# Industrial Maintenance Technician

**Certificate of Proficiency (COP)**

The Industrial Maintenance Technician Program is designed to equip individuals with the essential skills and knowledge to maintain, troubleshoot, and repair the machinery and equipment used in modern manufacturing and industrial environments. This program prepares students to work in diverse sectors such as manufacturing, energy, petrochemicals, food processing, pharmaceuticals, and more industries that rely heavily on automation and advanced technology.

## Certificate Requirements

**Total credits required to earn this certificate:** 63

LCC students must meet distribution requirements for bachelor degrees, associate degrees, and specific certificates. See Diversity and Distribution Lists (lowercolumbia.edu/publications/catalog/distribution-lists/) for more information.

## General Education Requirements

- **Communications:**

  5 credits – ENGL& 101 English Composition I ***OR***
  ENGL 110 Industrial Communications ***OR***
  ENGL& 235 Technical Writing (ENGL& 101 required for OLTM*)
- **Quantitative Skills:**

  5 credits – MATH 106 Industrial Mathematics or higher (MATH& 107 or higher required for OLTM*)
- **Human Relations / Social Science / Diversity:**

  5 credits – BUS 144 Management of Human Relations ***OR***
  SOC& 101 Introduction to Sociology: DIV (SOC& 101 required for OLTM*)

## Program Requirements

| Course Code | Course Title | Number of Credits |
|---|---|---|
| CS 110 | Introduction to Microcomputer Applications | 3 |
| HLTH 105 | First Aid, CPR and Bloodborne Pathogens | 1 |
| MFG 100 | Foundational Skills for the Trades | 2 |
| MFG 105 | Industrial Safety | 3 |
| MFG 140 | Applied Hydraulics | 4 |
| PMFG 110 | Industrial and Predictive Maintenance Fundamentals | 5 |

| Course Code | Course Title | Number of Credits |
|---|---|---|
| PMFG 150 | Electrical and Electronic Fundamentals | 6 |
| PMFG 201 | Electrical Control Equipment | 3 |
| PMFG 202 | Electric Motors | 2 |
| PMFG 210 | Advanced Industrial Maintenance | 5 |
| IMIN 215 | Programmable Logic Controllers | 5 |
| IMIN 230 | Process Technology Equipment | 4 |
| IMIN 240 | Instrumentation Fundamentals | 5 |

# Program Outcomes

Students completing this program should acquire the following skills and abilities:

- Communicate professionally in writing and speaking as appropriate to an industrial technology work environment. (GS - Communication)
- Apply objective, valid methods of inquiry and problem solving to draw rational, ethical, and coherent conclusions. (GS - Critical Thinking, Quantitative Literacy)
- Apply mathematical information to perform tasks in industrial technology. (GS - Quantitative Literacy)
- Interact effectively with individuals and groups. (GS - Teamwork)
- Display work appropriate behavior including positive attitude, timeliness and teamwork. (GS - Teamwork)
- Apply industry standard safety and hazardous material handling guidelines.
- Apply knowledge of computer programs to create professional, academic, or business documents following current industry standards.
- Identify the various components commonly used in process manufacturing operations.
- Describe basic concepts related to mechanical, hydraulic/pneumatic, instrumentation and electrical systems.
- Describe basic process control strategies.
- Perform foundational maintenance tasks on common process manufacturing devices.
- Demonstrate competency in documenting and communicating work performed using trade specific language.

# Notes

**Revised January 2025 (effective Summer 2025)**

*OLTM recommendations align with the requirements for LCC's Organizational Leadership and Technical Management BAS degree.

Program planning is based on information available at the time of preparation. It is the student's responsibility to meet with their LCC advisor. Consult the LCC catalog for LCC graduation requirements.