

## APPRENTICE – MILLWRIGHT Certificate

Basic Minimum Credits: 29.0  
Contact Hours: 39.0

Advanced Minimum Credits: 44.0  
Contact Hours: 58.0

INTRODUCTION: Alpena Community College offers Certificates of Completion for basic and advanced millwright apprenticeship training. The curriculum meets current industry standards for this skilled trade. College credits earned in this program may be applied toward the requirements for an Associate Degree at ACC. This program prepares students to work in an industrial setting with installation and maintenance of hydraulics, pneumatic equipment, power trains, belts, gears, and chains. Student who have completed the basic program may obtain an advanced certificate by completing the specified courses. The Apprentice (APP) courses for this program of study are offered primarily at night on a four-year rotating basis.

### BASIC COURSES

COURSE	TITLE	CREDITS	CONTACT HOURS
APP 100E	Electrical Studies for Trades	3.0	4.0
APP 106M	Industrial Safety	1.0	1.0
APP 121M or MFG 120	Apprentice Blueprint Reading or Print Interpretation & Processes <sup>A</sup>	3.0	4.0
APP 122M	Machine Repair <sup>A</sup>	3.0	4.0
APP 124M	Apprentice Hydraulics <sup>A</sup>	3.0	4.0
APP 125M or MFG 101	Apprentice Machine Shop <sup>A</sup> or Machining Processes I	3.0-4.0	4.0-6.0
APP 128M	Rigging & Weight Estimating <sup>A</sup>	1.5	2.0
APP 129M	Apprentice Pneumatics <sup>A</sup>	1.5	2.0
APP 223M	Predictive & Preventative Maintenance <sup>A</sup>	3.0	4.0
WLD 123 or WLD 124	SMAW Welding Processes or GMAW & FCAW Welding Processes	4.0	6.0
MTH 110	Technical Math I	<u>3.0</u>	<u>4.0</u>
<b>BASIC COURSES CREDITS/CONTACT HOURS:</b>		29.0-30.0	39.0-41.0

### ADVANCED COURSES

COURSE	TITLE	CREDITS	CONTACT HOURS
APP 102E	Residential Wiring & Blueprint Reading	3.0	4.0
APP 103E	Commercial & Industrial Wiring	3.0	4.0

#### CHOOSE THREE COURSES FROM THE FOLLOWING:

APP 111E	Electric Motor Control	3.0	4.0
APP 114E	Programmable Controllers	3.0	4.0
APP 290M	Millwright Internship	3.0	3.0
MFG 102	Machining Processes II	6.0	10.0
MFG 201	Introduction to CNC	6.0	10.0
	An Additional WLD or MET Course	4.0	6.0

**ADVANCED COURSES CREDITS/CONTACT HOURS:** 15.0-22.0      19.0-34.0  
**TOTAL MINIMUM PROGRAM CREDITS/CONTACT HOURS:** 44.0      58.0

### SUGGESTED SEQUENCING OF COURSES

YEAR 1 (FALL SEMESTER) <u>15.0</u> CREDITS		CREDITS	CONTACT HRS	YEAR 1 (SPRING SEMESTER) <u>13.5</u> CREDITS		CREDITS	CONTACT HRS
APP 100E	Electrical Studies for Trades	3.0	4.0	APP 106M	Industrial Safety	1.0	1.0
APP 122M	Machine Repair	3.0	4.0	APP 121M or MFG 120		3.0	4.0
APP 124M	Apprentice Hydraulics	3.0	4.0	APP 125M or MFG 101		3.0	4.0
APP 128M	Rigging & Weight Estimating	1.5	2.0	APP 223M	Predict&Prevent Maintenance	3.0	4.0
APP 129M	Apprentice Pneumatics	1.5	2.0	WLD 123 or WLD 124		<u>4.0</u>	<u>6.0</u>
MTH 110	Technical Math I	<u>3.0</u>	<u>4.0</u>	TOTAL		14.0	19.0
TOTAL		15.0	20.0				
YEAR 2 (FALL SEMESTER) <u>15.0-21.0</u> CREDITS		CREDITS	CONTACT HRS				
APP 102E	Resident Wiring & Blueprint Rdg	3.0	4.0				
APP 103E	Commercial & Industrial Wiring	3.0	4.0				
3 Advanced Electives		<u>9.0-15.0</u>	11.0-24.0				
TOTAL		15.0-21.0	19.0-32.0				

#### NOTES:

<sup>A</sup> Courses offered on a four-year rotating basis

Must complete Basic Courses prior to Advanced Courses

### [Gainful Employment Information for the Apprentice – Millwright Advanced Program](#)