MECHANICS-DIESEL/HEAVY EQUIPMENT (MECN)

MECN F103  **Starting and Charging Systems**  
3 Credits  
Starting and charging systems, diagnostic methods and specifications that are standard in the industry. Volt, amperage and load tests on a battery.  
*Lecture + Lab + Other: 1 + 4 + 0*

MECN F104  **Mobile Equipment Maintenance**  
1 Credit  
Technical, financial and legal aspects of mobile equipment maintenance. Students will work in groups to perform a maintenance operation and create maintenance records on a variety of vehicle types.  
*Lecture + Lab + Other: 0.5 + 1 + 0*

MECN F112  **Basic Auto Maintenance**  
1 Credit  
Covers basic automobile system functions, owner maintenance of electrical, cooling and fuel systems, auto lubricants and fluids, tires and wheels, tune-ups, and cold weather maintenance and operation. For the person without mechanical experience.  
*Lecture + Lab + Other: 1 + 0 + 0*

MECN F154  **Diesel Fuel Injection**  
2 Credits  
Troubleshooting and repairing a wide range of electronic systems found in both light and heavy equipment including, but not limited to, load moment limiting, motor speed control, electronic control of hydraulic systems and electronic governors for power generation.  
*Lecture + Lab + Other: 1 + 2 + 0*

MECN F159  **Manual Transmissions and Clutches**  
2 Credits  
Two major areas of automotive maintenance and repair: inspection and replacement of common clutch types; and maintenance, inspection and overhaul of automotive manual transmissions.  
*Lecture + Lab + Other: 1 + 2 + 0*

MECN F201  **Advanced Automobile Equipment Electronics**  
2 Credits  
In-depth study of batteries: design, construction, testing and charging, currents and maintenance. Knowledge applied to DC motors, electronic controls and electronic traction motor controls. The in-shop training discusses environmental impacts of electric drive vehicles.  
*Lecture + Lab + Other: 2 + 0 + 0*

MECN F202  **Principles of Electric Drive Vehicles**  
2 Credits  
Theory of fluid power and the components that make up a hydraulic system found on heavy equipment. Identification and description of hydraulic cylinders, motors, directional valves commonly found on heavy equipment. Includes testing of equipment and performing hydraulic pressure and flow tests.  
*Prerequisites: DSLT F101; DSLT F103; DSLT F105.*  
*Lecture + Lab + Other: 1 + 4 + 0*

MECN F203  **Basic Power Generations**  
3 Credits  
Portable and stationary electric power generators and the relationship of magnetism, AC/DC currents, motors, generators, transformers and electrical distribution.  
*Recommended: AUTO F110.*  
*Lecture + Lab + Other: 2 + 2 + 0*