

## **Industrial Maintenance/Mechatronics**

The Industrial Maintenance/Mechatronics Technology Program (IMM) of TCAT Knoxville is designed and managed to produce highly skilled individuals in the areas of mechanical and electrical industrial machinery repair. The program consists of Mechanical Training, to include all types of power transmission techniques, belt drives systems, chain drives, alignment methods, also coupling methods. Also they are trained in pneumatic and hydraulic symbology, operation and application. Continuing their training in basic electrical motor control, sensors, motor drives, AC and DC motor theory and operation and troubleshooting. The program ends with an extensive training period of PLC, Programmable Logic Controller, training, to include both programming and troubleshooting. As part of the IMM program training students are exposed to a good deal of math too.

| Program/Location                                    |                        |  | Length Days                                     |                  | Time        |          |
|---|------------------------|--|---|------------------|-------------|----------|
| Day Program/ PSCC Strawberry Plains Campu           |                        | us   | 16 Months                                       | Monday—Friday    | 8:00 am—2:  | 30 pm    |
|   | Curriculum/Courses     |  | С   | ompletion Awards |             | Required |
| IMM 0001  | Worker Characteristic  | Industrial Maintenance Helper<br>Programmable Logic Controllers          |   |                  |             | Hours    |
| IMM 1010  | Tech Foundations       |  |   |                  | Certificate | 864      |
| IMM 1020  | Orientation and Safety |  |   |                  | Certificate | 1296     |
| IMM 1030  | Mechanical Maintenance | Advanced Programmable Logic Controllers                                  |   |                  | Certificate | 1728     |
| IMM 1040  | Hydraulics             | Industrial Maintenance Technician  |   |                  | Diploma     | 1728     |
| IMM 1050  | Pneumatics             |  |   |                  |             |          |
| IMM 0002  | Worker Characteristic  |  |   |                  |             |          |
| IMM 2010  | Basic Electricity      | Completion Rate 2020: 85%<br>Placement Rate 2020: 82%                    |   |                  |             |          |
| IMM 2020  | Electric Motor Control |  |   |                  |             |          |
| IMM 2030  | Intro to PLCs          |  |   |                  |             |          |
| IMM 0003  | Worker Characteristic  | <b></b>  |   |                  |             |          |
| IMM 3010  | PLCs1                  | <b>HOW TO APPLY</b><br>All Documents Must be Presented Together to Apply |   |                  |             |          |
| IMM 0004  | Worker Characteristic  |  |   |                  |             | oply     |
| IMM 4011  | Intro to Robotics      | $\Rightarrow$ Complete the Free Application For Federal Student          |   |                  |             |          |
| IMM 4021  | Advanced PLCs          |  | Aid (FAFSA) online – the website is             |                  |             |          |
| Turical Job Opportunities                           |                        |  | www.fafsa.ed.gov and our school code is 004025. |                  |             |          |
| Typical Job Opportunities<br>Industrial Maintenance |                        |  |   |                  |             |          |
| Mechanical Maintenance                              |                        | $\Rightarrow$  | 1 11  |                  |             |          |
| Electrical Maintenance                              |                        |  | Enrollment online at www.tcatknoxville.edu and  |                  |             |          |
|   |                        |  | select APPLY NOW                                |                  |             |          |