 National Customs Brokers & Forwarders Association of America (NCBFAA) Offerings



The **National Customs Brokers & Forwarders Association of America (NCBFAA)** provides industry-recognized certifications in customs compliance, international trade, and logistics. These self-paced programs are designed for professionals seeking to enhance their expertise in global trade operations and compliance. At CATA, we offer the following certifications through our partnership with NCBFAA:

Available Certifications

1. Certified Customs Specialist (CCS)

This program provides in-depth training on U.S. customs regulations, tariff classifications, import/export processes, and trade compliance. It is ideal for professionals working in customs brokerage or supply chain operations.

2. Certified Export Specialist (CES)

Focuses on the fundamentals of exporting, including documentation, regulatory requirements, and international shipping practices. Participants will gain expertise in managing export operations efficiently.

3. Certified Zone Specialist (CZS)

Covers the management and operation of foreign trade zones (FTZs). Topics include compliance with FTZ regulations, inventory control, and the benefits of using FTZs in global trade.

4. **Master Customs Specialist (MCS)**

An advanced certification for experienced customs professionals, this program delves deeper into complex compliance issues, advanced tariff classifications, and specialized customs procedures.

5. **Master Export Specialist (MES)**

Designed for experienced export professionals, this program covers advanced export regulations, trade agreements, and global market strategies to enhance expertise in international trade operations.

Program Features

- **Specialized Training:** Each certification focuses on specific aspects of customs and trade, providing targeted expertise for career advancement.
- **Self-Paced Format:** Participants can complete the programs at their own convenience, making it ideal for working professionals.
- **Recognition:** Certifications are recognized by industry leaders and enhance credibility and career prospects in global trade and logistics.

Additional Information

NCBFAA certifications may include additional fees for accessing the e-learning platform and exams, which are separate from tuition costs. For more information on pricing or enrollment, contact us at cata@southtexascollege.edu

3.6 ToolingU-SME Offerings



ToolingU-SME focuses on manufacturing and industrial training, providing self-paced courses that combine theory and practical skills. These programs cater to individuals and employers seeking to enhance manufacturing expertise.

Courses Offered:

- **Lean Manufacturing Principles:** Learn techniques to streamline production processes and eliminate waste.
- **CNC Programming and Operation:** Gain hands-on skills in programming and operating CNC machines.
- **Maintenance Fundamentals:** Covers key concepts in equipment maintenance and troubleshooting.
- **Workplace Safety and Compliance:** Emphasizes OSHA standards and best practices for a safe work environment.

Additional Information

ToolingU courses may include additional fees for accessing the e-learning platform and, which are separate from tuition costs. For detailed pricing or enrollment inquiries, contact us at cata@southtexascollege.edu

3.7 South Texas College Blackboard LMS Offerings



CATA also utilizes South Texas College's Online Campus known as **Blackboard** to deliver a variety of self-paced online courses across multiple disciplines. The platform supports flexible learning formats, allowing students to access resources, participate in discussions, and complete coursework independently.

Courses Offered:

- **Business Management Fundamentals:** Develop skills in project management, leadership, and business operations.
- **Healthcare Basics:** Training in foundational healthcare topics such as medical terminology and patient care.
- **Digital Literacy and IT Skills:** Learn essential computer skills, including Microsoft Office, cybersecurity basics, and cloud computing.
- **Soft Skills for Workplace Success:** Courses in communication, teamwork, and problem-solving to boost employability.

4. STUDENT RESOURCES

At CATA, we are dedicated to supporting students throughout their learning journey by providing a range of services designed to enhance educational experiences and ensure career success. Our student resources aim to meet the needs of learners in both traditional and non-traditional settings.

4.1 Career Services

CATA's Career Services department bridges the gap between training and employment by equipping students with the tools they need to launch or advance their careers. Services include:

- **Resume Assistance:** Personalized guidance to help students craft professional, industry-specific resumes that stand out to employers.
- **Interview Preparation:** Hands-on mock interviews, coaching, and strategies to build confidence, address common interview questions, and demonstrate technical and soft skills.
- **Job Placement Assistance:** A dedicated team connects students with local employers, leveraging relationships with industry partners to facilitate job matching, career fairs, and direct referrals to employment opportunities.
- **Career Exploration Workshops:** Sessions on career paths, industry trends, and networking strategies to help students navigate their professional journeys.

4.2 Academic Support

CATA offers a variety of academic support services to empower students to excel in their programs, regardless of their learning styles or challenges:

- **Tutoring Services:** One-on-one and group tutoring sessions are available for select technical and academic subjects to reinforce understanding and boost confidence.
- **Skill-Building Workshops:** Specialized workshops focus on improving technical skills, mastering study habits, and preparing for industry-specific certifications or exams.
- **Online Resources:** Students have access to digital libraries, self-paced instructional videos, and additional materials designed to supplement classroom learning and hands-on training.

- **Academic Advising:** Personalized guidance to help students select courses, plan academic pathways, and balance workloads effectively.

4.3 Financial Aid Assistance

Understanding that funding is often a barrier to education, CATA provides robust financial aid support to ensure students can access their desired programs:

- **Eligibility Guidance:** Assistance in determining eligibility for grants, scholarships, and other funding opportunities, including TPEG and workforce development grants.
- **Application Support:** Hands-on help with completing applications, including FAFSA, local scholarships, and employer-sponsored funding.
- **Timely Processing:** Dedicated support to ensure funding approvals are secured before course registration deadlines, minimizing delays and disruptions.
- **Financial Literacy Workshops:** Sessions on managing educational costs, budgeting for courses, and understanding long-term financial aid options.

4.4 Access to Facilities

CATA students benefit from access to world-class facilities designed to enhance their learning experience and prepare them for real-world challenges:

- **Industry-Standard Labs:** Equipped with cutting-edge technology and tools that simulate real-world work environments, providing hands-on experience in fields such as manufacturing, IT, and healthcare.
- **Study Spaces:** Quiet rooms and collaborative areas are available to accommodate individual and group study needs.
- **Computer Labs:** Fully equipped labs for coursework, research, and access to online resources, including proprietary learning platforms and certification prep tools.
- **Resource Centers:** On-site resource hubs provide students with access to textbooks, reference materials, and career development tools.

4.5 Counseling Services

CATA recognizes the importance of mental health and overall well-being in student success. To support students holistically, we offer:

- **Personal and Academic Counseling:** Professional counselors are available to help students address challenges, set goals, and create plans for academic and personal growth.

- **Referral Services:** For specialized needs, students can be referred to external support services, including mental health resources, housing assistance, or childcare services.
- **Stress Management Workshops:** Periodic sessions help students learn techniques to manage stress, improve focus, and balance academic and personal responsibilities.

4.6 Disability Services

CATA is dedicated to ensuring equal access to education for students with disabilities. Our comprehensive disability services include:

- **Adaptive Technology:** Tools such as screen readers, speech-to-text software, and assistive devices to enhance learning and accessibility.
- **Accessible Learning Environments:** Classrooms and facilities designed to accommodate mobility needs and ensure inclusivity.
- **Extended Testing Times:** Support for students who require additional time to complete exams, ensuring they can demonstrate their knowledge without undue pressure.
- **Individualized Support Plans:** Tailored plans to address specific accommodations based on documented needs.

Contact Information: For more details on disability services, reach out to the Office of Student Accessibility Services at **956-872-2173**.

5. EMPLOYER RESOURCES

CATA partners with employers to meet workforce development needs and enhance organizational performance. Whether you're seeking to upskill your employees, assess training needs, or build apprenticeship programs, we offer comprehensive solutions to support your business objectives.

5.1 Customized Training Solutions

CATA designs and delivers training programs tailored to the specific needs of your organization. Our customized training programs help employers address critical workforce challenges while driving measurable outcomes.

What We Offer:

- **Employer-Specific Training:** Courses tailored to address skill gaps in areas like advanced manufacturing, IT, logistics, and healthcare.
- **Flexible Delivery Options:** Training can be conducted at your site, CATA facilities, or online to accommodate your schedule.
- **Funding Assistance:** Access workforce development grants to offset training costs and maximize ROI.

