

# Louisiana Delta Community College

## Academic Affairs Master Syllabus

**Course Name:** ANTILOCK AND TRACTION CONTROL DIAGNOSIS AND REPAIR

**Course Number:** AUTO 1540

**Credit Lecture hours:** 0      **Credit Lab Hours:** 1      **Contact Hours:** 30

**Textbook, Author, and Publisher:** To be provided by College Campus

**Instructor Information:** To be provided by College Campus

**Class Location:** To be provided by College Campus

**Course Description:** This course teaches the procedures and methods necessary to diagnose and repair antilock brake systems and traction control systems.

**Prerequisites:** None

**Co-requisites:** None

### **Learning Outcomes:**

On completion of this course, the student will be able to:

Miscellaneous (Wheel Bearings, Parking Brakes, Electrica 1, Etc.) Diagnosis and Repair

1. Diagnose wheel bearing noises, wheel shimmy, and vibration concerns; determine necessary action. (P-1)
2. Remove, clean, inspect, repack, and install wheel bearings and replace seals; install hub and adjust wheel bearings. (P-1)
3. Check parking brake cables and components for wear, rusting, binding, and corrosion; clean, lubricate, or replace as needed. (P-2)
4. Check parking brake operation; determine necessary action. (P-1)
5. Check operation of parking brake indicator light. (P-3)
6. Check operation of brake stop light system; determine necessary action. (P-1)
7. Replace wheel bearing and race. (P-1)
8. Inspect and replace wheel studs. (P-1)
9. Remove and reinstall sealed wheel bearing assembly. (P-2)

**Learning Outcomes (Continued :)**

## Antilock Brake and Traction Control Systems

1. Identify and inspect antilock brake system (ABS) components; determine necessary action. (P-1)
2. Diagnose poor stopping, wheel lock-up, abnormal pedal feel or pulsation, and noise concerns caused by the antilock brake system (ABS); determine necessary action. (P-2)
3. Diagnose antilock brake system (ABS) electronic control(s) and components using self-diagnosis and/or recommended test equipment; determine necessary action. (P-1)
4. Depressurize high-pressure components of the antilock brake system (ABS). (P-3)
5. Bleed the antilock brake system's (ABS) front and rear hydraulic circuits. (P-2)
6. Remove and install antilock brake system (ABS) electrical/electronic and hydraulic components. (P-3)
7. Test, diagnose and service ABS speed sensors, toothed ring (tone wheel), and circuits using a graphing multimeter (GMM)/digital storage oscilloscope (DSO) (includes output signal, resistance, shorts to voltage/ground; and frequency data). (P-1)
8. Diagnose antilock brake system (ABS) braking concerns caused by vehicle modifications (tire size, curb height, final drive ratio, etc. (P-3)
9. Identify traction control system components (P-3)

**Assessment Measures:** To be provided by the College Campus.

**Library Resource Center:**

The Delta Library and Learning Resource Center is committed to providing quality information and learning resources and services, including technology, in supporting the overall mission of Delta Community College and its commitment to lifelong learning.

**Special Accommodations:**

Louisiana Delta Community College complies with Section 504 of the Rehabilitation Act, as well as the Americans with Disabilities Act. Students with disabilities who attend the Monroe campus may make a request by contacting the Director of Counseling and Disability Services (See College Directory for contact information.) at the beginning of each semester. Reasonable accommodations will be attempted for students with documented disabilities. If an impairment is identified later in the semester, a non-retroactive accommodation plan will be developed. Students at satellite campuses should contact the Coordinator of Student Affairs at their particular campus.

**Title IX:**

Louisiana Delta Community College is committed to protecting the rights of students, which includes compliance with Title IX requirements. As such, the institution and members of our community will not tolerate the offenses of dating violence, domestic violence, sexual assault, and stalking. Students with Title IX concerns should contact the College's Title IX Coordinator (See College Directory for contact information.) Students are required to complete Sexual Assault Awareness and Prevention Online Training. Access to this online course will be sent out through the Delta email account.

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**Student Code of Conduct:**

Louisiana Delta Community College encourages an environment of academic integrity and mutual respect. Students should read and follow both academic and behavioral expectations identified in the Code of Student Conduct that can be found online at [www.ladelta.edu](http://www.ladelta.edu). Students are expected to act with integrity, respect the rights of others, and conduct themselves in a professional manner. The Honor Code prohibits academic misconduct such as cheating, engaging in unauthorized collaboration, and plagiarism. Violations of the Code of Student Conduct may result in disciplinary action as provided in the Code. Incidents are reported through the online Student Conduct system.