# 11/10/2022

# brcc keystone logo

Baton Rouge Community College

*Academic Affairs Master Syllabus*

Date Approved: 1 December 2022

Term and Year of Implementation: Fall 2023

**Course Title:** Truck Engine Design

**BRCC Course Rubric:** DHTT 1103

**Previous Course Rubric**:

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 1-6-3

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 15-90-105

**Louisiana Common Course Number:**

**CIP Code:** 47.0613

**Course Description:** Introduces students to engine operation, nomenclature content, required measurements and torque values. Identifies engine cooling, lubrication, and valve train systems. The course meets the standards set by the National Institute for Automotive Service Excellence (ASE) for certification T1 and T2 (gasoline and diesel engines, respectively) and addresses task list required for accreditation by the National Institute for Automotive Service Excellence (ASE) for T1 and T2 certification.

**Prerequisites:**  DHTT 1304 and DHTT 1614

**Co-requisites:** MVSB 1703, DHTT 1014, and DHTT 1252

**Suggested Enrollment Cap:** 20

**Learning Outcomes.** *Upon successful completion of this course, the students will be able to:*

1. Explain engine design and theory.

2. Demonstrate the procedure and process of implementing proper fastener torque values and installation of internal and external engine components.

3. Diagnose engine mechanical problems.

4. Demonstrate the math, writing, science, and interpersonal skills needed to become a successful medium/heavy truck technician.

**Assessment Measures.** Assessment of all learning outcomes will be measured using the following methods:

1. Assessment measures may include, but are not limited to presentations, in-class activities, observations, skill performances, class participation, lab activities, homework, assignments, quizzes, written exams, and industry-standard proficiency exams.

**Information to be included on the Instructor’s Course Syllabi:**

* ***Disability Statement*:** Baton Rouge Community College seeks to meet the needs of its students in many ways. See the Office of Disability Services to receive suggestions for disability statements that should be included in each syllabus.
* ***Grading:*** The College grading policy should be included in the course syllabus. Any special practices should also go here. This should include the instructor’s and/or the department’s policy for make-up work. For example in a speech course, “Speeches not given on due date will receive no grade higher than a sixty” or “Make-up work will not be accepted after the last day of class”.
* ***Attendance Policy*:** Include the overall attendance policy of the college. Instructors may want to add additional information in individual syllabi to meet the needs of their courses.
* ***General Policies*:** Instructors’ policy on the use of things such as beepers and cell phones and/or hand held programmable calculators should be covered in this section.
* ***Cheating and Plagiarism*:** This must be included in all syllabi and should include the penalties for incidents in a given class. Students should have a clear idea of what constitutes cheating in a given course.
* ***Safety Concerns:*** In some courses, this may be a major issue. For example, “No student will be allowed in the lab without safety glasses”. General statements such as, “Items that may be harmful to one’s self or others should not be brought to class”.
* ***Library/ Learning Resources:*** Since the development of the total person is part of our mission, assignments in the library and/or the Learning Resources Center should be included to assist students in enhancing skills and in using resources. Students should be encouraged to use the library for reading enjoyment as part of lifelong learning.

**Expanded Course Outline:**

1. Career Professionalism

a. Writing skills for medium/heavy truck technicians

b. Applied math and science for medium/heavy truck technicians

c. Interpersonal skills for medium/heavy truck technicians

2. Diesel and gasoline engine theory

3. Engine design

4. Lubrication and cooling systems in medium/heavy trucks

5. Precision instruments

6. Service information for the various medium/heavy trucks

7. Diagnosing engine mechanical problems