Success Story:

"The apprenticeship program at STC became a system of checks and balances for us that allowed us to see what we are doing right and where we can improve while giving us an even greater professional edge." - Maribel Saenz, Saenz Utility Contractors

5.2 Workforce Needs Assessments

Our specialists collaborate with employers to evaluate workforce challenges and design actionable solutions. Using data-driven insights, we ensure that your employees gain the skills necessary for your business to thrive.

Our Approach:

- **Skills Gap Analysis:** Identify areas where employee skills need improvement to meet industry standards.
- **Strategic Talent Development:** Create a roadmap for upskilling and reskilling initiatives tailored to your growth objectives.
- **Customized Recommendations:** Provide targeted solutions, including training programs and resources, aligned with your specific goals.

Why It Matters:

Over 85% of employers who participated in our workforce assessments reported increased employee productivity and satisfaction.

5.3 Apprenticeship Development

As a registered apprenticeship sponsor with the Department of Labor, CATA collaborates with employers to develop programs that prepare workers for high-demand industries. Our apprenticeship programs provide a structured approach to building a skilled and loyal workforce.

How We Help:

- **Program Development:** Design and implement apprenticeship programs tailored to your industry's needs.
- **DOL Registration Support:** Guide employers through the registration process with the Department of Labor.
- **Ongoing Support:** Provide classroom instruction, administrative services, and compliance oversight to ensure program success.

Impact:

CATA has successfully partnered with over 30 employers to register apprenticeship programs, resulting in more than 200 skilled workers certified across industries since 2018.

5.4 Employer Advisory Committees

Employers play a key role in shaping CATA's programs through advisory committees. These committees ensure that our training aligns with industry demands and reflects real-world practices.

What You Gain:

- **Curriculum Influence:** Provide feedback on course content to ensure relevance and alignment with current industry trends.
- **Networking Opportunities:** Collaborate with other industry leaders to strengthen partnerships and share best practices.
- **Strategic Input:** Shape the development of future training programs to meet evolving workforce needs.

Example:

CATA's partnerships with construction industry leaders resulted in the development of a

Construction Superintendent Apprenticeship program that addresses critical leadership skill gaps.

5.5 Grants and Funding Assistance

CATA supports employers in navigating funding opportunities to minimize training expenses. Our team works with local and state organizations to ensure businesses can access financial resources to invest in their workforce.

Available Resources:

- **Workforce Development Grants:** Access funding for employee training in high-demand skills.
- **Subsidized Training:** Reduce costs through partnerships with local and state agencies.
- **Guidance on Applications:** Receive step-by-step assistance in applying for grants and understanding eligibility requirements.

Highlight:

Each year, CATA secures an average of \$1,000,000 in local, state, and federal grants to support workforce training and development. These funds allow employers to upskill their current employees in high-demand fields such as advanced manufacturing, construction, IT, and more. Additionally, CATA leverages grant funding to recruit displaced individuals, provide them with industry-specific training, and assist with job placement, helping to rebuild lives while meeting employer workforce needs. This comprehensive approach ensures that both businesses and individuals benefit from cutting-edge training and career opportunities.

5.6 Recruitment Support

Employers working with CATA gain access to a pipeline of skilled graduates and recruitment support services designed to meet their hiring needs.

What We Provide:

- **Access to Skilled Talent:** Tap into a pool of qualified graduates from CATA programs.
- **Job Postings and Referrals:** Share job opportunities with our graduates and receive candidate referrals.
- **Recruitment Events:** Collaborate with CATA on job fairs, industry panels, and other networking events.

6. FAQs FREQUENTLY ASKED QUESTIONS

General Questions

1. What is CATA, and what does it offer?
 - CATA (Center for Advanced Training & Apprenticeships) offers workforce development programs, including certifications, apprenticeships, customized training, and self-paced learning options for individuals and employers.
2. How do I contact CATA for more information?
 - You can reach us at cata@southtexascollege.edu or call us at **956-872-6197**. Visit us in person at the Technology Campus, Building E, or explore our website at [CATA Website](#).

Registration and Payment

3. How do I register for a course or program?
 - Follow the steps outlined in Section 1.3 of this catalog. Registration can be completed online, in person, or using the form provided in Section 10.
4. What are the tuition payment options?
 - Tuition can be paid via credit/debit card, check, or an approved payment plan. Contact us for financial assistance options.
5. Can I get a refund if I need to cancel my registration?
 - Yes, a 100% refund is provided if cancellation occurs before the first-class day. Refer to Section 1.4 for our full refund and cancellation policy.

Programs and Certifications

6. What areas of study are available?
 - CATA offers programs in advanced manufacturing, logistics, construction, IT, animal healthcare, welding, workplace safety, and more. See Section 2.2 for a complete list.
7. Are the certifications nationally recognized?
 - Yes, CATA partners with organizations like MSSC, NCCER, SACA, AWS, and others to offer industry-recognized certifications.

8. What is the difference between an apprenticeship and a certification program?

- Apprenticeships combine paid on-the-job training with classroom instruction and lead to nationally recognized certifications, while certification programs focus on validating specific technical skills.

9. Can I take courses at my own pace?

- Yes, we offer self-paced learning through platforms like MSSC, Amatrol, ToolingU, and our Blackboard LMS. See Section 5 for details.

Financial Assistance

10. What types of financial aid are available?

- We offer guidance on grants, scholarships, and workforce development funding. Contact us to explore eligibility for options like TPEG and local workforce grants.

11. Do employers qualify for training subsidies?

- Yes, employers may qualify for workforce development grants to subsidize employee training costs. Contact us for details.

For Employers

12. Can CATA develop customized training for my organization?

- Absolutely. CATA works with businesses to design tailored training programs that address specific workforce needs. See Section 7.1 for details.

13. How do I register an apprenticeship program with the Department of Labor?

- CATA provides full support, including program development, DOL registration, and ongoing administrative assistance. See Section 7.3 for details.

14. What funding opportunities are available for employers?

- CATA helps employers access local, state, and federal grants to reduce training costs. Learn more in Section 7.5.

Facilities and Support

15. Where are CATA programs held?

- Programs are offered at multiple South Texas College campuses, including the Technology Campus, Mid-Valley Campus, Starr County Campus, and Pecan Campus. Refer to Section 1.2 for facility details.

16. What resources are available for students?

- CATA provides career services, tutoring, academic advising, financial aid support, and access to state-of-the-art labs. See Section 6 for a full list of resources.

17. Are CATA facilities accessible to individuals with disabilities?

- Yes, we offer adaptive technology, accessible learning environments, and personalized accommodations. Contact the Office of Student Accessibility Services at **956-872-2173** for more details.

Miscellaneous

18. Can I tour CATA facilities?

- Yes, we welcome employers and prospective students to tour our labs and facilities. Contact us to schedule a visit.

19. What if I have more questions not covered in the catalog?

- Feel free to reach out to us directly at cata@southtexascollege.edu or call **956-872-6197** for personalized assistance.

APPENDIX A: PRICING STRUCTURE

A.1 Overview of Pricing Structure

CATA programs are structured into five pricing levels based on the type of training and area of study. Tuition is calculated per contact hour, per student, and assumes a minimum enrollment of 12 students. If class sizes fall below or exceed 12, tuition rates adjust accordingly to maintain cost recovery. Additional charges may apply for materials, supplies, and specialized tools required for the course.

A.2 Tuition Rates and Course Pricing

Level	Rate per Contact Hour	Areas of Study
Level 1	Variable Tuition	Youth Camp Programs
Level 2	Variable Tuition	Animal Healthcare, Operations & Organizational Management, Building Construction, Electrical & Electronic Systems
Level 3	Variable Tuition	Advanced Manufacturing Processes, Information Technologies, Welding Technologies
Level 4	Variable Tuition	Logistics and Supply Chain, Workplace Safety and Health
Level 5	Variable Tuition	Robotic Systems and Automation

A.3 Variable Tuition Adjustments

If a course enrolls fewer than 12 students, tuition rates increase to cover fixed program costs. If more than 12 students enroll, tuition may decrease or remain stable, depending on course-specific expenses. Grant-funded programs may offer reduced or zero-cost tuition depending on eligibility requirements.

