

**Certificate of Proficiency (COP)****Engineering Technician**

An engineering technician provides technical support to an engineer, and may work in the fields of mechanical, industrial, civil, electrical, aerospace, computer, or environmental engineering. They assist engineers with research and development, computer aided drafting, quality control or design. They may also work alongside scientists or as quality assurance inspectors. Engineering technicians need the ability to work well on a team, and have strong analytical and problem-solving skills. In this program students learn to use math and science skills to assist engineers with creating products, improving manufacturing methods and maintaining assembly systems.

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

- **Engineering Technician - COP ( [lowercolumbia.edu/program-maps/trades/COP-Engineering-Technician](http://lowercolumbia.edu/program-maps/trades/COP-Engineering-Technician) )**

**Certificate Requirements**

- **Communications:**

5 credits – ENGL& 101 English Composition I OR ENGL 110 Industrial Communications (recommended)

- **Quantitative Skills:**

5 credits – MATH 106 Industrial Mathematics

- **Human Relations / Social Science:**

5 credits – BUS 144 Management of Human Relations

**Program Requirements**

BLPT 150 <i>OR</i> BLPT 160	Machinists Blueprint Reading <i>OR</i> Blueprint Reading for Welders	5
BTEC 131	Introduction to Spreadsheets	5
CS 110	Intro to Microcomputer Apps	3
COLL 289	Employment Portfolio Seminar	1
HLTH 105	First Aid, CPR and Bloodborne Pathogens	1
ENGR& 121	Engineering Graphics I	3
ENGR& 122	Engineering Graphics II	3

ENGR& 123	Engineering Graphics III	3
MFG 105	Industrial Safety	3
MFG 130	Materials Science	5
MFG 230	Computer Integrated Manufacturing	4
MFG 288	Cooperative Work Experience	2*

\*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](http://lowercolumbia.edu/publications/catalog/distribution-lists) )** are available in the Lower Columbia College Catalog located at [lowercolumbia.edu/catalog](http://lowercolumbia.edu/catalog).

*Total credits required to earn this certificate: 53.*

## **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.
- Interpret blueprints, diagrams and schematics associated with various manufacturing processes.
- Apply knowledge of properties of industrial influence and the selection of primary materials and conversion into useful products.
- Demonstrate competency in manual drafting and engineering graphics software.

***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.