

## APPRENTICE – MILLWRIGHT (ADVANCED)

CERTIFICATE (C)

DESCRIPTION: 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 hydraulic, pneumatic equipment, power trains, belts, gears, and chains. Students who have completed the basic program may obtain an advanced certificate by completing the specified courses. The Apprenticeship (APP) courses for this program of study are offered primarily at night on a four-year rotating basis.

### BASIC REQUIREMENTS CREDITS: 29-30

APP 100E	ELECTRICAL STUDIES FOR TRADES (3/4)
APP 106M	INDUSTRIAL SAFETY (1/1)
APP 121M or MFG 120	APPRENTICE BLUEPRINT RDG (3/4) <sup>A</sup> or PRINT INTERPRETATION & PROCESSES (3/4) <sup>A</sup>
APP 122M	MACHINE REPAIR (3/4) <sup>A</sup>
APP 124M	APPRENTICE HYDRAULICS (3/4) <sup>A</sup>
APP 125M or MFG 101	APPRENTICE MACHINE SHOP (3/4) <sup>A</sup> or MACHINING PROCESSES I (4/6)
APP 128M	RIGGING & WEIGHT ESTIMATING (1.5/2) <sup>A</sup>
APP 129M	APPRENTICE PNEUMATICS (1.5/2) <sup>A</sup>
APP 223M	PREDICTIVE & PREVENTATIVE MAINTENANCE (3/4) <sup>A</sup>
WLD 123 or WLD 124	SMAW WELDING PROCESSES (4/6) or GMAW & FCAW WELDING PROCESSES (4/6)
MTH 110	TECHNICAL MATH I (3/4)

### ADVANCED REQUIREMENTS CREDITS: 15-17

APP 102E	RESIDENTIAL WIRING & BLUEPRINT RDG (3/4)
APP 103E	COMMERCIAL & INDUSTRIAL WIRING (3/4)

CHOOSE THREE COURSES FROM THE FOLLOWING:

APP 111E	ELECTRIC MOTOR CONTROL (3/4)
APP 114E	PROGRAMMABLE CONTROLLERS (3/4)
APP 290M	MILLWRIGHT INTERNSHIP (3/4)
MFG 102	MACHINING PROCESSES II (4/6)
MFG 201	CNC I (4/6)
	AN ADDITIONAL WLD OR MET COURSE (4/6)

**MINIMUM 29 CREDIT HOURS/39 CONTACT HOURS (BASIC)**

**MINIMUM 44 CREDIT HOURS/58 CONTACT HOURS (ADVANCED)**

NOTES:

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

Must complete Basic courses prior to Advanced courses

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### SUGGESTED SEQUENCE OF COURSES

#### YEAR 1 (FALL SEMESTER) CREDITS: 15

APP 100E	ELECTRICAL STUDIES FOR TRADES (3/4)
APP 122M	MACHINE REPAIR (3/4)
APP 124M	APPRENTICE HYDRAULICS (3/4)
APP 128M	RIGGING & WEIGHT ESTIMATING (1.5/2)
APP 129M	APPRENTICE PNEUMATICS (1.5/2)
MTH 110	TECHNICAL MATH I (3/4)

#### YEAR 1 (SPRING SEMESTER) CREDITS: 14

APP 106M	INDUSTRIAL SAFETY (1/1)
APP 121M or MFG 120	APPRENTICE BLUEPRINT RDG (3/4) or PRINT INTERPRETATION & PROCESSES (3/4)
APP 125M or MFG 101	APPRENTICE MACHINE SHOP (3/4) or MACHINING PROCESSES I (4/6)
APP 223M	PREDICTIVE & PREVENTATIVE MAINTENANCE (3/4)
WLD 123 or WLD 124	SMAW WELDING PROCESSES (4/6) or GMAW & FCAW WELDING PROCESSES (4/6)

#### YEAR 2 (FALL SEMESTER) CREDITS: 15-17

APP 102E	RESIDENTIAL WIRING & BLUEPRINT RDG (3/4)
APP 103E	COMMERCIAL & INDUSTRIAL WIRING (3/4)

CHOOSE THREE COURSES FROM THE FOLLOWING:

APP 111E	ELECTRIC MOTOR CONTROL (3/4)
APP 114E	PROGRAMMABLE CONTROLLERS (3/4)
APP 290M	MILLWRIGHT INTERNSHIP (3/4)
MFG 102	MACHINING PROCESSES II (4/6)
MFG 201	CNC I (4/6)
	AN ADDITIONAL WLD OR MET COURSE (4/6)