AHK German American Chambers of Commerce
Deutsch-Amerikanische Handelskammern

GACC Pit Chapter

Apprenticeship Programs

COURSE CATALOG

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About us

The Pittsburgh Chapter of the German-American Chamber of Commerce (GACC PIT) connects world-class German training standards with U.S. industry needs. Through our partnership with the German Chambers of Industry and Commerce (IHK), we offer over 360 proven training modules, adapted into 2.5-year dual apprenticeship programs that combine classroom theory with hands-on workplace experience.

Benefits Overview

EMPLOYEES

- Build a skilled talent pipeline
- Tailored training to company needs
- Improve retention and loyalty
- Access to proven German training module

APPRENTICES

- No tuition fees
- Earn while you learn
- Hands-on industry experience
- Internationally recognized certification.

MISSION AT GACC PIT

To help employers create a sustainable pipeline of skilled talent by attracting young people to manufacturing careers, investing in training that builds employee loyalty, and preparing well-rounded technicians.

EMPLOYER-SPONSORED TRAINING AND EDUCATION

- Employer selects and hires the apprentice; this is the primary relationship
- Employer provides on the job training (OJT). Active training and not job shadowing is an important aspect.
- Employer invests in the apprentice:
- Hourly wages while at work,
- Tuition for RTI (Related Technical Instruction),
- Full-time hours combining OJT and Classroom Training (Dual Program)

WE SUPPORTS THE COMPANY THE WHOLE WAY THROUGH, WITH THE FOLLOWING:

- Marketing to candidates
- Developing customized company training plans based on industry-defined competencies
- Coordination with community colleges
- Ongoing consulting, support, and administration, and
- Reliable quality control via Apprenticeship Program Exams (Licensed by the DiHK, translated to English)

Our GACC Pit Chapter

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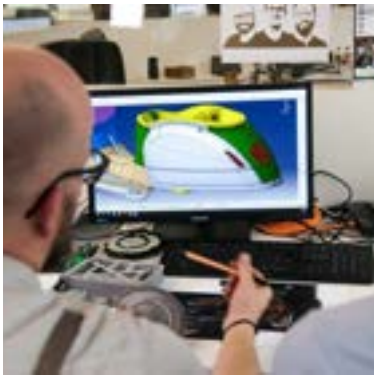
Apprenticeship Programs

Mechatronics Technician

Polymer Process Technician

Sales Engineer



CAM/CAD Technical Designer

EV Automotive Technician

Chemistry Lab Technician

Mechatronics Technician

Technology Install, troubleshoot, and repair electrical, mechanical, and control systems (including robotics, pneumatics, hydraulics, and electronics); wire motors/drives; assemble and maintain machinery; read schematics; configure hardware/software; perform QA testing.

Methodology Apply systematic problem-solving (Plan-Do-Check-Act), ensure proper documentation, work safely with PPE, follow quality management principles, and communicate effectively.

Potential Roles: Maintenance Technician, Automation/Robotics Technician, Control Systems Specialist, Service/Field Service Technician, or Industrial Equipment Installation and Maintenance Specialist.

CERTIFICATIONS

- DOL Journeyman Certification • Certification and/or Associates
- Degree (A.S.) Mechatronics Technology
- • Manufacturing Skill Standards Council (MSSC) Certified Production Technician (CPT)
- PMMI
- DiHK German Certification in Mechatronics (Mechatroniker)

Academic Curriculum

ROADMAP TO SUCCESS

The curriculum for students enrolled in a Mechatronic Technician at A Road to success requires 660 hours of classroom training.

Course Schedule Example

Year	Hours	Required Course
One	60	Introduction to Electronics
	60	Fluid Power Systems
	60	Introduction to Mechanical Systems
	60	Mechatronics & Industry 4.0
	60	Manufacturing Technology: Math, Technology, and Reasoning
Total	**300**	
Two	60	Digital Electronics
	60	Industrial PowerSystems
	60	Programmable Logic Controllers
	60	ManufacturingTech" Processes, Controls& Quality
Total	**240**	
Three	60	Intro to Robotics
	60	Motor and Motor Controls
Total	**120**	
Total	**660**	

Potential Provider(s):
Community College of Allegheny County, Westmoreland County Community College, Butler County Community College, Community College of Beaver County, Northern Pennsylvania Regional College

Polymer Process Technician

Technology	Operate, set up, troubleshoot, and maintain extrusion/blow mold machinery; understand machine components and materials (PVC/Regrind); perform quality control checks; adjust processes; program and maintain mechatronic systems; assemble and dismantle machinery; perform preventive maintenance.
Methodology	Work systematically (Plan-Do-Check-Act); analyze and troubleshoot problems; document accurately; follow safety procedures and use PPE; apply quality management; communicate effectively.
Potential Roles:	Extrusion Technician, Injection Mold Technician, Blow Mold Technician.