A.4 Funding and Financial Assistance

Tuition costs may be supplemented through various funding sources, including employer-sponsored training, grant funding, and customized financial agreements. Eligible students may apply for financial assistance through workforce development grants and institutional funding partnerships. Employers seeking bulk enrollments can negotiate customized tuition structures based on workforce training needs.

APPENDIX B: COURSE LISTING

BY AREAS OF STUDY

B.1 Overview of Course Offerings

CATA provides a diverse range of courses designed to equip students and professionals with the skills and certifications required in high-demand industries. Each course is tailored to meet specific workforce needs, blending hands-on training with practical knowledge.

Courses are categorized into areas of study, allowing students and employers to easily identify the programs that align with their goals. From foundational skills to advanced certifications, CATA offers programs to support career entry, advancement, and specialized training.

The following sections detail the courses offered under each area of focus, along with their descriptions and pricing levels.

B.2 Youth Camp Programs

Youth camp programs provide hands-on learning opportunities for high school students, introducing them to careers in STEM and skilled trades.

Arduino Innovators Camp

HRS: 20

Participants explore electronics and programming through hands-on projects with Arduino microcontrollers. Students design and build interactive circuits and projects, such as light displays and simple robots, fostering creativity and interest in STEM fields.

Craft Masters Builders Camp

HRS: 20

This camp introduces students to construction basics, including carpentry, blueprint reading, and tool usage. Participants practice workplace safety and gain experience in collaborative building projects, fostering skills for careers in construction technology.

Diesel Engine Explorer Camp

HRS: 20

Participants will learn diesel engine maintenance and repair basics, including engine components, fuel and brake systems, and diagnostic techniques. Hands-on activities provide practical experience in troubleshooting and performing repairs, preparing students for careers in diesel mechanics.

Drone Discovery Camp

HRS: 20

Students learn drone piloting essentials, including flight controls, safety protocols, and regulatory requirements. Hands-on sessions allow participants to practice maneuvering and troubleshooting drones, providing a strong foundation in aviation technology.

HVAC Adventures Camp

HRS: 20

Explore the science of climate control and HVAC systems. Students gain hands-on experience working with HVAC equipment, learning how systems function and how they are maintained, with an introduction to careers in the HVAC industry.

Robo-Tech Explorer Camp

HRS: 20

This camp introduces students to industrial robotics with a focus on FANUC robotics systems. Participants learn to operate robots, follow programming commands, and practice safety protocols while gaining insight into automation principles in modern manufacturing.

Wired Wonders Camp

HRS: 20

Dive into the world of residential wiring! Students explore electrical circuit design, installation techniques, and safety protocols through hands-on projects. This camp provides foundational skills and insights into careers in the electrical trades.

B.3 Animal Healthcare

Animal Healthcare programs equip students with foundational skills needed to assist veterinarians and care for animals in clinical and professional settings.

Breeds of Domestic Animals

HRS: 16

This course covers the characteristics, history, and care of various domestic animal breeds, including dogs, cats, livestock, and poultry.

Introduction to Veterinary Technology

HRS: 16 - 144

This is an in-depth course that provides a comprehensive overview of veterinary technology through both lectures and practical laboratory sessions. It emphasizes foundational techniques in animal handling and care, while also delving into the ethical and professional standards essential to the field of veterinary technology.

Large Animal Clinical Procedures

HRS: 16

This course provides theoretical and technical skills in companion large animal nursing. Topics include basic animal care and first aid, physical examination, administration of medication, disinfecting/cleaning, bandaging, and prevention techniques. Competency sessions provide the student with hands-on experience with assisting concepts learned during lectures.

Medical Records and Office Skills

HRS: 16 - 96

Practical experience in management of the veterinary practice. Emphasis on client relations, record keeping, inventory, employment skills, and computer skills in the veterinary environment.

Small Animal Clinical Procedures

HRS: 16

This course provides theoretical and technical skills in companion small animal nursing. Topics include basic animal care and first aid, physical examination, administration of medication, disinfecting/cleaning, bandaging, and prevention techniques. Competency sessions provide the student with hands-on experience with assisting concepts learned during lectures.

Veterinary Critical Care

HRS: 16

This course focuses on the care and treatment of critically ill or injured animals. Students will learn emergency procedures, monitoring techniques, and advanced support for animals in critical condition.

Veterinary Hematology

HRS: 16

A veterinary hematology course provides a comprehensive overview of blood and its disorders in animals, covering the basics of blood components and formation, diagnostic techniques

including blood sampling and tests, and common disorders such as anemia and leukemias. The course emphasizes practical application through case studies and treatment planning while also exploring recent advancements and research in the field.

Veterinary Imaging

HRS: 16

This course introduces basic imaging techniques used in veterinary medicine, including X-rays, ultrasound, CT scans, and MRI. Students will learn how to use these tools for diagnosing animal injuries and diseases.

Veterinary Medical Terminology

HRS: 16 - 32

Introduction to word parts, directional terminology, and analysis of veterinary terms.

Veterinary Microbiology

HRS: 16

This course covers the basics of microorganisms that cause diseases in animals, including bacteria, viruses, fungi, and parasites. Students will learn how these microbes affect animals, how to diagnose infections, and methods for prevention and treatment. The course includes both theory and hands-on laboratory practice.

Veterinary Parasitology

HRS: 16 - 128

Study of parasites common to domestic animals including zoonotic diseases.

Veterinary Pharmacology

HRS: 16 - 96

This course will be a skill development and practice of dosage forms and calculations; prescriptions identifications; storage and handling of medications; drugs for specific body systems; antimicrobials; antiparasitic; anti-inflammatories; disinfectants and antiseptics.

B.4 Operations & Organizational Management

Programs designed to enhance workplace efficiency, leadership capabilities, and project management skills for individuals in business and organizational roles.

Basic Workplace Communication

HRS: 7 - 40

Designed to be repeated with varying content. Skill development in pronunciation and use of job-related vocabulary. Includes non-verbal communication techniques.

Business Ethics

HRS: 48 - 96

Discussion of ethical issues, the development of a moral frame of reference, and the need for an awareness of social responsibility in management practices and business activities. Includes ethical corporate responsibility.

Business Law

HRS: 48 - 64

The course provides the student with foundational information about the U.S. legal system and dispute resolution, and their impact on business. The major content areas will include general principles of law, the relationship of business and the U.S. Constitution, state and federal legal systems, the relationship between law and ethics, contracts, sales, torts, agency law, intellectual property, and business law in the global context.

Business Presentations

HRS: 48 - 96

This course provides skill development in planning and conducting business presentations on an individual and/or group basis including communication and media skills.

Communication Skills for the Workplace

HRS: 7 - 96

Addresses essential listening, speaking, reading, writing, and computational skills required by business and industry. Improvement of communication skills related to successful job performance.

Communications Improvement I

HRS: 7 - 96

Designed for students whose primary language is other than English. Presentation of industry-related basic reading, writing, speaking, and listening skills. Emphasis on high-frequency vocabulary and phonics; refining oral and written production and listening skills for enhanced job productivity; and increasing control of the English sound system.

Communications Improvement II

HRS: 7 - 96

Provides on-the-job dynamic communicative practice for students whose primary language is other than English, and introduces students to the uses of language in a variety of relevant job-related contexts.

Communications Improvement III

HRS: 7 - 96

Designed for students whose primary language is other than English. Improvement in reading, writing, speaking and listening skills for job success. Focus on recognition and comprehension of analogies, antonyms, synonyms, and context clues. Interpretation of factual material and inferences associated with job-related communication.

Communications Improvement IV

HRS: 7 - 96

Designed for students whose primary language is other than English. Emphasis on industry-related vocabulary development and skills acquisition, including determining meaning from context, identifying word forms and variation in meaning, synonyms and antonyms, connotation and denotation, and fact and opinion.

Communications Improvement V

HRS: 7 - 96

Designed for students whose primary language is other than English. Focus on comprehending challenging industrial and job-related materials. Exploration of various reference sources and practice suggested proofreading techniques to assist with on-the-job document production.

Communications in Management

HRS: 48 - 64

This course includes basic theory and process of communication skills necessary for the management of an organization's workforce.

