

Certificate of Proficiency (COP)
Multicraft Trades

Lower Columbia College (LCC) Multicraft Trades Certificate program is designed to prepare individuals to go to work, enter an apprenticeship training program, or enroll in one of LCC's vocational programs. This program promotes a diverse and skilled workforce and prepares participants to meet basic qualifications for entry employment in a skilled trades profession.

Build Your Pathway: This program is a key asset for local workforce systems' career pathway strategies. Through partnerships with K-12 Career & Technical Programs and industry partners, this program is valuable training approach for students to build pathways to family wage careers. Participants can use this program as an entryway to a local apprenticeship, a skilled trade career, or into a LCC degree program such as Advanced Manufacturing, Diesel/Heavy Equipment Technology, Machine Trades, or Welding.

For a roadmap that identifies the preferred sequencing of courses and other specific recommendations from faculty, please see the corresponding program map(s):

- **Multicraft Trades - COP (lowercolumbia.edu/program-maps/trades/COP-Multicraft-Trades)**

General Education

- **Communications:**
5 credits – ENGL& 101 English Composition I OR ENGL 110 Industrial Communication (recommended)
- **Quantitative Skills:**
5 credits – MATH 106 Industrial Mathematics
- **Human Relations / Social Science:**
5 credits – BUS 144 Management of Human Relations: DIV

Program Requirements

Multicraft Trades:

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|------------------------------------|---|----|
| BLPT 150 <i>OR</i> | Machinists Blueprint Reading <i>OR</i> | 5 |
| BLPT 160 | Blueprint Reading for Welders | |
| COLL 289 | Employment Portfolio Seminar | 1 |
| HLTH 105 | First Aid, CPR and Bloodborne Pathogens | 1 |
| MASP 107 <i>AND/OR</i> MASP 111 | Machining for Related Occupations (2-6 variable) <i>AND/OR</i> Machine Shop I (2-10 variable for a combined total of 10 credits) | 10 |
| MFG 105 | Industrial Safety | 3 |
| MFG 115 | Manufacturing Processes | 5 |
| MFG 288 | Cooperative Work Experience | 2* |
| TECH 100 | Advanced Principles of Technology | 5 |
| WELD 105 | Related Welding | 6 |

*MFG 299 Independent Study may be substituted for MFG 288 with faculty program advisor permission.

Diversity and Distribution Lists (lowercolumbia.edu/publications/catalog/distribution-lists) are available in the Lower Columbia College Catalog located at lowercolumbia.edu/catalog.

Total credits required to earn this certificate: minimum of 53 with a cumulative grade point average (GPA) of at least 2.0 in the program requirements.

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).
- Apply objective, valid methods of inquiry and problem solving to draw rational, ethical, and coherent conclusions (GS).
- Apply mathematical information to perform tasks in industrial technology (GS).
- Interact effectively with individuals and groups (GS).
- Display work appropriate behavior including positive attitude, timeliness and 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.
- Describe a variety of manufacturing techniques and components common to manufacturing systems.
- Perform basic machining and welding techniques.
- Interpret blueprints, diagrams and schematics associated with various manufacturing processes.
- Describe basic concepts related to mechanical, hydraulic/pneumatic, instrumentation and electrical systems.
- Describe basic process control strategies.
- Perform entry-level maintenance tasks common in manufacturing operations.
- Demonstrate competency in documenting and communicating work performed using trade specific language.
- Apply knowledge of the properties of industrial influence and the selection of primary materials and conversion into useful products.
- Describe various approaches used to ensure quality in manufacturing operations.

Revised March 2021 (Effective Fall 2021)

Notes:

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.