CERTIFICATIONS

- DOL Journeyman Certification,
- A.S. Polymer and Mechatronics Technology
- Polymer Technology Certification,
- Manufacturing Skill Standards Council (MSSC)
- Certified Production Technician (CPT)
- PMMI
- DiHK German Certification in Polymer Technician

Academic Curriculum

ROADMAP TO SUCCESS

The curriculum for students enrolled in a Polymer Technology Porcess Technician at A Road to success requires 699 hours of classroom training.

Course Schedule Example

Year	Hours	Required Course
One	40	Basic Electrical (1,2,3,4)
	80	Motor Control (1,2)
	20	Industrial Electrical Wiring
	30	Power Distribution
	25	Polymer Technology Certification- Part 1
Total	**195**	
Two	24	Introduction to Robotics
	45	Polymer Technology Certification Part 2
	20	Job Shadowing
	50	Programmable Controllers (1,2,3)
	40	Hydraulics (1,2)
	45	Welding Fundamentals
	45	Engineering Drawing
Total	**269**	

Academic Curriculum

ROADMAP TO SUCCESS

The curriculum for students enrolled in a Polymer Technology Porcess Technician at A Road to success requires 699 hours of classroom training.

Course Schedule Example

Year	Hours	Required Course
Three	25	Polymer Technology Certification Part 3
	10	Pneumatics
	10	Pneumatics Maintenance
	10	Piping Systems
	10	Electro-Fluid Power I
	20	Hydraulic Troubleshooting I
	10	Basic Mechanical Drives
	10	Light Duty V-Belt and Chain Drives
	10	Heavy Duty V-Belt Drives
	10	Heavy Duty Chain Drives
	45	Robotics and Controls
	45	Advanced Welding
Total	**235**	
Total	**699**	

Sales Engineer

Technology Learn technical details of software relevant to clients, learn how to market for B2B sales, generate sales leads, evaluate data, problem-solve with installed equipment, identify customer needs, communicate with upper management

Methodology Build marketing and sales skills, demonstrate follow-up, cross-selling, up-selling skills, use problem-solving and customer-oriented strategy, communicate between customer and engineers/R&D, quality management

Potential Roles: Sales Engineer, Technical Sales, Inside Sales, Outside Sales Engineer

CERTIFICATIONS

- DOL Journeyman Certification
- Associates Degree in Business with Sales Engineering Certification
- Manufacturing Technician Level 1 (MS Institute)
- DiHK German Certification in Sales Engineering (Industriekaufmann/Frau)

Academic Curriculum

ROADMAP TO SUCCESS

The curriculum for students enrolled in a Sales Engineer program requires 466 hours of classroom training.

Course Schedule Example

Year	Hours	Required Course
1	23	Business Communication
	30	Introduction to Business or Principles of Management
	30	Financial Accounting
	45	Managerial Accounting
	45	Production Management - Planning, Operating and Controlling
Total	**175**	
2	50	Supply Chain Management
	23	Human Resource and Organization Management
	30	Principles of Macroeconomics
	50	Principles of Marketing + Principles of Selling
	45	Investments and Finance
	x	Midterm Exam
Total	**198**	

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Academic Curriculum

ROADMAP TO SUCCESS

The curriculum for students enrolled in a Sales Engineer program requires 466 hours of classroom training.

Course Schedule Example

Year	Hours	Required Course
2.5	50	Planning, Operating and Controlling Sales Processes
	23	Final Project: Implement business strategies and projects
	20	Optional Electives (e.g. Blueprint Reading, Fluid Power Systems)
Total	**93**	
Total:	**466**	

Potential Provider(s):
Community College of Allegheny County, Westmoreland County Community College, Butler County Community College, Community College of Beaver County, Northern Pennsylvania Regional College

CAM/CAD Technical Designer

Technology Create and edit CAD/CAM part models, program multi-axis machines, select tooling, plan manufacturing processes, maintain quality/revisions, troubleshoot machines, and apply GD&T.

Methodology Analyze systems, design components, ensure safe/quality work, and communicate effectively with customer focus.

Potential Roles: AD/CAM Technical Designer, Mechanical Design Engineer, CAD Product Designer, Technical Drafting.

CERTIFICATIONS

- DOL Journeyman Certification
- Associates Degree (A.S.) Computer-Aided Drafting & Technology
- AutoCAD certification
- DiHK German Certification in CAD/CAM Technical Design

Academic Curriculum

ROADMAP TO SUCCESS

The curriculum for students enrolled in a CAD/CAM program requires 492 hours of classroom training.