Critical Thinking and Problem Solving

HRS: 7 - 48

Interpreting data for problem solving and recommending corrective action. Emphasis on a structured approach to critical thinking and problem solving in a team environment.

Customer Relationship Management

HRS: 48 - 64

Topics in this course address general principles of customer relationship management including skills, knowledge, attitudes, and behaviors.

Customer Service

HRS: 16 - 80

This course provides an introduction to techniques for delivering excellent customer service. Participants will learn fundamental principles and best practices to enhance customer interactions and satisfaction.

Delegation

HRS: 7 - 40

Concepts of delegation and empowerment of employees and teams. Prepares the student to delegate effectively and to foster a mind-set of empowerment in employees.

Diversity in the Workplace

HRS: 7 - 40

The impact of diversity on individual and organizational performance.

Employee Relations

HRS: 32 - 64

This course is an examination of employee relations, policies, practices, and issues required to build strong employee relations. Topics include communications, employee conduct rules, performance appraisal methods, Title VII, Federal Medical Leave Act, Fair Labor Standards Act, and Americans with Disabilities Act updates.

Employment Practices

HRS: 48 - 64

This course is a study of employment issues including techniques for human resource forecasting, selection, and placement including interview techniques, pre-employment testing, and other predictors. Topics include recruitment methods, the selection process, Equal Employment Opportunity (EEO), EEO record keeping and Affirmative Action Plans.

Information and Project Management

HRS: 48 - 96

This course explores critical path methods for planning and controlling projects. It includes time/cost tradeoffs, resource utilization, stochastic considerations, task determination, time management, scheduling management, status reports, budget management, customer service, professional attitude, and project supervision.

Introduction to Accounting I

HRS: 48 - 128

This course is a study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis is placed on understanding the complete accounting cycle and preparing financial statements, bank reconciliation, and payroll.

Introduction to Computerized Accounting

HRS: 48 - 128

This course is an introduction to utilizing the computer in maintaining accounting records, making management decisions, and processing common business applications with primary emphasis on a general ledger package.

Introduction to Project Management

HRS: 7 - 40

Methods for planning and controlling projects. Includes project management concepts and models, critical path, analysis of time/cost benefits, and resource utilization.

Introduction to Supervision

HRS: 7 - 40

Supervisory tasks, leadership and motivational skills, communication processes, organizational design, and effective solution strategies.

Level I - Basic Supervision

HRS: 7 - 40

Exploration of supervisory functions as applied to leadership, counseling, motivation and human skills.

Level II - Leadership Skills for Supervisors/Managers

HRS: 7 - 40

Concepts and skills of leadership in the work setting. Introduces leadership and motivational theories and leadership styles. Includes evaluation of leadership performance.

Organizational Behavior

HRS: 48 - 96

The analysis and application of organizational theory, group dynamics, motivation theory, leadership concepts, and the integration of interdisciplinary concepts from the behavioral sciences.

Principles of Finance

HRS: 48 - 64

This course covers the financial dynamics of a business. It includes monetary and credit theory, cash inventory, capital management, and consumer and government finance. Emphasis is placed on the time value of money.

Principles of Financial Accounting

HRS: 48 - 96

This course is an introduction to the fundamental concepts of financial accounting as prescribed by U.S. generally accepted accounting principles (GAAP) as applied to transactions and events that affect business organizations. Students will examine the procedures and systems to accumulate, analyze, measure, and record financial transactions. Students will use recorded financial information to prepare a balance sheet, income statement, statement of cash flows, and statement of shareholders' equity to communicate the business entity's results of operations and financial position to users of financial information who are external to the company.

Principles of Management

HRS: 48 - 64

This course is a study of concepts, terminology, principles, theories, and issues in the field of management.

Principles of Managerial Accounting

HRS: 48 - 64

This course is an introduction to the fundamental concepts of managerial accounting appropriate for all organizations. Students will study information from the entity's accounting system relevant to decisions made by internal managers, as distinguished from information relevant to users who are external to the company. The emphasis is on the identification and assignment of product costs, operational budgeting and planning, cost control, and management decision making.

Problem Solving and Decision Making

HRS: 48 - 64

This course emphasizes decision making and problem-solving process in organizations, utilizing logical and creative problem-solving techniques. Application of theory is provided by experimental activities such as small group discussions, case studies and the use of other managerial decision aids.

Production and Operations Management

HRS: 48 - 64

This course is a study of the fundamentals of techniques used in the practice of production and operations management. Includes location, design, and resource allocation.

Supervision

HRS: 48 - 64

This course is a study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined.

Team Building

HRS: 7 - 40

Principles of building and sustaining teams in organizations. Includes team dynamics, process improvement, trust and collaboration, conflict resolution, and the role of the individual in the team.

Teams and Consensus Building

HRS: 7 - 40

An examination of group dynamics, trust and collaboration and their role in building positive and productive work groups. Discussion of team stress and distress, ways of working effectively as a team, and methods for incorporating team building strategies in staff meetings, professional development activities, and one-on-one counseling.

Workplace Communications

HRS: 7 - 40

Communication skills as applicable to individuals or groups in the workplace. Includes skills in listening, writing, and verbal/non-verbal communications.

B.5 Building Construction

Courses focus on construction fundamentals, such as blueprint reading, carpentry, and workplace safety, equipping students with hands-on skills for roles in construction.

Advanced Air Conditioning Controls

HRS: 48 - 160

Theory and application of electrical control devices, electromechanical controls, and/or pneumatic controls.

Advanced Electricity for HVAC

HRS: 48 - 160

Advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment including detailed instruction in motors and power distribution motors, motor controls, and application of solid-state devices.

Air Conditioning and Refrigeration Codes

HRS: 48 - 128

HVAC standards and concepts with emphasis on the understanding, and documentation of the codes and regulations required for the state mechanical contractors license and local codes.

Air Conditioning Control Principles

HRS: 48 - 160

A basic study of HVAC and refrigeration controls; troubleshooting of control components; emphasis on use of wiring diagrams to analyze high and low voltage circuits; a review of Ohm's law as applied to air conditioning controls and circuits.

Air Conditioning I

HRS: 80 - 176

Introduction to HVAC principles, terminology, tools, and skills.

Air Conditioning II

HRS: 48 - 160

Study and practical application of air conditioning principles, including air properties, maintenance operations, thermodynamics, and compressors.

Air Conditioning Installation and Startup

HRS: 48 - 160

A study of air conditioning system installation, refrigerant piping, condensate disposal, and air cleaning equipment with emphasis on startup and performance testing.

Air Conditioning Troubleshooting

HRS: 48 - 160

An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests.

Basic Air Conditioning

HRS: 7 - 40

Heating, ventilation, and air conditioning theory. Includes testing, and repair. Emphasizes refrigerant 24 reclamation, safety procedures, specialized tools, and repairs.

Basic Construction Safety

HRS: 16 - 80

This course covers basic job site construction safety in residential, commercial, and industrial construction.

Basic Electricity for HVAC

HRS: 48 - 160

Principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation.

Building Codes and Inspections

HRS: 48 - 128

This course is an introduction to building codes and standards applicable to building construction and inspection processes. The student will be expected to identify various construction classifications and occupancy categories; cross-reference the guidelines, tables, charts, and specifications as presented in the building codes; and assess and determine if construction meets building code standards for site, foundation, rough, and final building structure inspection.

Commercial Air Conditioning

HRS: 48 - 160

A study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less.

Commercial Air Conditioning System Design

HRS: 48 - 160

Advanced study in essential elements of commercial air conditioning contracting including duct systems design; equipment selection using manufacturers' data; and preparation of shop drawings and submittals.

Commercial Refrigeration

HRS: 48 - 160

Theory and practical application in the maintenance of commercial refrigeration; medium, and low temperature applications and ice machines.

Construction Estimating I

HRS: 48 - 96

This course is an introduction to the fundamentals of estimating materials and labor costs in construction. The student will be required to explain estimating procedures; estimate materials from blueprints; and calculate labor units and costs.

Construction Management I

HRS: 48 - 128

This course is an introduction to human relations management skills in motivation on the job site. Topics include written and oral communications, leadership and motivation, problem solving, and decision making.

