Technician Training

Operated by ALMMII
A Michigan-based 501c(3) Non-Profit

Integrated technical skills for advanced manufacturing careers

A state-of-the-art interactive learning facility, located in the LIFT Manufacturing Innovation Institute, the LIFT Learning Lab spans 6,500 square feet, featuring seven unique labs equipped to prepare your workforce for the most in-demand manufacturing careers. LIFT provides training leading to industry recognized credentials and competencies required in today's manufacturing workplace, or can provide a unique setting to deliver your company's own training.

The LIFT Learning Lab facility and equipment have been curated to showcase robotics and automation principles that underpin "smart factories," as well as expose students to materials science, metrology, and maker spaces for hands-on fabrication.

Learning Lab Features

- Fundamental Skills Development Lab for Advanced Manufacturing
- Smart Factory Twin Lab (Under Construction)
- ASM Materials Science and Project Fabrication Lab
- CNC Operations Training Center
- Welding Technician Training Center
- Virtual Learning Lab
- Training Room and Flexible Learning Spaces

Why train at LIFT in the Learning lab?

Industry-recognized training and credentials

All LIFT-provided training is aligned to standards-based, nationally portable, industry recognized credentials ensuring students are prepared with the competencies employers need.

Innovation lab setting

The LIFT Learning Lab is a far cry from a traditional educational facility, with learning occurring in a real manufacturing environment. With learning facilities co-located in a high-tech innovation lab, students are exposed to new technologies and cutting-edge processes while learning the fundamentals they need to thrive in an advanced manufacturing environment.

Certified instructors with industry experience

Instructors are certified and bring real-world industry experience into the classroom. Most LIFT instructors are still working in their field and are up-to-date on the latest technologies and processes used in industry, ensuring students' learning is relevant to today's industry needs.

High-end, state-of the-art equipment

The LIFT Learning Lab features the latest models of industry-standard equipment-- no miniaturized or out-of-date models. Students will learn on the same equipment they will encounter in the workplace, reducing employers' need to provide additional training on the job.

Lift Technician Training Programs

LIFT provides training for the most in-demand technician-level positions in advanced manufacturing, taught by experienced professionals with extensive industry experience.

Entry Level Welding Technician

225 Contact Hours

Partial AWS SENSE Level 1

LIFT's Welding Technician program prepares students to become entry-level welders in either Gas Metal Arc Welding (MIG) or Gas Tungsten Arc Welding (TIG). Utilizing curriculum aligned to the American Welding Society SENSE Level I standards, this course covers the required knowledge, attitude, skills, and habits required to perform routine, predictable, repetitive, and procedural welding tasks. Topics include: Safety, Occupational Orientation, Gas Metal Arc Welding (GMAW) or Gas Tungsten Arc Welding (GTAW), four Thermal Cutting Processes, and Welding Inspection and Testing. **Cost: $5,000**

Welder Career Outlook

Entry-level welders:

- Use hand-held metal joining tools to permanently join parts, as well as fill holes, seams, and indentations.
- Understand blueprints and calculate dimensions.
- Inspect materials and structures for quality of welds.
- Keep their machinery and welding equipment in excellent working condition.
- Understand metallurgy, some specialized math like trigonometry and some basic engineering.

22,500 openings are projected nationwide through 2026

404,800 people working as Welders across the country in 2016

Welders can make up to $63,170 a year, with median earnings around $40,240

Source: Bureau of Labor Statistics, U.S. Department of Labor Occupational Outlook Handbook

CNC Operations

292 Contact Hours

NIMS Measurement & Materials Safety

NIMS CNC Lathe Operations

NIMS CNC Mill Operations

LIFT's CNC Operations program prepares students to operate CNC mills and lathes. Utilizing curriculum aligned to NIMS Machining standards, this course covers: Machine maintenance, safety, print reading, measurements, inspection, cutting tool assembly, geometrical dimensioning and tolerancing (GD&T), and applied mathematics. This program combines self-paced online learning (that can be completed off-site) with hands-on project based learning done in the Learning Lab. **Cost: $4,000**

CNC Operator Career Outlook

CNC Operators:

- Work with computer numeric controlled (CNC) heavy machinery from setup to operation to produce parts and tools from metal, plastic or other materials.
- Translate the requirements of detailed part drawings into measurements for production.
- Perform proper set-up and calibration procedures for all equipment and make sure machines are well-maintained.
- Adjust the machine to control speed, material feed and path of the cut, as well as make sure the machines are set up properly, working well, and producing quality product.
- Inspect the finished product to ensure it is both manufactured to defined design geometry and tolerances and is defect-free and ready for the next step in production.

14,500 job openings projected nationwide through 2026

146,000 people working as CNC Operators in the US

CNC Operators can make up to $63,170 a year, with median earnings around $39,230

Source: Bureau of Labor Statistics, U.S. Department of Labor Occupational Outlook Handbook

*Program is self-paced and competency-based, and the number of hours required to complete coursework will vary by student.

Multi-skilled Technician

325 Contact Hours

MSSC Certified Production Technician

NIMS and AWS credentials with minimal additional training

The IGNITE: Mastering Manufacturing curriculum, students are introduced to manufacturing technologies, processes and systems that will equip them for success in a 21st century production environment.. A curriculum flexible enough to provide performance-based learning for high school CTE programs or for adult learners transitioning to a new career, IGNITE blends virtual learning with project-based experiences built around real industry challenges to develop essential competencies for success in a 'smart factory'.

Multi-Skilled Advanced Manufacturing Technician		
	Technology Specific Competencies	• Additive Manufacturing • Cyber Security • Lightweighting Materials
	Advanced Technical Skills	• Machine Tools • Robotics Programming • Programmable Controllers • CAM • Mold Design • Welding • Plastics
	Core Technical Skills	• Safety • Measurement • AC/DC Electricity • Fluid Power Systems • CAD and CNC Programming • Manufacturing Processes and Technologies
	Materials Science	• Principles of Materials • Engineering Design Cycle
	Common Employability & IT Skills	• Personal, People, Applied Knowledge, and Workplace Skills

IGNITE prepares students for:

Immediate readiness for entry-level production roles.

Additional training and education leading to multiple career paths including:

- Engineering Technicians
- Engineering Technologists
- Engineers

IGNITE
Mastering Manufacturing

About LIFT

LIFT is a 501c3 public-private partnership established in 2014 and created to develop and deploy advanced lightweight materials manufacturing technologies. LIFT is also known by its parent organization name: American Lightweight Materials Manufacturing Innovation Institute (ALMMII). From its inception, LIFT, its members and partners, have accepted as a critical part of the Institute's core mission the development of an educated and skilled workforce, competent and confident in deploying the new technologies and processes being developed across the nation.

Location

The LIFT Learning Lab is located in the center of Detroit's Corktown neighborhood- a growing manufacturing innovation hub.

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