HIBBING COMMUNITY COLLEGE
COURSE OUTLINE

COURSE NUMBER & TITLE: ASES 2024: Automotive Heat / Air Conditioning
CREDITS: 3 (1 Lec / 2 Lab)
PREREQUISITES: Instructor approval

CATALOG DESCRIPTION:
Automotive Heat / Air Conditioning covers theory, operation, diagnosis and repair of automotive climate control systems. Topics include heating, air conditioning, controls, and electrical circuits.

OUTLINE OF MAJOR CONTENT AREAS:
1. Electrical Review
2. Safety precautions
3. Theory of temperature control
   A. Heat
   B. Refrigeration process
4. Heating system operation
5. Refrigeration system operation
6. Diagnosis and repair
7. System controls
   A. Manual
   B. Vacuum
   C. Automatic Temp Control

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will performance test A/C system and identify problems.
2. Students will leak test A/C system and determine necessary action.
3. Students will determine recommended oil and oil capacity for system application.
4. Students will inspect, test, service or replace A/C compressor clutch components.
5. Students will evacuate and charge A/C system and add refrigerant oil as required.

MNTC GOALS AND COMPETENCIES MET:
N/A

HCC COMPETENCIES MET:
Thinking Working Productively & Cooperatively
Communicating Clearly & Effectively
Creatively & Critically
STUDENT CONTRIBUTIONS:
The student will:
1. Attend all class sessions.
2. Participate in class activities and discussions.
3. Request assistance when needed.
4. Complete and hand in assigned work when due.

Attendance is critical: if the student is not present, they cannot participate in or contribute to the learning process.

STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.

ADDITIONAL INFORMATION:
Tasks lists, handouts, and other materials will be provided.
Safety glasses are required in the lab.

Curriculum Committee Approval Date: April 3, 2018

AASC APPROVAL DATE: April 18, 2018
REVIEW DATE: April 2023