Construction Management II

HRS: 48 - 128

This course is a management course in contract documents, safety, planning, scheduling, production control, and law and labor. Topics include contracts, planning, cost and production peripheral documents, and cost and work analysis.

Construction Materials and Methods I

HRS: 48 - 128

This course is an introduction to construction materials and methods and their applications.

Construction Tools and Techniques

HRS: 64 - 128

This course is a comprehensive study of the selection and use of hand tools, portable power and stationary power tools and related construction equipment.

Gas and Electric Heating

HRS: 48 - 160

Study of the procedures and principles used in servicing heating systems including gas fired furnaces and electric heating systems.

Heat Pumps

HRS: 48 - 160

A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems.

HVAC Maintenance Skills

HRS: 16 - 48

An introduction to routine maintenance and minor repairs on residential and light commercial heating, ventilation, and air conditioning systems. Inspection of gas/electrical lines, cleaning systems and filter replacement, lighting pilots, lubrication, and replacement of belts. Instruction in the laws and restrictions involving service to central units.

HVAC Shop Practices and Tools

HRS: 16 - 48

Tools and instruments used in the HVAC industry. Includes proper application, use and care of these tools, and tubing and piping practices.

HVAC Zone Controls

HRS: 48 - 128

Theory and application of HVAC residential Zone control devices, electromechanical controls, and/or pneumatic controls.

Industrial Air Conditioning

HRS: 48 - 160

A study of components, accessories, applications, and installation of air conditioning systems above 25 tons capacity.

Mechanical, Electrical & Plumbing Systems in Construction I

HRS: 48 - 96

This course is a presentation of the basic mechanical, plumbing, and electrical components in construction and their relationship to residential and light commercial buildings.

Refrigeration Principles

HRS: 64 - 144

An introduction to the refrigeration cycle, heat transfer theory, temperature/pressure relationship, refrigerant handling, refrigeration components, and safety.

Residential Air Conditioning

HRS: 48 - 160

A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems.

Residential Air Conditioning Systems Design

HRS: 48 - 160

Study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection and balancing the air system.

Testing, Adjusting, and Balancing HVAC Systems

HRS: 48 - 128

A study in the process of checking and adjusting all the building environmental systems to produce the design objectives. Emphasis on efficiency and energy savings.

B.6 Electrical & Electronic Systems

Programs include training in electrical wiring, troubleshooting, and safety protocols for residential and commercial applications, preparing participants for roles in the electrical trades.

AC Circuits

HRS: 48 - 128

A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance.

Basic Electrical Theory

HRS: 64 - 144

Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current.

Basic Electrical Wiring

HRS: 32 - 128

Presentation of the theory of residential electric circuits. Topics include load calculations and safety in electrical work, installation of wiring, load protection, ground fault, and other devices commonly used in 110-volt household applications.

Basic Industrial Electricity

HRS: 32 - 128

Theory and application of electrical energy with emphasis on industrial and commercial systems. Includes AC and DC theory, electrical generation, transmission, distribution and switching and single phase and 20 three phase motor principles.

Commercial Wiring

HRS: 64 - 128

This course provides instruction in commercial wiring methods. It includes over current protection, raceway panel board installation, proper grounding techniques, and associated safety procedures.

DC Circuits

HRS: 48 - 128

A study of the fundamentals of direct current including Ohm's law, Kirchhoff's laws and circuit analysis techniques.

Electric Motors

HRS: 32 - 128

DC and AC motors. Emphasis on the theory of magnetism, motors, and principles of operation. Includes operating characteristics, application, selection, installation, maintenance, and troubleshooting. Includes NEC guidelines covering installation of electrical motors.

Electrical Circuits

HRS: 32 - 128

Introduction to AC and DC currents, transformers, RLC circuits, resonance, power in AC and DC circuits, mathematics used in analysis of AC and DC circuits, and basic amplifying systems and power supplies.

Electrical Troubleshooting

HRS: 64 - 128

Maintenance, operation, troubleshooting, and repair of circuits of various residential, commercial, and industrial electrical systems.

Electricity Principles

HRS: 48 - 128

Principles of electricity including proper use of test equipment, A/C and D/C circuits, and component theory and operations.

Electro-Mechanical Devices

HRS: 64 - 128

A study of electro-mechanical devices found in robotic systems. Includes transformers, switches, and solid-state relays.

Electronic Soldering

HRS: 32 - 80

Theory and use of tools and equipment for electronic soldering techniques.

Fundamentals of Electricity I

HRS: 48 - 160

This course is an introduction to basic direct current (DC) theory including electron theory and direct current applications.

Industrial Wiring

HRS: 64 - 128

This course provides instruction on wiring methods used for industrial installations. It includes motor circuits, raceway and busway installations, proper grounding techniques, and associated safety procedures.

Introduction to Electrical Controls

HRS: 7 - 40

General principles of electrical controls and their components in the electrical power industry. Includes reading electrical diagrams and identifying industrial switches and pilot devices. Introduction to hardwiring and troubleshooting of industrial control relays and timers.

National Electrical Code I

HRS: 32 - 64

This course is an introductory study of the National Electric Code (NEC) for those employed in fields requiring knowledge of the Code. Emphasis is on wiring design, protection, methods, and materials; equipment for general use; and basic calculations.

Programmable Logic Controllers I

HRS: 64 - 128

This course covers the fundamental concepts of programmable logic controllers, principles of operation, and numbering systems as applied to electrical controls.

Residential Wiring

HRS: 48 - 96

This course covers wiring methods, for single family and multi-family dwellings. It includes load calculations, service entrance sizing, proper grounding techniques, and associated safety procedures.

B.7 Advanced Manufacturing Processes

Courses cover CNC machine operation, advanced manufacturing technology, and lean production principles, providing skills for high-demand careers in manufacturing.

Advanced CNC Machining

HRS: 48 – 128

This course is a study of advanced CNC operation with an emphasis on programming and operations of machining and turning centers.

Advanced Computer-Aided Manufacturing (CAM)

HRS: 48 – 128

This course is a study of advanced techniques in Computer-Aided Manufacturing (CAM). Students will create multi-axis part programs using Computer-Aided Manufacturing (CAM) software; transfer programs to the machine control unit; and machine the parts.

Advanced Machining I

HRS: 48 – 128

This is an advanced study of lathe and milling operations. Emphasis is placed on advanced cutting operations of the lathe and milling machines, including the use of special tooling, bench assembly and materials identification.

Basic Lathe

HRS: 48 – 128

An introduction to the common types of lathes. Emphasis on basic parts, nomenclature, lathe operations, safety, machine mathematics, blueprint reading, and theory. Identify engine lathe components; match cutting speeds and feeds to materials; list safety procedures; identify machine accessories; identify types of lathes; use formulas to calculate speeds and feeds; set up basic lathe operations; perform metal removing operations such as turning, facing, drilling, grooving, turning on centers, and threading; and perform basic machine maintenance.

Basic Machine Shop I

HRS: 48 – 128

This is an introductory course that introduces machining fundamentals. The student begins by using basic machine tools such as the lathe, milling machine, drill press, power saw, and bench grinder. Machine terminology, theory, math, part layout, and bench work using common measuring tools is included. Emphasis is placed on shop safety, housekeeping, and preventative maintenance.

Basic Milling Operations

HRS: 64 – 144

An introduction to the common types of milling machines, part nomenclature, basic machine operations and procedures, safety, machine mathematics, blueprint reading, and theory. Identify milling machine components and their functions; identify types of milling machines; describe the difference between climb and conventional milling; calculate speeds and feeds for milling machines; and set up and operate milling machines.

Bench Work and Layout

HRS: 48 – 112

An introduction to bench work and layout. Application of the use and theory of tools such as hand tools, pedestal grinders, and layout tools. Identify and demonstrate use of layout and hand tools; adjust clearances on the tool rest and the spark arrestor on the pedestal grinder; perform grinding procedures on tools; and perform grinding wheel replacement.

Blueprint Reading and Sketching

HRS: 48 – 128

An introduction to reading and interpreting working drawings for fabrication processes and associated trades. Use of sketching techniques to create pictorial and multiple-view drawings. Interpret working drawings including dimensions, notes, symbols, sections, and auxiliary views; and sketch pictorials and multi-view drawings.

