Articulation Request and Agreement
2018-2019

Discipline:	Automotive Technology
High School:	Bret Harte High School
High School Course:	Auto 1
Columbia College Course:	AT 100
Date Accepted:	2018-2019
Renewal:	2021-2022

This request and agreement is submitted for consideration of the following course as an articulated course at Columbia College. Students would receive course credit at Columbia College.

Directions:

- Complete a separate form for each course.
- Attach the course outline for the course.
- Attach the course final if course is to be considered for credit.
- Mail to: Dean of Career Technical Education, 11600 Columbia College Drive, Sonora, CA 95370

Completed by High School Instructor:

High School/ROP:	Bret Harte High School
Instructor Name:	Ken Sooter
Mailing Address:	365 Murphys Grade Road, Angels Camp, CA 95222
Email Address:	ksooter@bhuhsd.k12.ca.us
Contact Number:	209.736.2507

High School / ROP/CTE Course Title: Auto 1

HS/ROCP Credits: 10

HS/ROCP Prerequisite(s): None

High School / ROP/CTE Course Description:

Designed as an introductory course in automotive. Course will cover: Automotive safety, hand and power tools, body and chassis systems, engine systems, electrical systems, power train systems, emission control systems and accessory systems. Hand-on activities include 85 shop projects on live vehicles. 40% of the time in class lecture or demonstration, 60% of the time in shop.

College Course Title: AT 100 – Introduction to Automotive Technology

College Units: 4

College Prerequisite(s): None

Advisories/Recommendations: None

Course Content and Format:

This course will consist of lecture, demonstration, homework (an internet assignment), quizzes, and shop work. Internet access is required in this course. Basic automotive practices and basic skills will be taught. Students will be required to obtain access to internet for specific projects. Late work will be accepted, at a reduced percentage. Missed days of instruction can be made up before school, at lunch, or after school with the instructor's approval. Extra credit job s may be performed at home with the approval of the instructor and the guidance of your parent or guardian. A maximum of 200 points extra credit may be earned per semester. Total hours of instruction: 144 hours.

Competencies and Skill Requirements (Use additional pages as necessary)
At the conclusion of this course, the student should be able to:

Introduction:

1. Complete Vehicle owners' manual worksheet
2. Determine VIN # worksheet
3. Identify shop equipment (No RO required)
4. Safety Quiz @ 100% (No RO required)
5. Determine shop safety layout (No RO required)
6. Tool ID (No RO required)
7. ID vehicle lift points
8. Complete repair order

Service Area 1 Oil Change Service

1. Raise and support a vehicle (jack stands)
2. Raise a vehicle using a frame-contact lift
3. Check engine oil level (Projects 11-13 complete together)
4. Perform oil change
5. Change oil filter

Service Area 2 Under Hood Inspection

1. Check brake master cylinder level
2. Check power steering fluid level
3. Check and correct coolant level
4. Identify and inspect accessory drive belts
5. Battery visual inspection
6. Inspect operation of lighting system
7. Visibility checklist
8. On-the-ground safety checklist
9. Check automatic transmission fluid
10. Inspect shock absorbers

Service Area 3 Under Vehicle Service

1. ID steering and suspension system on computer (No RO required)
2. Tire wear inspection
3. ID suspension and steering systems on computer
4. Inspect suspension and steering linkage
5. Chassis lubrication

Service Area 4 Tire and Wheel Service

1. Tire Identification
2. Tire Maintenance
3. Replace a rubber valve stem (Class Demo)
4. Dismount and mount tires
5. Repair a tire puncture
6. Computer tire balance

