ORIGINATOR: Bryan Kramer
FORMERLY KNOWN AS:
CROSS LISTED COURSE:

SEMESTER UNITS: 4.0
HRS LEC: 54.0 HRS LAB: 54.0 HRS OTHER: 0.0
CONTACT HRS TOTAL: 108.0
STUDY NON-CONTACT HRS RECOMMENDED: 108.0

CATALOG DESCRIPTION:
This introductory course aligns with Honda’s Professional Automotive Career Training (PACT) curriculum. The course covers Honda-specific fundamental theory and maintenance procedures, including research on American Honda Motor's interactive network for learning modules and service information. Honda recognizes the completion of this course as part of their core training program.

JUSTIFICATION FOR COURSE:

PREREQUISITES:

COREQUISITES:

ADVISORIES:

ASSIGNED DISCIPLINES:
   Automotive technology

MATERIAL FEE: Yes [ ] No [X] Amount: $0.00

CREDIT STATUS: Noncredit [ ] Credit - Degree Applicable [X] Credit - Not Degree Applicable [ ]

GRADING POLICY: Pass/No Pass [ ] Standard Letter [X] Not Graded [ ] Satisfactory Progress [ ]

OPEN ENTRY/OPEN EXIT: Yes [ ] No [X]

TRANSFER STATUS: CSU Transferable[X] UC/CSU Transferable[ ] Not Transferable[ ]

BASIC SKILLS STATUS: Yes [ ] No [X] LEVELS BELOW TRANSFER: Not Applicable

CALIFORNIA CLASSIFICATION CODES: Y - Not Applicable

NON CREDIT COURSE CATEGORY: Y - Not applicable, Credit Course

OCCUPATIONAL (SAM) CODE: C

REPEATABLE ACCORDING TO STATE GUIDELINES: No [X] Yes [ ] NUMBER REPEATS:

REQUIRED FOR DEGREE OR CERTIFICATE: No [X] Yes [ ]

GE AND TRANSFER REQUIREMENTS MET:

COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:

1. Demonstrate an ability to self-assess progress and development in a specific area and to further design and pursue a course of action based on the self-assessment.

2. Analyze and diagnose automotive engines and related components for correct system operation.

3. Perform precision torque applications.

4. Demonstrate mastery of diagnostic tools and equipment used for automotive repair.
5. Perform accurate vehicle safety inspections.

COURSE OBJECTIVES:
1. safely perform a solo A express service demonstrating efficiency and 100% accuracy.
2. safely perform, as a team, a B express service demonstrating efficiency and 100% accuracy.
3. locate service information on Honda's Interactive Network.
4. identify Honda-specific components.
5. evaluate Honda-specific safety concerns.

COURSE CONTENT:

LECTURE CONTENT:

A. Honda career opportunities and customer culture philosophy
   1. GIS02 system adapted for specific school location
   2. Customer service
B. Introduction to shop and personal safety
   1. SP2 certification
   2. Identification of safety concerns
C. Service information resources
   1. Instructor-led demonstration through Honda's Interactive Network
   2. Service manuals
D. Service news and bulletins
   1. Express service information location
   2. Information evaluation
E. Tools and equipment
   1. Basic hand-tool usage
   2. 26-gallon Drayco oil drum designed as tool storage
   3. Drain plugs and time cert repairs
   4. Historical review of oil recycling laws
F. Efficiency
   1. Shop preparation
   2. Restocking
   3. Clean-up and downtime
G. Honda multi-point vehicle inspection customer focused for efficiency and accuracy
   1. Instructor demonstration
      a. Solo
      b. Tech A and B
   2. Work efficiency
   3. Time efficiency
   4. Initiative
H. Express Service Choreography introduction to Honda A and B services
   1. Average 3 to 4 cars per hour
   2. 24 to 32 cars per day
I. Parallel and serial processes
   1. Communication and teamwork
   2. Work accuracy, quality and pride
   3. Express service trip
   4. Express video
   5. Physical endurance
J. Interior and Exterior
   1. Lighting operation and service
      a. Inspection and bulb replacement
      b. Student demonstration
      c. Historical review of light bulbs used and replacement procedures
2. Winshield washer and wiper
   a. Operation
   b. Inspection
   c. Blade insert
3. Parking brake operation
4. Clutch operation
5. Cabin filter
6. Horn operation
K. Battery performance and testing
   1. Theory and application of battery service equipment and procedures
      a. Battery safety
      b. Battery testing (ED-18/GR8)
      c. Battery saver and battery removal and replacement
      d. Jump starting procedure
      e. Battery charging
      f. Historical review of battery service
   2. Safety considerations
L. Under hood service and fluid inspection
   1. Level inspection and procedures for vehicle fluids
      a. Brake fluid inspection and identification
      b. Clutch fluid inspection and identification
      c. Power steering fluid inspection and identification
      d. Engine coolant inspection and identification
      e. Windshield washer fluid
      f. Historical review of underhood fluid inspection.
M. Drive belt and cooling system
   1. Theory and service procedures for drive belts and cooling system
      a. Hose inspection and identification
      b. Belt inspection and identification
      c. Cooling system inspection and identification
      d. Historical review of belt materials and design
   2. Theory and application of filters
      a. Air filter inspection
      b. Air filter replacement
N. Under vehicle and hydraulic lift operation
   1. Safety considerations
   2. Theory and application of vehicle lift operation
      a. Express service lift
      b. Non-express service lift
O. Brake- and suspension-systems theory, component identification and operation
   1. Theory and application of brake system
      a. Brake system leak inspection
      b. Parking brake inspection
      c. Steering inspection and identification
      d. Suspension inspection and identification
      e. Historical review of brake and suspension components used
   2. Component failure identification
      a. Fluid leak detection
      b. Exhaust leak detection
      c. Driveline damage
      d. Defective seals and boots
P. Oil fundamentals and service procedures
   1. Theory and application of lubrication system
      a. Oil and filter identification
      b. Oil and filter replacement
Q. Brakes and tires
   1. Theory and application of vehicle control systems
      a. Tire identification
      b. Tire damage and wear inspection
      c. Tire air pressure inspection and adjustment
      d. Tread depth measurement and recording
      e. Tire rotation including 5th tire
      f. Disc brake identification and theory
      j. Drum brake identification and theory
      k. Brake pad wear inspection, measurement, and recording for safety
      h. Brake shoe wear inspection, measurement, and recording for safety

