Program map for Advanced Manufacturing Associate in Applied Science - Transfer (AAS-T) for LCC BAS-OLTM

2024-25

Return to Manufacturing, Trades and Transportation Program Maps (lowercolumbia.edu/program-maps/trades)

Manufacturing industries are in need of skilled production operators and technicians with up-to-date, 21st century skills. Industries that make products from metal, plastics, wood and other materials, as well as those producing solar panels, biofuels, energy, petrochemicals, pharmaceuticals, food, semiconductors, and a host of other traditional and “green” products need employees capable of running and servicing sophisticated machinery. In addition, workers in these industries must understand and practice principles aimed at maintaining safety, improving quality, eliminating waste, and reducing or eliminating the impact of operations on the environment. This program prepares students for a career in manufacturing and also aligns with the requirements to apply to the BAS-Organizational Leadership and Technical Management program at LCC.

View this program in the LCC Catalog (lowercolumbia.edu/publications/catalog/programs/Trades-AAST-Advanced-Manufacturing-to-BAS-OLTM)

See also

- Degree Requirements for Manufacturing, Trades and Transportation programs (lowercolumbia.edu/programs/trades)
- Course descriptions in the LCC Catalog (lowercolumbia.edu/publications/catalog/courses)
- Distribution lists in the LCC Catalog (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

- COLL 101: College Success 101 (2 credits)
- MATH 107: Math in Society or higher (5 credits)
- CS 110: Introduction to Microcomputer Applications (3 credits)
- MFG 105: Industrial Safety (3 credits)

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

Second Quarter

- MFG 130: Materials Science (5 credits)
- BLPT 150: Machinist Blueprint Reading/BLPT
- 160: Blueprint Reading for Welders (5 credits)
  - *MATH 106 or instructor permission (or higher level math; see advisor)**
- ENGR& 121: Engineering Graphics I (3 credits)
- HLTH 105: First Aid, CPR and Bloodborne Pathogens (1 credit)

Third Quarter

- ENGR& 122: Engineering Graphics II (3 credits)
- BTEC 131: Introduction to Spreadsheets (5 credits)
- MFG 230: Computer Integrated Manufacturing (4 credits)
  - *MASP 221 or MASP 222**
- ENGL 101: English Composition I (5 credits)

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

Fourth Quarter

- MFG 140: Applied Hydraulics (4 credits)
- PMFG 150: Electrical and Electronic Fundamentals (5 credits)
- PMFG 151: Process Control Equipment (5 credits)
- ENGR& 123: Engineering Graphics III (3 credits)

Fifth Quarter

- PMFG 110: Industrial and Predictive Maintenance Fundamentals (5 credits)
- PMFG 201: Electrical Control Equipment (3 credits)
- PMFG 154: Fundamentals of Instrumentation and PLCs (5 credits)
- BUS 144: Management of Human Relations: DIV (5 credits)

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

Sixth Quarter

- PMFG 210: Advanced Industrial Maintenance (5 credits)
  - *PMFG 110 or instructor permission**
- PMFG 202: Electric Motors (2 credits)
  - *PMFG 201 or instructor permission**
- MFG 120: Quality Assurance (4 credits)
- COLL 289: Employment Portfolio Seminar (1 credit)
  - *Formal admission to a specific program**
- MFG 288: Cooperative Work Experience (2 credits)
  - *COLL 289 or BTEC 294 or BUS 294 or IT 294 must be taken prior to or concurrent with this course**
- Natural Science with lab from the distribution list (5 credits)

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

Detailed Class Sequence

1. College Success 101

COLL 101 (2 credits)

2. Math in Society

MATH 107 (5 credits)

3. Introduction to Microcomputer Applications

CS 110 (3 credits)
Pre- and/or co-requisite(s): Ability to use a keyboard

4. Industrial Safety

MFG 105 (3 credits)

5. Materials Science

MFG 130 (5 credits)

6. Machinist Blueprint Reading/Blueprint Reading for Welders

BLPT 150/BLPT 160 (5 credits)
Pre- and/or co-requisite(s): MATH 106 or instructor permission

7. Engineering Graphics I

ENGR& 121 (3 credits)

8. First Aid, CPR and Bloodborne Pathogens

HLTH 105 (1 credit)

9. Engineering Graphics II

ENGR& 122 (3 credits)
Pre- and/or co-requisite(s): ENGR& 121 or instructor permission

10. Introduction to Spreadsheets

BTEC 131 (5 credits)
*Pre- and/or co-requisite(s): BTEC 104 or CS 110, and BUS 104 or MATH 88 or MATH 97, with a C or higher, or instructor permission**

11. Computer Integrated Manufacturing

MFG 230 (4 credits)
Pre- and/or co-requisite(s): MASP 221 or MASP 222

12. English Composition I

ENGL 101 (5 credits)

13. Applied Hydraulics

MFG 140 (4 credits)
Pre- and/or co-requisite(s): MATH 091 or instructor permission

14. Electrical and Electronic Fundamentals

PMFG 150 (5 credits)
Pre- and co-requisite(s): MATH 087 or 088/Tech 088 or higher

15. Process Control Equipment

PMFG 151 (5 credits)
Pre- and/or co-requisite(s): MATH 087 or 088/Tech 088 or higher

16. Engineering Graphics III

ENGR& 123 (3 credits)

Pre- and/or co-requisite(s): ENGR& 121/ENGR& 122 or Instructor permission

17. Industrial and Predictive Maintenance Fundamentals

PMFG 110 (5 credits)

18. Electrical Control Equipment

PMFG 201 (3 credits)

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

19. Fundamentals of Instrumentation and PLCs

PMFG 154 (5 credits)
Pre- and/or co-requisite(s): PMFG 150/PMFG 151 or Instructor permission

20. Management of Human Relations: DIV

BUS 144 (5 credits)

21. Advanced Industrial Maintenance

PMFG 210 (5 credits)
Pre- and/or co-requisite(s): PMFG 110 or instructor permission

22. Electric Motors

PMFG 202 (2 credits)
Pre- and/or co-requisite(s): PMFG 201 or instructor permission

23. Quality Assurance

MFG 120 (4 credits)

24. Employment Portfolio Seminar

COLL 289 (1 credit)
Pre- and co-requisite(s): Formal admission to a specific program

25. Cooperative Work Experience

MFG 288 (2 credits)
Pre- and/or co-requisite(s): COLL 289 or BTEC 294 or BUS 294 or IT 294 must be taken prior to or concurrent with this course

25. Natural Science with Lab

Natural Science with lab from the LCC distribution list (5 credits)