Computer Aided Design/Computer Aided Manufacturing

HRS: 48 – 128

Computer-assisted applications in integrating engineering graphics and manufacturing. Emphasis on the conversion of a working drawings using computer aided design/computer aided manufacturing (CAD/CAM) software and related input and output devices translating into machine codes. Describe the history and application of CAD/CAM systems; describe the CAD/CAM components; apply CAD/CAM software and related input and output devices; and interface CAD/CAM to machines.

Computerized Numerical Control Programming

HRS: 48 – 128

This course will introduce G and M codes (RS274-D) necessary to program Computer Numerical Controlled (CNC) machines. Write, simulate, edit execute CNC programs; calculate the feeds and speeds for various materials; and select the appropriate tooling.

Fundamentals of Computer Numerical Controlled (CNC) Machine Controls

HRS: 48 – 128

This course is a study in the programming and operation of Computer Numerical Controlled (CNC) machine shop equipment.

Geometric Dimensioning and Tolerancing

HRS: 64 – 128

Geometric dimensioning and tolerancing, according to standards, application of various geometric dimensions and tolerances to production drawings. Apply tolerance, feature control frame, feature of size, datums, form, orientation, location, runout, and profile controls between various parts.

Industrial Maintenance Technology, Basic

HRS: 48 – 96

An introduction to preventive maintenance of equipment associated with general industrial production. Instruction in diagnosing and repairing hydraulic, pneumatic and mechanical systems related to industrial equipment. Define break-down, preventative and total productivity maintenance; develop a cost model of each type of maintenance; design a basic troubleshooting tree; solve basic AC and DC schematic problems; identify electrical inputs and

expected outputs of basic industrial components; develop a flow chart for the operation of an air conditioning and/or refrigeration unit (AC/R); and identify expected pressures and temperatures for an AC/R unit.

Intermediate Machining I

HRS: 48 – 128

This course covers the operation of drilling machines, milling machines, lathes, power saws, and precision measuring tools.

Introduction to Computer-Aided Manufacturing (CAM)

HRS: 48 – 128

This course is a study of Computer-Aided Manufacturing (CAM) software which is used to develop applications for manufacturing.

Introduction to Industrial Maintenance

HRS: 48 – 96

A course in Basic mechanical skills and repair techniques common to most fields of industrial maintenance. Topics include precision measuring instruments and general safety rules common in industry, including lock-out/tag-out. Identify various types of fasteners common to industrial maintenance; utilize various hand and power tools; utilize precision measuring instruments; and demonstrate proper lock-out/tag-out procedures.

Machine Shop Mathematics

HRS: 48 – 112

This course is designed to prepare the student with technical, applied mathematics that will be necessary in future machine shop-related courses.

Manufacturing Materials and Processes

HRS: 48 – 128

This course is a basic study of various materials used in the manufacturing industry and the chemical, physical, and mechanical properties of various materials. Emphasis is placed on manufacturing processes, including casting, forming, and machining.

Operation of CNC Turning Centers

HRS: 48 – 128

This course will focus on CNC operations with an emphasis on turning centers. Set up and operate CNC turning centers; set the tool and workpiece offsets for machining operations; and edit the program as required.

Precision Tools and Measurement

HRS: 48 – 96

This course is an introduction to the modern science of dimensional metrology. Emphasis is placed on the identification, selection, and application of various types of precision instruments associated with the machine trade. Students will gain practice of basic layout and piece part measurements while using standard measuring tools.

Principles of Lean Manufacturing

HRS: 7 – 40

Study of principles of lean manufacturing; including a systematic approach to reducing costs and lead-time. Identify basic elements of the lean manufacturing process; and explain efficient production systems.

Pumps, Compressors and Mechanical Drives

HRS: 64 – 96

A study of the theory and operations of various types of pumps and compressors. Topics include mechanical power transmission systems including gears, v-belts, and chain drives.

Identify the principles involved in the operation of centrifugal and positive displacement pumps and compressors; explain the function of various components in pumps and compressors, disassemble and reassemble pumps, compressors and mechanical drives, and troubleshoot pumps, compressors and mechanical drives.

Specialized Tools and Fixtures

HRS: 64 – 128

This is an advanced course in the designing and building of special tools, such as jigs, fixtures, punch press dies and molds. This course covers the machining and assembling of a production tool, using conventional machine shop equipment. It includes the application of production tool theory, care and maintenance.

Statistical Process Control for Machinist

HRS: 48 – 112

An introduction to statistical process control used by machinist and machine operators. Analyze the data collected from work pieces. Identify the basic tools required for data collection; list the most common charts used to measure variations; demonstrate the use of measuring tools used for data collection; analyze the variances of data gathered; distinguish different charts for various applications and calculate random sampling by using the proper formulas.

B.8 Information Technologies

Courses cover IT fundamentals, including cybersecurity, hardware troubleshooting, and programming, preparing students for careers in modern technology.

Advanced Routing and Switching

HRS: 64 – 96

Advanced concepts for the implementation, operation, and troubleshooting of switched and routed environments. Emphasizes advanced routing protocols, Multi-Protocol Label Switching (MPLS), and advanced security. Implement advanced routing protocols; configure route filtering and redistribution, advanced security, and scalable multilayer-switched LANs; implement appropriate technologies to build a scalable routed network; implement campus networks using multiplayer switching technologies; and analyze traffic flow, reliability, redundancy, and performance for campus LANs, routed and switched WANs, and remote access networks.

Advanced Spreadsheets

HRS: 7 – 40

Advanced concepts in electronic spreadsheets. Topics address macro programming features, database functions, merging/linking spreadsheets, data file transfer, and Boolean functions. Utilize advanced spreadsheet functions, create and design macros, and develop solutions utilizing linked worksheets and merged data.

Advanced Word Processing

HRS: 64 – 128

Advanced word processing techniques using merging, macros, graphics, and desktop publishing. Includes extensive formatting for technical documents. This course is designed to be repeated multiple times to improve student proficiency. Implement advanced word processing features; import data; incorporate graphics; apply collaborative and special functions to enhance documents.

Fundamentals of Networking Technologies

HRS: 64 – 112

This course provides instruction in networking technologies and their implementation. Topics will include the OSI reference model, network protocols, transmission media, and networking hardware and software.

Implementing and Supporting Servers

HRS: 64 – 112

Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment. Configure peripherals and devices; set up servers; configure directory replication; manage licensing; create and manage system policies and profiles; administer remote servers and disk resources; create and share resources; implement fault-tolerance; configure servers for interoperability; install and configure Remote Access

Service (RAS); and identify and monitor performance bottlenecks and resolve configuration problems.

Intermediate Spreadsheets

HRS: 7 – 40

Instruction in moving and copying, cell contents; sorting mathematical, statistical, and financial functions; date and time arithmetic; report generation; and built-in graphics support.

Create macros; utilize database features; apply data analysis features; and utilize linked worksheets.

Intermediate Word Processing

HRS: 16 – 96

Word processing applications to produce mailable documents. Apply basic and advanced formatting skills and special functions to produce documents.

Introduction to PC Operating Systems

HRS: 48- 128

Introduction to personal computer operating systems including installation, configuration, file management, memory and storage management, control of peripheral devices, and use of utilities. Install, configure, and maintain the operating system; perform basic file management operations; organize and allocate primary and secondary storage; access and control peripheral devices; and run utilities.

Introduction to Spreadsheets

HRS: 64 – 112

Instruction in the concepts, procedures, and application of electronic spreadsheets. Define spreadsheet terminology and concepts, create formulas and functions, use formatting features, and generate charts, graphs, and reports.

Networking with TCP/IP

HRS:

This course will prepare the student to set up, configure, use, and support Transmission Control Protocol/Internet Protocol (TCP/IP) on networking operating systems.

Personal Computer Hardware

HRS: 48 – 96

Current personal computer hardware including assembly, upgrading, setup, configuration, and troubleshooting. Assemble/setup and upgrade personal computer systems; diagnose and isolate faulty components; optimize system performance; and install/connect peripherals.