R. Torque procedures
   1. Theory and application of torque tooling for tire safety
      a. Click-type wrench
      b. Dial-type wrench
      c. Beam-type wrench
      d. Torque-stick use
      e. Preset torque wrench

S. Service advisor procedures
   1. Service advisor duties
   2. Accurate and timely communication
   3. Parallel process and professional information delivery for best efficiency

T. Maintenance minder and reminder stickers
   1. Theory and application of service reminder systems
      a. Maintenance minor procedures
      b. Correct identification of next service on static clings
      c. Parallel process and car delivery
   2. Efficiency during downtime

U. Clutch theory, construction, and inspection
   1. Clutch theory of operation
      a. Clutch inspection and identification
      b. Manual transmission driving operation

LABORATORY CONTENT:
The lab component reinforces the student's understanding of the various automotive systems described above through hands-on practice.

A. Solo A service for graduation
   1. Demonstration
   2. Student demonstration along with written exam
      a. Complete an "Express Choreography" for A

B. Tech A and B Express Service for graduation
   1. Student demonstration
      a. Complete "Express Choreography" for B
      b. Safety procedures observered

C. Express Service Solo A Choreography Final
   1. Section A "Express Service" demonstrated within the prescribed time limits at 100% accuracy
   2. Safety considerations

D. Express Service Maintenance section A:
   1. Inspection of base automotive system operations
   2. Inspection of automotive components for wear
   3. Battery performance
   4. Fluid level
5. Check tire condition and rotation
6. Oil and filter change

E. Express Service Maintenance section B:
1. Inspection of base automotive system operations
2. Inspection of automotive components for wear
3. Battery performance
4. Fluid level check
5. Tire condition and rotation
6. Oil and filter change
7. Brake condition
8. Cabin air filter replacement
9. Engine air filter replacement

F. Possible Vehicle Bugs
1. Oil on shock
2. Screw in tire
3. Trailing arm bushing
4. E-brake adjustment
5. Interior light
6. 3rd brake light
7. Inside pad worn
8. Wiper blade with slice
9. Washer spray nozzle clogged at rear or front
10. Rear wiper operation
11. Horn operation

METHODS OF INSTRUCTION:

A. Lecture:
B. Lab:
C. Independent Study:

INSTRUCTIONAL TECHNIQUES:

COURSE ASSIGNMENTS:
Reading Assignments

Text
Websites
Honda Interactive Network Information (www.in.honda.com)

Out-of-class Assignments
none

Writing Assignments

On examination, students will evaluate various Honda-specific automotive malfunctions based on inspection results. Students will demonstrate an ability to relate diagnostic test results directly to component failures. Students will research information on Honda's Interactive Network to confirm the proper operation -- or failure -- of components, and then communicate their results to the instructor in writing, on a repair order and test answer document.

METHODS OF STUDENT EVALUATION:
Midterm Exam
Final Exam
Short Quizzes
Written Assignments
Essay Examinations
Objective Examinations
Demonstration of Critical Thinking:
Students will evaluate various Honda-specific automotive malfunctions based on inspection results. Students will demonstrate an ability to relate diagnostic test results directly to component failures. Students will research information on Honda's Interactive Network to confirm the proper operation -- or failure -- of components, and then communicate their results in writing, on a repair order.

Required Writing, Problem Solving, Skills Demonstration:
On examination, students will evaluate various Honda-specific automotive malfunctions based on inspection results. Students will demonstrate an ability to relate diagnostic test results directly to component failures. Students will research information on Honda's Interactive Network to confirm the proper operation -- or failure -- of components, and then communicate their results to the instructor in writing, on a repair order and test answer document.

TEXTS, READINGS, AND RESOURCES:
TextBooks:

LIBRARY:
Adequate library resources include:

Comments:
Attachments:
Attached Files