

Discipline: Transportation Date Submitted: April 18<sup>th</sup>, 2019

# CERRITOS COLLEGE ARTICULATION AGREEMENT

**Cerritos College Course:** 

Auto 100: Automotive Maintenance &

Operation

Cerritos College 11110 Alondra Blvd. Norwalk, CA 90650 **High School Course:** 

**Auto 1: Automotive Maintenance & Operation** 

Artesia High School 12108 Del Amo Blvd. Lakewood, CA 90715

General Course Description: This course is a study of the interaction of science and technology as they apply to the automotive transportation system and engineered sub-systems that are responsible for the functioning of the automobile. The math and specific concepts associated with these systems will also be explored. Students will develop their understanding of science, as it applies to the study of engineered automotive systems, by building on their knowledge of physics and math while conducting investigative research. Students will be engaged in a theoretical program that integrates academic student with technical skills. The course is proposed to prepare and motivate students to pursue a post-secondary education in science and engineering programs.

College Prerequisite(s): None

HS/ROCP Prerequisite(s): None

Advisories/Recommendations: None

#### **Course Content:**

- 1. Careers in the Automotive Industry, ASE Certification
- 2. Shop Safety, Environmental & Hazardous Materials
- 3. Tools & Measuring Systems
- 4. Vehicle Maintenance
- 5. Gasoline & Diesel Engines
- 6. Electrical Fundamentals
- 7. Starting, Charging, Ignition & Computer Systems
- 8. Fuels & Fuel Systems (including alternative fuels)
- 9. Vehicle Emissions & Vehicle Emission Systems
- 10. Brakes & ABS Systems
- 11. Tires, Wheels & Wheel Alignment
- 12. Suspension & Steering Systems
- 13. Manual & Automatic Transmissions & Transaxles
- 14. Heating, Ventilation & Air Conditioning Systems (HVAC)
- 15. Professional Development

# Competencies and Skill Requirements. At the conclusion of these courses, the student should be able to:

- 1. Comply with safety, environmental regulations and standards.
- 2. Explain the operation of vehicle systems.
- 3. Identify and describe the operation of related vehicle components.
- 4. Identify and properly use tools and equipment.
- 5. Perform basic maintenance and service procedures according to industry standards.
- 6. Access service information and specifications using electronic and printed sources.
- 7. Recognize the various career opportunities in the automotive industries.

### **Measurement Methods:**

- Homework
- 2. Classwork (including labs)
- 3. Quizzes and Test
- 4. Portfolio

## **Textbooks or Other Support Materials:**

"Automotive Technology", 6<sup>th</sup> edition, Halderman, PowerPoints and Test Generator downloadable.

### **Procedures for Course Articulation:**

Cerritos College credit for the articulated course listed above may be received when the following criteria are met:

- 1. The student has completed the articulated course listed above, Auto 1: Automotive Maintenance & Operation, with a "C" grade or higher.
- 2. The student will take and pass the exam given by the Automotive Department.
- 3. The student must enroll at Cerritos College within two (2) years from the semester date in which the course was completed.
- 4. The student will complete and submit the *Cerritos College Credit by Exam Form* to the Office of Educational Partnerships & Programs.
- 5. No more than 15 units of credit may be accepted for credit by examination.

This Agreement will be reviewed annually and will remain in effect until cancelled by either party giving 30 days written notice.

High School/ROP District Signatures		Cerritos College Signatures	
V Me So	5/10/19	De Mula	5/28/19
Faculty/Department Chair	Date '	#nstructor/Division Cha	ir Date
Principal Principal	5/16/19 Date	Dean of Instruction	5/2 9/19 Date,
Superintendent	3/21/19	Vice President	- 6/6/16
Superintendent	Date	vice President	/Date/ (/