Word Processing

HRS: 64 – 128

Word processing software focusing on business applications. This course is designed to be repeated multiple times to improve student proficiency. Apply basic and advanced formatting skills and special functions to produce documents.

B.9 Welding Technologies

Courses include training in MIG, TIG, and stick welding, as well as advanced welding certifications, preparing students for structural and pipe welding careers.

Advanced Gas Tungsten Arc Welding (GTAW)

HRS: 80 – 176

This course covers advanced topics in GTAW welding, including welding in various positions and directions.

Advanced Layout and Fabrication

HRS: 80 – 176

This is an advanced course in layout and fabrication which includes production and fabrication of layout, tools, and processes. Emphasis is on application of fabrication and layout skills.

Intermediate Layout and Fabrication

HRS: 64 – 160

This course is an intermediate course in layout and fabrication. Includes design, layout, and fabrication. Emphasis placed on symbols, blueprints, and written specifications.

Intermediate Pipe Welding

HRS: 80 – 176

A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Position of welds will be 1G, 2G, 5G, and 6G using various electrodes. Topics covered include electrode selection, equipment setup, and safe shop practices.

Intermediate Shielded Metal Arc Welding (SMAW)

HRS: 80 – 176

This course is a study of the production of various fillet and groove welds. Preparation of specimens for testing in various positions.

Introduction to Blueprint Reading for Welders

HRS: 48 – 128

A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes. Includes systems of measurement and industry standards. Also includes interpretation of plans and drawings used by industry to facilitate field application and production. Define terms and abbreviations; interpret views, lines, dimensions, detail drawings and welding symbols; identify structural shapes; demonstrate the proper use of measuring devices; and calculate dimensions.

Introduction to Flux Cored Arc Welding (FCAW)

HRS: 64 – 60

This course is an overview of terminology, safety procedures, and equipment set-up. Practice in performing various joints using Flux Cored Arc Welding (FCAW) equipment.

Introduction to Gas Metal Arc Welding (GMAW)

HRS: 80 – 176

This course is a study of the principles of gas metal arc welding, setup and use of Gas Metal Arc Welding (GMAW) equipment, and safe use of tools/equipment. Instruction covers various joint designs.

Introduction to Gas Tungsten Arc Welding (GTAW)

HRS: 96 – 176

This course is an introduction to the principles of gas tungsten arc welding (GTAW), setup/use of GTAW equipment, and safe use of tools and equipment. The course covers welding instruction in various positions on joint designs.

Introduction to Layout and Fabrication

HRS: 48 – 160

This course is a fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in constructions.

Introduction to Pipe Welding

HRS: 80 – 176

An introduction to welding of pipe using the shielded metal arc welding process (SMAW), including electrode selection, equipment setup, and safe shop practices. Emphasis on various welding positions and electrodes. Describe equipment utilized; demonstrate required pipe preparation; and perform welds using various positions and electrodes.

Introduction to Shielded Metal Arc Welding (SMAW)

HRS: 80 – 176

This course is an introduction to shielded metal arc welding process. Emphasis placed on power sources, electrode selection, and various joint designs.

Introduction to Welding

HRS: 48 – 80

Equipment used in oxy-fuel and arc welding. Includes cutting of ferrous metals. Emphasizes welding and cutting safety and basic welding processes. Identify safety procedures associated with oxy-fuel and arc welding and cutting processes; and demonstrate basic welding and cutting.

Welding Codes and Standards

HRS: 48 – 128

This course is an in-depth study of the welding codes and their development in accordance with structural standards, welding processes, destructive and nondestructive test methods.

B.10 Logistics and Supply Chain

Programs offer training in warehouse operations, inventory management, and supply chain logistics, preparing individuals for roles in transportation and logistics management.

Certified Custom Specialist (CCS)

HRS: 64 - 96

The CCS course will review fundamental points relevant to the importation process while delving into practical, relevant subject matter not generally tested on the formal Customs licensing exam. Each topic will help you grow and develop as an import professional.

Certified Export Specialist (CES)

HRS: 64 - 96

Certified Export Specialist (CES) certification program is designed to help trade professionals involved in the export industry to become competent and knowledgeable in the current export regulations.

Certified Logistics Associate

HRS: 40 - 64

Emphasis on physical distribution and total supply chain management. Includes warehouse operations management, hardware and software operations, bar codes, organizational effectiveness, just-in-time, and continuous replenishment.

Certified Logistics Technician

HRS: 40 - 64

A systems approach to managing activities associated with traffic, transportation, inventory management, warehousing, packaging, order processing, and materials handling.

Logistics Management

HRS: 64 - 96

Identification of the principles and practices involved in international distribution systems including the multinational corporation. Attention to global strategic planning, production, supply, manpower/labor, geography, business communications, cultural, political, and legal issues affecting global distribution and firm/host relationships.

Master Customs Specialist (MCS)

HRS: 64 - 96

The Master Customs Specialist (MCS) Certification designates its holders as possessing advanced knowledge and skills in U.S. Customs and its partner government agencies. A highly prized and recognized accomplishment, the course leading to certification provides the practitioner with a depth of expertise beyond the day-to-day operational demands of Customs brokers and import operations.

Master Export Specialist (MES)

HRS: 64 – 96

Designed for a broad audience that includes shippers, carriers, freight forwarders, bankers, government employees, insurance professionals and students alike, this certificate program introduces an even higher level of excellence to the NEI's outstanding continuing education program.

Production Activity Control

HRS: 48 - 80

A detailed study of priority and capacity management through the use of material requirements planning (MRP), capacity management, capacity requirements planning (CRP), production activity control (PAC), and Just-In-Time (JIT). Exploration of the execution of the production place and master production schedule, reactions to capacity constraints, and maintenance of individual order control.

Supply Chain Materials Management

HRS: 48 - 64

Introduces the concepts and principles of supply chain management, materials management to include inventory control and forecasting activities.

B.11 Workplace Safety and Health

Programs provide OSHA certification, hazard identification, and safety compliance training, ensuring students are prepared to maintain and enforce workplace safety standards.

Accident Prevention, Inspection, and Investigation

HRS: 32-96

This course provides an understanding of occupational hazard recognition, accident prevention, loss reduction, inspection techniques, and accident investigation analysis. Participants will learn to describe the components of an effective accident investigation, analyze factors contributing to accidents, recommend changes to prevent future accidents, identify effective safety inspection components, and provide recommendations to correct hazards identified during inspections.

Basic Safety and Health

HRS: 7-40

This course introduces the basic concepts of safety and health. It focuses on identifying common workplace hazards, implementing corrective actions, incorporating job safety analysis (JSA), and applying appropriate training.

Basic Safety Communications

HRS: 7-40

Participants in this course will establish basic safety skills for the workplace, including following safety instructions, recognizing safety signs and labels, and reporting unsafe working conditions and accidents.

Construction Site Safety and Health

HRS: 32-96

This course provides an introduction to safety requirements for construction sites, including occupational health and environmental controls. Participants will learn to identify hazards on construction sites, apply relevant regulations, and write a job site safety analysis (JSA).

Construction Site Safety Supervisor (CSSS)

HRS: 83

This training sequence is designed for project personnel responsible for job site safety, providing field managers with a high degree of safety expertise. The trainee must complete the entire Field Safety curriculum and five modules from the Safety Technology curriculum to earn this credential.

Construction Site Safety Technician (CSST)

HRS: 103

The CSST program is designed for industry safety professionals, company safety officers, site safety coordinators, or foremen seeking to enhance their safety knowledge and skills. Trainees must complete the entire Field Safety and Safety Technology curriculum to obtain this credential.

Cardiopulmonary Resuscitation (CPR)

HRS: 7-10

This course teaches lifesaving skills for respiratory and cardiac emergencies involving adults, children, and infants. It is designed to be repeated to improve proficiency. Participants will demonstrate Cardiopulmonary Resuscitation (CPR) skills, choking lifesaving techniques, and the key steps in first aid according to current guidelines.

Ergonomics and Human Factors in Safety

HRS: 48-128

This course examines the relationship between human behavior and ergonomics as applied to workplace safety. Participants will explain the psychology of human behavior related to safety, identify ergonomic hazards, recommend appropriate controls, and understand the workplace factors contributing to ergonomic risks.