Service Area 5 Service Information

1. Under hood label worksheet
2. Motor service manual worksheet (No RO required)

Service Area 6 Cooling and Fuel Service

1. ID cooling system on computer (No RO required)
2. Cooling system inspection (41-46 use One RO)
3. Pressure test a radiator and radiator cap
4. Perform a cooling system combustion leak test (DO Liquid Test)
5. Check coolant strength (use Refractometer)
6. Replace a radiator hose (Upper)
7. Flush cooling system
8. Adjust a alternator V-belt
9. ID Fuel system on computer (NO RO required)
10. Carburetor inline fuel filter service
11. PCV valve service
12. 02 sensor test (Fluke 88 and Probe)

Service Area 7 Electrical Services

1. ID electrical system on computer (No RO required)
2. Honda trainer Job #ELS 22
3. Honda trainer Job #ELS 24
4. Blade fuse testing and service
5. Splice a wire with a crimp tool (No RO required)
6. ID Battery computer (No RO required)
7. Battery service (59-65 use one RO)
8. Battery specific gravity test
9. Battery open voltage test
10. Battery slow charge
11. Battery capacity/load test
12. Battery sulfation test (three minute charge test)
13. Battery Drain test
14. Replace a tail/brake light

Service Area 8 Tune-Up Services

1. ID Spark Plug Problems on computer (No RO required)
2. Replace spark plugs (Complete project 66072 on one RO)
3. Inspect spark plug cables (measure resistance)
4. Replace a distributor cap and rotor
5. Check ignition timing using a timing light
6. Perform a compression test
7. Read an oscilloscope (Sun Scope)
8. Perform poser balance test (Sun Scope)
9. ID engine components on computer (No RO required)
10. Restore a screw thread (No RO required)
11. Drill and tap a hole (No RO required)

Service 9 Chassis Service

1. Manually bleed brakes and flush system (78-79 One RO)
2. Remove a drum using an impact wrench
3. Inspect drum brakes
4. Inspect front disc brakes
5. Adjust a tapered roller wheel bearing (81-82 one RO)
6. Repack wheel bearings
7. Computer final test (auto insight) (No RO required)

Measurement Methods (include any industry certification or licensure):
Skills are evaluated based on project mastery, quiz grades, text materials and general shop competencies.

Grading:

Student evaluation will be based on three (3) various areas:

1. Knowledge of information (quizzes, tests, worksheets and performance evaluations.)

2. Application of materials (project completion, safety, and workmanship.
3. Participation (Initiative, teamwork, responsibility and cooperation). Students will receive 20 points per day for effective participation.

Grades will be evaluated by percentage of points earned as follows:

101% - 105% = A+
90% - 100% = A
80% - 89% = B
70% - 79% = C
60% - 69% = D
50% - 59% = F

In order to receive college credit, student must pass a competency exam with 70% or better, administered by Columbia College faculty, Erik Andal or his designee. The score on the exam administered by the college will also determine the grade reflected on the transcript as follows: 70%-100% = Pass

Note: Students that complete an articulated high school course and meet the specific articulation requirements for course will be awarded Columbia College credit. The transcript will be noted as CBE (Credit by Exam). In order to receive above credit, students must complete a Columbia College Application for Admission within six (6) months of completing the high school course.

***Sample* Textbooks or Other Support Materials (including Software):**

Modern Automotive Technology – Duffy, James E. 7th edition published 2009
Software: ATC Challenge, Shop Talk, CDX, All data

CC faculty Signature:	**Date:** 12/14/18
[*Office use only.*] **TOPs Code:**	[*Office use only.*] **Internal Tracking Number:**

Completed by Columbia College

Columbia College faculty and Bret Harte High School faculty have met and agree on the terms of the articulation agreement.

Department Faculty Signature	x	☑ **Approved** ☐ **Not Approved**	12 / 14 / **2018**
CTE Dean Signature	x	☑ **Approved** ☐ **Not Approved**	12 / 17 / **2018**
CTE Transition Officer Signature	x Carol Ellis	☑ **Approved** ☐ **Not Approved**	12 / 17 / **2018**
Admissions and Records Notified			12 / 17 / **2018**
High School Notified			12 / 17 / **2018**