



# ELECTRO-MECHANICAL TECHNOLOGIES

## Why Electro-Mechanical Technologies?

The Electro-Mechanical Technologies Degree at Lakes Region Community College prepares students to enter the manufacturing work force in an entry level machine technician capacity. There is a high demand nationwide for machine maintenance technicians. Students graduating EMT will have an understanding of electrical and mechanical theory and principals as well have acquired shills in troubleshooting electrical, hydraulic, and pneumatic control systems. Students will also have acquired skills in Computer Numeric Controlled (CNC) machine operations, electrical controls programmable controllers, and principles of electrical motors.

#### Potential Jobs/Careers:

- Maintenance Technician
- Facilities Technician
- Building Operator
- Machine Maintenance Technician
- Machine Installer
- Machine Design & Building

#### **Potential Salary:**

There is a wide range of jobs in the electrical industry. See below for the average annual salary range in NH for electrical technicians.

Entry Level \$40,684

- Mid-Range \$59,612

- Experienced \$67,204

\*New Hampshire Occupational Employment & Wages 2021, published by the NH Economic and Labor Market Information Bureau – Salaries are based on 40 hours of work, not including overtime.

#### **Estimated Program Cost:**

Year 1: \$8,382

Year 2: \$6,932

for a total of \$15,314

\*Costs are based on in-state tuition and do not include fees, supplies, or books. Additional fees may apply; all prices are subject to change.

## Did you know?

"My experience at LRCC has been very positive. Coming from a background in the military I had no electrical experience. The courses and instructors at LRCC did an amazing job of explaining and demonstrating the principles and skills I'll need to complete my EMT degree and enter the workforce."

— David Boustead A.S. Electro-Mechanical Technologies, Class of 2020

## **Degree & Certificate Requirements**

## **DEGREE** Requirements

| FIRST YEA       | <b>R</b> Fall Semester       | Credits |
|-----------------|------------------------------|---------|
| ENGL100L        | English Composition          | 4       |
| ETEC124L        | AC/DC Theory                 | 5       |
| ELMT120L        | Fluid Power Systems          | 4       |
| ESNT120L        | College Essentials           | 1       |
| <b>ELECTIVE</b> | Humanities/Fine Arts/Foreign | 3       |
|                 | Language Elective            |         |
|                 | TOTAL                        | L 17    |

| FIRST YEA | <b>R</b> Spring Semester     | Credits |
|-----------|------------------------------|---------|
| ETEC128L  | Fundamentals of              | 4       |
|           | Electrical Controls          |         |
| ETEC130L  | Rotating Machinery           | 4       |
| MANF151L  | CNC Machines I               | 2       |
| MANF152L  | CNC Machines I Lab           | 2       |
| MATH137L  | Technical Algebra & Geometry | 4       |
|           | TOTA                         | L 16    |

#### Total Credits for Year = 33

| SECOND YEAR Fall Semester Cr |                         |       | redit | S |
|------------------------------|-------------------------|-------|-------|---|
| PHYS125L                     | Technical Physics       |       | 3     |   |
| MANF230L                     | CAD/CAM                 |       | 3     |   |
| MANF211L                     | CNC Machines II         |       | 1     |   |
| MANF212L                     | CNC Machines II Lab     |       | 2     |   |
| ELECTIVE                     | Social Science Elective |       | 3     |   |
|                              |                         | TOTAL | 12    |   |

| SECOND Y  | <b>EAR</b> Spring Semester C                               | Credit | S |
|---|--|--------|---|
| ETEC235L<br>ELMT210L                                      | Programmable Logic Controllers<br>Mechanical Drive Systems | 3 4    |   |
| ELMT270L  | Electro-Mechanical Capstone                                | 3      |   |
| OR<br>ELMT280L  | Electro-Mechanical Internship                              | 3      |   |
| ELECTIVE  | Liberal Arts Elective                                      | 3      |   |
| ELECTIVE  | Open Elective  | 3      |   |
|   | TOTAL  | 16     |   |
| Total Credits for Year = 28<br>Total for A.S. Degree = 61 |  |        |   |

## **CERTIFICATE** Requirements

| Machine Maintenance Technician               |  |                               |   |
|--|--|-------------------------------|---|
| Fall Semester Cre                            |  |                               | S |
| ESNT120L<br>MATH137L<br>ETEC124L<br>ELMT120L | College Essentials Technical Algebra & Geometry AC/DC Theory Fluid Power Systems TOTAL | 1<br>4<br>5<br>4<br><b>14</b> |   |
| Spring Semester Crec                         |  |                               | S |

|          |                          | _  |
|----------|--------------------------|----|
| MANF151L | CNC Machines I           | 2  |
| MANF152L | CNC Machines I Lab       | 2  |
| ELMT210L | Mechanical Drive Systems | 4  |
| ETEC128L | Fundamentals of          | 4  |
|          | Electrical Controls      |    |
|          | TOTAL                    | 12 |

**Total Credits for Certificate = 26** 