Fabrication Safety Training

HRS: 7-40

This course focuses on safety compliance for fabrication in various manufacturing and industry settings. Participants will demonstrate the safe operation of equipment, hand tools, and power tools used in fabrication and manufacturing industries.

Fire Protection Systems

HRS: 32-96

This course provides a study of fire protection systems and their applications, with an emphasis on fire prevention codes and standards. Participants will explain fire chemistry theory, summarize fire protection methods, describe their applications, and identify applicable codes and standards in the industrial and business environment.

Fire Protection Training - Portable Fire Extinguishers

HRS: 7-40

This course introduces the selection and use of portable fire extinguishers. Participants will identify fire classifications, select the correct extinguisher, and demonstrate application procedures to an accepted standard.

First Aid

HRS: 7-40

This course provides instruction in first aid for injured and ill persons. Participants will discuss and demonstrate management of medical emergencies, injuries, and environmental emergencies as recommended by the certifying agency and the American Heart Association.

Industrial Safety

HRS: 32-96

This course provides an overview of state and federal regulations requiring industrial safety training. Topics include OSHA standards such as confined space entry, lockout/tagout, arc flash, and other work-related subjects. Participants will describe the components of safety systems, interpret Safety Data Sheets (SDS), select and use Personal Protective Equipment (PPE), and perform lockout/tagout procedures.

Introduction to Safety and Health

HRS: 48-128

This course introduces the basic concepts of safety and health. Participants will identify procedures to minimize workplace injuries and illnesses, incorporate job safety analysis (JSA) and training, and recognize elements of an effective safety culture.

Material Handling

HRS: 48-128

This course covers proper methods for material handling and storage, including safety practices, proper equipment usage, engineering controls, and the use of personal protective equipment. Participants will identify industry regulations, explain safe work practices, and demonstrate the use of handling equipment.

Mechanical Lift Training

HRS: 7-40

This course provides orientation and hands-on training for the safe operation of mechanical lifts. Participants will explain and perform procedures to safely complete tasks related to mechanical lift operations.

Mobile Elevated Working Platforms

HRS: 7-40

This course outlines safe operating procedures for aerial platforms, boom lifts, and other elevated working platforms. Participants will learn to operate these devices safely and prevent accidents while working above ground.

Occupational Safety and Health Management

HRS: 7-40

This course explores major safety issues in the workplace, including general safety awareness, loss control, and regulatory compliance. Participants will learn about record-keeping requirements, emergency preparedness, and proactive versus reactive safety concepts.

OSHA 10-Hour Construction Outreach Training

HRS: 10

This course is designed for entry-level construction workers and provides essential safety training tailored to the construction industry. Participants will identify construction site hazards, understand OSHA standards, and promote safe practices.

OSHA 10-Hour General Industry Outreach Training

HRS: 10

This course provides entry-level workers with foundational safety training for general industry. Participants will learn OSHA regulations, recognize workplace hazards, and implement safety measures.

OSHA 30-Hour Construction Outreach Training

HRS: 30

This course provides advanced safety training for supervisors in the construction industry. It focuses on managing safety programs, leading investigations, and ensuring compliance with OSHA standards.

OSHA 30-Hour General Industry Outreach Training

HRS: 30

This course offers comprehensive safety training for supervisors in general industry. Participants will learn to conduct hazard assessments, implement safety programs, and ensure regulatory compliance.

OSHA Regulations - Construction Industry

HRS: 48-128

This course provides a study of OSHA regulations for the construction industry. Participants will identify applicable regulations and demonstrate proficiency in retrieving information from Title 29 C.F.R. Part 1926.

OSHA Regulations - General Industry

HRS: 48-128

This course focuses on OSHA regulations for general industry. Participants will identify standards, retrieve information from Title 29 C.F.R. Part 1910, and discuss safety programs.

Physical Hazards Control

HRS: 32-96

This course examines physical hazards in industry and methods to control them through workplace design and redesign. Participants will identify hazards, implement control practices, and apply OSHA standards to ensure safety.

Powered Industrial Truck Operator Training

HRS: 7-40

This course focuses on safe lift truck operation and OSHA training requirements. Participants will learn to operate powered industrial trucks safely, avoid workplace hazards, and perform equipment inspections.

Principles of Safety Engineering

HRS: 48-128

This course teaches methods to predict, eliminate, or reduce unsafe conditions during design and construction. Participants will evaluate blueprints, implement safety controls, and apply engineering principles to workplace safety.

Safety and Accident Prevention

HRS: 7-40

This course focuses on recognizing and evaluating workplace hazards and implementing engineering, administrative, and personal protective measures to control them.

Safety Communications

HRS: 7-40

This course enhances safety and communication skills in the workplace. Participants will document unsafe conditions, report accidents, and identify regulatory standards.

Safety Program Management

HRS: 48-128

This course examines major safety management issues, including safety awareness, loss control, and regulatory compliance. Participants will develop and implement safety programs, apply safety audit processes, and summarize human behavior modification techniques.

Workplace Safety

HRS: 7-40

This course introduces training techniques for handling bloodborne and airborne pathogens, general safety, and security. Participants will explain SDS requirements, OSHA regulations, and compliance practices.

B.12 Robotic Systems and Automation

Courses focus on robotic programming, PLC systems, and industrial automation, equipping participants with advanced skills for careers in robotics and automated manufacturing.

Advanced Hydraulics

HRS: 64 - 128

Advanced study of hydraulic systems and components including diagnostics and testing of hydraulic systems.

Basic Fluid Power (Pneumatics/Hydraulics)

HRS: 48 - 128

Basic fluid power course covering pneumatic and hydraulic systems, fluid power symbols, operating theory, components, and basic electrical and manual controls.

DC-AC Circuits

HRS: 48 - 128

Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchhoff's laws, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques.

Digital Systems

HRS: 48 - 128

A course in electronics covering digital systems. Emphasis on application and troubleshooting digital systems.

Electro-Mechanical Devices

HRS: 64 - 128

This course is a study of electro-mechanical devices found in robotic systems. Includes switches and relays.

Fluid Power I (Hydraulics)

HRS: 48 - 128

Introduction to the basic principles of hydraulic pressure flow and system components. Emphasis on maintenance procedures, troubleshooting techniques, and safety practices.

Fluid Power II (Pneumatics)

HRS: 48 - 128

Introduction to the basic principles of pneumatic pressure, flow, and system components, symbols, and circuits. Emphasis on troubleshooting techniques, good maintenance procedures, and safety practices.

Industrial Maintenance Technology, Basic

HRS: 48 - 96

An introduction to preventive maintenance of equipment associated with general industrial production. Instruction in diagnosing and repairing hydraulic, pneumatic and mechanical systems related to industrial equipment.

Introduction to Industrial Maintenance

HRS: 48 - 96

Basic mechanical skills and repair techniques common to most fields of industrial maintenance. Topics include precision measuring instruments and general safety rules common in industry, including lockout/ tag-out.

Introduction to Programmable Logic Controllers

HRS: 7 - 40

Basic hardware and software applications for industrial Programmable Logic Controllers (PLC). Includes power supplies, discrete Input/Output (IO) modules, programming devices, processors, basic logic elements, timers, and counters.

Mechanical Maintenance

HRS: 48 - 128

General principles of mechanical and electrical systems related to inspection, repair, and preventative maintenance of facility equipment.

Programmable Logic Controllers I

HRS: 64 - 128

Fundamental concepts of programmable logic controllers, principles of operation, and numbering systems as applied to electrical controls.

Pumps, Compressors, & Mechanical Drives

HRS: 64 - 96

This course is a study of the theory and operations of various types of pumps and compressors. Topics include mechanical power transmission systems including gears, v-belts, and chain drives.

Robotic Fundamentals

HRS: 48 - 128

This course is an introduction to flexible automation. Topics will include installation, repair, maintenance, and development of flexible robotic manufacturing systems.

Sensors

HRS: 64 - 96

Study of basic principles of industrial sensors for automated systems. Emphasis on the operation and application of position, rate, proximity, opto-electronics, ranging, and pressure switches.

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