

# MANUFACTURING APPRENTICESHIP, CERTIFICATE OF ACHIEVEMENT (LEVEL II)

NMC Code 078

Apprenticeships combine work, on-the-job training, and classroom instruction to prepare workers for high-skilled careers. As a recognized related technical instruction (RTI) provider, NMC supports the educational courses and training components of a registered apprenticeship. This certificate is designed to credential a student in a US Department of Labor Registered Apprenticeship. The courses required are developed in partnership with the employer to meet the training needs and associated national standards of the occupation. Students will need to meet with the Experiential Learning Program Coordinator to determine eligibility and complete additional apprenticeship registration requirements.

## Requirements certificate requirements

Manufacturing Apprentice Certificate (Level II) Requirements:

1. Student is a DOL registered apprentice
2. Complete the Occupational Specialty courses as listed for the apprenticeship
3. Certificate is earned upon completion of any combination of the Occupational Specialty Requirements to equal 30 credits

### OCCUPATIONAL SPECIALTY REQUIREMENTS

| Course  | Title                                  | Credits |
|---------|--|---------|
| DD 101  | Print Reading and Sketching            | 3       |
| DD 110  | Basic Metallurgy                       | 3       |
| DD 160  | Tolerancing and GD&T                   | 3       |
| DD 170  | CADD/Computer Modeling                 | 4       |
| MFG 104 | Fluid Power                            | 3       |
| MFG 106 | Fluid Power Certification <sup>1</sup> | 2       |
| MFG 111 | Math for Manufacturing                 | 3       |
| MFG 113 | Machining I                            | 3       |
| MFG 114 | Machining II                           | 3       |
| MFG 203 | Manuf/Engineering Processes            | 3       |
| MFG 217 | CNC Operations - Lathe                 | 4       |
| MFG 219 | CNC Mill Operations                    | 4       |
| MFG 290 | Manufacturing Tech Internship          | 3       |
| ELE 101 | Introduction to Electrical I           | 3       |
| ELE 105 |  | 3       |
| EET 102 | Intro to Engineering Tech              | 2       |
| EET 103 | Electrical Studies I                   | 3       |
| EET 161 | Fundamentals of Light & Lasers         | 4       |
| EET 204 | Electrical Studies II                  | 3       |
| EET 221 | Industrial Controls                    | 3       |

|         |                                |   |
|---------|--------------------------------|---|
| EET 232 | Programmable Logic Controllers | 3 |
| EET 233 | PLC Applications I             | 3 |
| EET 234 | PLC Applications II            | 3 |
| WPT 111 | Welding Theory I               | 3 |
| WPT 112 | Welding Lab I                  | 4 |
| WPT 113 | Welding Theory II              | 3 |
| WPT 114 | Welding Lab II                 | 4 |
| WPT 161 | Welding Qualification Prep     | 3 |
| WPT 211 | Welding Fabrication I          | 3 |
| WPT 212 | Welding Fabrication II         | 3 |
| WPT 213 | Weld Quality Testing           | 3 |
| WPT 260 | Intro to Welding Automation    | 3 |

<sup>1</sup> MFG 106 Fluid Power Certification prepares and tests students for the IFPS Connector and Conductor Certification.

*\*Additional courses may be added based on input from the employer*

## Course Sequence Guide

| Course                        | Title | Credits      |
|-------------------------------|-------|--------------|
| <b>Year 1</b>                 |       |              |
| <b>Fall</b>                   |       |              |
| Occupational Specialty Course |       | 3-4          |
| Occupational Specialty Course |       | 3-4          |
| <b>Credits</b>                |       | <b>6-8</b>   |
| <b>Spring</b>                 |       |              |
| Occupational Specialty Course |       | 3-4          |
| Occupational Specialty Course |       | 3-4          |
| <b>Credits</b>                |       | <b>6-8</b>   |
| <b>Year 2</b>                 |       |              |
| <b>Fall</b>                   |       |              |
| Occupational Specialty Course |       | 3-4          |
| Occupational Specialty Course |       | 3-4          |
| <b>Credits</b>                |       | <b>6-8</b>   |
| <b>Spring</b>                 |       |              |
| Occupational Specialty Course |       | 3-4          |
| Occupational Specialty Course |       | 3-4          |
| <b>Credits</b>                |       | <b>6-8</b>   |
| <b>Year 3</b>                 |       |              |
| <b>Fall</b>                   |       |              |
| Occupational Specialty Course |       | 3-4          |
| Occupational Specialty Course |       | 3-4          |
| <b>Credits</b>                |       | <b>6-8</b>   |
| <b>Total Credits</b>          |       | <b>30-40</b> |

**Note:** This sample model schedule varies by course offerings, work schedule, etc.