

Program map for Industrial Maintenance Technician Certificate of Proficiency (COP)



2026-27

The Production Technician Certificate of Proficiency is designed to prepare production operators for industries using high technology equipment and processes. Producers of coated steel, biofuels, energy, petrochemicals, pulp and paper, pharmaceuticals, food, and dimensional lumber are some of the industries that use automation to control production processes.

[View this program in the LCC Catalog \(lowercolumbia.edu/publications/catalog/programs/Trades-CO-P-Industrial-Maintenance-Technician\)](https://www.lowercolumbia.edu/publications/catalog/programs/Trades-CO-P-Industrial-Maintenance-Technician)

See also

- [Degree Requirements for Manufacturing, Trades and Transportation programs \(lowercolumbia.edu/publications/catalog/programs/trades\)](https://www.lowercolumbia.edu/publications/catalog/programs/Trades-CO-P-Industrial-Maintenance-Technician)
- [Course descriptions in the LCC Catalog \(lowercolumbia.edu/publications/catalog/courses\)](https://www.lowercolumbia.edu/publications/catalog/courses)
- [Distribution lists in the LCC Catalog \(lowercolumbia.edu/publications/catalog/distribution-lists\)](https://www.lowercolumbia.edu/publications/catalog/distribution-lists)

Important: Many course sequences only begin in fall quarter. Check with your program advisor.

By Quarter Overview

First Quarter (Fall)

-
- MATH 106: Industrial Mathematics (5 credits)
 - MFG 140: Applied Hydraulics (4 credits)
 - PMFG 150 Electrical and Electronic Fundamentals (6 credits)
 - COLL 101: College Success 101 (2 credits)

**Pre- and/or co-requisite(s)*

Second Quarter (Winter)

-
- CS 110: Introduction to Microcomputer Applications (3 credits)
 - PMFG 110: Industrial and Predictive Maintenance Fundamentals (5 credits)

- PMFG 204 Electric Motors and Control Equipment (5 credits)

**Pre- and/or co-requisite(s)*

Third Quarter (Spring)

- PMFG 210: Advanced Industrial Maintenance (5 credits)

-
-
-
-

**Pre- and/or co-requisite(s)*

Fourth Quarter (Summer)

- HLTH 105: First Aid, CPR and Bloodborne Pathogens (1 credit)
- MFG 105: Industrial Safety (3 credits)
- ENGL& 101 English Composition I OR ENGL 110 Industrial Communications OR ENGL& 235 Technical Writing (ENGL& 101 required for OLTM) (5 credits)

**Pre- and/or co-requisite(s)*

Fifth Quarter (Fall)

- IMIN 230 Process Technology Equipment (5 credits)
- *IMIN 240 Instrumentation Fundamentals (5 credits)*

Detailed Class Sequence

1. Industrial Mathematics

MATH 106 (5 credits)

Pre- and/or co-requisite(s): MATH 079 or TECH 079 with a C or better or instructor permission

2. Applied Hydraulics

MFG 140 (4 credits)

Pre- and/or co-requisite(s): MATH 091 or higher or instructor permission

3. Electrical and Electronic Fundamentals

PMFG 150 (6 credits)

4. College Success 101

COLL 101 (2 credits)

5. Introduction to Microcomputer Applications

CS 110 (3 credits)

Pre- and/or co-requisite(s): Ability to use keyboard

6. Industrial and Predictive Maintenance Fundamentals

PMFG 110 (5 credits)

7. PMFG 204 Electric Motors and Control Equipment

PMFG 204 (5 credits)

Pre- and/or co-requisite(s): PMFG 150 or instructor permission

8. Management of Human Relations: DIV

BUS 144 (5 credits)

9. Programmable Logic Controllers

IMIN 215 (5 credits)

10. Advanced Industrial Maintenance

PMFG 210 (5 credits)

11. Industrial Communication

ENGL 110 (5 credits)

12. Industrial Safety

MFG 105 (3 credits)

13. First Aid, CPR and Bloodborne Pathogens

HLTH 105 (1 credit)

14. Process Technology Equipment

IMIN 230 (5 credits)

15. Instrumentation Fundamentals

IMIN 240 (5 credits)