

Certification for Manufacturing (C4M) Information For Educators

The Certification for Manufacturing (C4M) Certification Program was developed for companies across the state who have a significant need for workers with entry level manufacturing skills.

To determine the required skills an Occupational Analysis was performed by LED FastStart at multiple Louisiana manufacturing companies.

An occupational analysis is a structured survey which focuses on a given occupation and the skills required across multiple organizations.

Through the occupational analysis the skills required for an entry level position were determined.

The Certification for Manufacturing (C4M) Certification Program was developed by LED FastStart to meet those needs.

The C4M curriculum consists of four courses followed by an assessment. Upon successful completion an individual will receive the C4M Certification.

C4M credential holders may receive a maximum of 15 credit hours towards an Associate of Science Degree or 7 credit hours towards a Bachelor of Science Degree in Engineering Technology.

Many Louisiana companies have guaranteed interviews to C4M credential holders.

LED FastStart provides the C4M curriculum and instructor certification programs at no charge to Louisiana schools and colleges.

Further details, including equipment and instructor qualification requirements are available from LED FastStart.

The courses are as follows:

1. **Introduction to Manufacturing** – Focus on a general understanding of the manufacturing environment.

Topics include:

- Manufacturing Processes
- General Safety
- Quality
- Lean Manufacturing
- Team Skills

2. **Tools & Equipment** – Students are introduced to various tools and equipment used in a manufacturing facility.

Topics Include:

- Occupational Safety
- Basic Mathematics
- Precision Measurement Tools
- Hand and Power Tools
- Symbols and Schematics
- Hydraulics
- Pneumatics

3. **Automation** – Automation introduces individuals to the various control systems used in manufacturing, the various types of automation employed by manufacturers, and how automation impacts the manufacturing environment.

Topics Include:

- Electrical Fundamentals
- Instrumentation
- Automatic Control Systems
- Human Machine Interface (HMI)
- Programmable Logic Controllers (PLC)
- Robotics
- Computer Database

4. **Introduction to Fabrication, Process Technology & Machining** – Course was designed to train the student in more advanced subjects that manufacturers identified as desirable skills.

Topics Include:

- Algebra and Geometry
- Practical Identification of Metals
- Basic Arc Welding
- Gas Metal Arc Welding (GMAW)
- Stick Metal Arc Welding (SMAW)
- Gas Tungsten Arc Welding (GTAW)
- Chemistry and Physics
- Process Technology
- Machining