

# RAIL VEHICLE MAINTENANCE



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| Award Title              | Academic Plan | Award Type | GE Units | Required Course Units | Major Elective Units | Major Units |
|--------------------------|---------------|------------|----------|-----------------------|----------------------|-------------|
| Rail Vehicle Maintenance | T035649C      | AS         | 21*      | 40                    | -                    | 40          |
| Rail Vehicle Maintenance | T035618D      | C          |          | 40                    | -                    | 40          |

At least 60 degree applicable units are required to earn an Associate degree.

\*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

## PROGRAM OVERVIEW

In this program, students garner safety, electrical, and mechanical competencies required for the maintenance and repair of rail vehicles in these core areas: couplers, truck and axle, propulsion and dynamic braking, auxiliary inverters and batteries, friction brakes, HVAC, current collection and distribution, monitoring and diagnosing, car body, doors, communications systems, and car-borne cab signal control systems.

The Rail Vehicle Maintenance Degree and Certificate are designed to prepare students for employment in the Rail industry.

Career opportunities for students completing this program of study include, but are not limited to:

- Locomotive Engineers
- Rail Car Repairers
- Rail-Track Laying and Maintenance Equipment Operators

By fulfilling the program requirements, students will have the necessary knowledge to develop the safe skills to perform preventive maintenance and inspections on light rail, passenger and freight rail cars; utilize basic computer skills to review, create, and update electronic work orders; and diagnose and repair stationary and rotary mechanical, electronic, low and high voltage electrical components and their issues.

The coursework in these programs meet the requirements for Snap-On 604 Meter Certification, Bendix Air Brake Certification, Single Car Testing per Association of American Railroads AAR S-486 Certification, and Mobil Air Conditioning Society (MACS) 608 and 609 Certification.

**NOTE:** Students are required to provide educational supplies, basic hand tools, Transportation Technology uniform, text book and personal protective equipment (PPE). Students are also required to complete the Snap-On 604 Meter and Bendix Air Brake certifications.

## PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Identify and explain the operation of rail vehicles and systems along with related subsystems and related industry standards.
- Diagnose and repair rail vehicles and systems using various manufacturer diagnostic software, tools, and shop equipment in accordance with industry standards.

## RAIL VEHICLE MAINTENANCE

### Associate in Science Degree

Major Units: 40

Requirements for the Associate of Science degree in Rail Vehicle Maintenance may be met by completing **40 units** of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

## REQUIRED COURSES

| SEMESTER I   |  | UNITS |
|--------------|--|-------|
| DIESLTK 401  | Rail System Overview, Safety, Tools, and Mechanical Principles   | 10    |
| -or-         | <i>DIESLTK 401A Rail Systems Overview, Safety and Tools (5)</i><br>- and -<br><i>DIESLTK 401B Mechanical Principles (5)</i>                  |       |
| SEMESTER II  |  | UNITS |
| DIESLTK 402  | Rail Electrical and Electronic Principles  | 10    |
| -or-         | <i>DIESLTK 402A Rail Electrical Principles (5)</i><br>- and -<br><i>DIESLTK 402B Rail Electronic Principles (5)</i>                          |       |
| SEMESTER III |  | UNITS |
| DIESLTK 403  | Rail Vehicle Pneumatic & Hydraulic Controls, HVAC & Car Body   | 10    |
| -or-         | <i>DIESLTK 403A Rail Vehicle Pneumatic &amp; Hydraulic Controls (5)</i><br>- and -<br><i>DIESLTK 403B Rail Vehicle HVAC and Car Body (5)</i> |       |
| SEMESTER IV  |  | UNITS |
| DIESLTK 404  | Rail Diesel Engine Fundamentals and Rail Accessory/Support Systems   | 10    |
| -or-         | <i>DIESLTK 404A Rail Diesel Engine Fundamentals (5.5)</i><br>- and -<br><i>DIESLTK 404B Rail Accessory/Support Systems (4.5)</i>             |       |

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## RAIL VEHICLE MAINTENANCE

### ■ Certificate of Achievement

Major Units: 40

A Certificate of Achievement in Rail Vehicle Maintenance may be earned by completing 40 units of Required Courses listed under the Associate degree in Rail Vehicle Maintenance with a "C" or better in each course.

| SEMESTER IV |  | UNITS |
|-------------|--|-------|
| DIESLTK 404 | Rail Diesel Engine Fundamentals and Rail Accessory/Support Systems | 10    |
| -or-        |  |       |
|             | <i>DIESLTK 404A Rail Diesel Engine Fundamentals (5.5)</i>          |       |
|             | <i>- and -</i>   |       |
|             | <i>DIESLTK 404B Rail Accessory/Support Systems (4.5)</i>           |       |

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### ■ Certificate of Achievement

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## USEFUL LATTC LINKS:

College Catalog, Class Schedule & more: <http://www.lattc.edu/academics>

Financial Aid Office: <http://www.lattc.edu/services/financial-aid>

Counseling Services & Support: <http://www.lattc.edu/services/support>

Advanced Transportation & Manufacturing Pathway: <http://www.lattc.edu/ATM>

To register: <http://www.lattc.edu/student-guides/new-student-guide>

For additional information consult a LATTC college counselor.