Course Schedule Example

Year	Hours	Required Course
1	30	Engineering Drawing 1
	30	Introduction to Computer Aided Drafting (CAD)
	2	Engineering Seminar
	20	Algebra Fundamentals
	30	Introduction to Machining
	20	Math for the Technologies
Total	**152**	
2	30	Engineering Drawing 2
	20	Math for Technologies 2
	20	Introduction to Lathe Operations
	30	Computer Asstd Drafting Applications
	30	Technical Physics 1
	30	Technical Computing
	20	Introduction to Mill Operations
	30	Introduction to Architectural Modeling
Total	**180**	

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Academic Curriculum

ROADMAP TO SUCCESS

The curriculum for students enrolled in a CAD/CAM program requires 492 hours of classroom training.

Course Schedule Example

Year	Hours	Required Course
3	30	Parametric Modeling 2
	10	Technical Communications
	30	Customizing the CAD Environment
	30	Intro to Parametric Modeling
	30	Fundamentals of Computer Controlled Machining
	30	Advanced CNC and Mastercam
	-	GACC Final Exam
Total	**160**	
Total:	**492**	

Potential Provider(s):
Community College of Allegheny County, Westmoreland County Community College
Northern Pennsylvania Regional College

EV Automotive Technician

Please Note: Prior Knowledge required!

This program is only open to individuals with a prior background in the automotive field.

Technology Work with high-voltage systems, electric motors, battery management systems, and advanced EV components. Use diagnostic tools, CAN bus systems, chargers, and experimental pilot setups. Operate and maintain EV-specific equipment including inverters, DC/AC converters, and high-voltage batteries.

Methodology Follow strict safety protocols (PPE, lockout/tagout, fire safety, ASE Safety Certification), conduct diagnostics, perform maintenance and disconnections, troubleshoot system faults, manage battery state-of-charge, and integrate EV subsystems. Hands-on learning includes regenerative braking, high-voltage climate systems, steering, ADAS, and park assist systems.

Potential Roles: EV Automotive Technician, High-Voltage Systems Specialist, Battery Diagnostics Technician, Electric Vehicle Maintenance Specialist, EV Systems Integration Technician.

CERTIFICATIONS

- Journeyworker Papers (Dept. of Labor & Industry)
- EV Automotive College Certificate from CCAC
- ASE Certification in High-Voltage Electrical Safety Standards
- German Apprenticeship Certificate (DiHK) as Kfz-MechatronikerIn System- und Hochvolttechnik

Academic Curriculum

ROADMAP TO SUCCESS

The curriculum for students enrolled in an EV Automotive Technician n program requires 185 hours of classroom training.

Course Schedule Example

Year	Hours	Required Course
1	50	Safety & Electrical Awareness
	20	Discuss High Voltage Drive Train Topology & Construction
	25	Electric Motors and Controls
	30	Battery Management
	30	High Voltage Battery Diagnostics and Maintenance
	30	Additional EV Automotive Systems
Total:	**185**	

PotentialProvider(s):

Community College of Allegheny County

Chemistry Lab Technician

Technology Handle and analyze chemicals using laboratory instruments and techniques such as chromatography, spectroscopy, titrations, and microscopy. Operate experimental pilot plants, prepare solutions, maintain and calibrate lab equipment, and record/interpret data.

Methodology Follow lab protocols and safety standards (OSHA 10, chemical hazard handling), conduct experiments, collect and analyze data, maintain lab inventory, and document results through reports and charts.

Potential Roles: Chemistry Lab Technician, Research Assistant, Quality Control Analyst, Laboratory Specialist, Chemical Analyst.

CERTIFICATIONS

- Journeyworker Papers (Dept. of Labor & Industry)
- Chem Lab Technician Diploma from Bidwell Training Center
- OSHA 10 Certificate
- German Apprenticeship Certificate (DiHK) as Chemie LaborantIn

Academic Curriculum

ROADMAP TO SUCCESS

The curriculum for students enrolled in a Chemistry Lab Technician program requires 1170 hours of classroom training.

Course Schedule Example

Name	Hours	Required Course
MATH 101	120	Technical Mathematics
CHEM 101	120	Chemistry for Technicians
CHEM 102	96	Organic Chemistry for Technicians
CHEM 103	96	Materials Chemistry for Technicians
LAB 101	48	Introduction to the Chemistry Lab
LAB 102	96	Measurement and Solutions
LAB 103	96	Chemical Reactions and Titrations
LAB 104	120	Synthesis and Characterization
LAB 105	120	Instrumental Analysis
LAB 106	90	Applied Chemical Methods
PD 101	24	Professional Development 1: Career Exploration
PD 102	24	Professional Development 2: Resume Building/Professional Documents
PD 103	24	Professional Development 3: Interview Skills
COMP 101	48	Intro to Computers
COMP 102	48	Technical Communication
Total:	**1170**	

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More Questions?

Reach out!

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