HIBBING COMMUNITY COLLEGE  
COURSE OUTLINE

COURSE TITLE & NUMBER: Electronics/Electrical Systems 1: DSL 1537  
CREDITS: 2 (1 Lec / 1 Lab)  
PREREQUISITES: None

CATALOG DESCRIPTION:  
Electronics/Electrical Systems 1 will focus on atomic structure, electron theory of electricity, testing conductors, semi-conductors and insulators, construction and operation of storage batteries, Ohm’s law theory, the applications to series, parallel, and series/parallel DC circuits, 12/24 volt DC components, operation, troubleshooting, repair, 12/24 volt DC charging circuits, 12/24 volt DC starting circuit, operation, troubleshooting, repair.

OUTLINE OF MAJOR CONTENT AREAS:  
1. Fundamental knowledge of basic electricity  
2. Construction of storage batteries  
3. Ohms Law  
4. 12/24 volt starting systems  
5. 12/24 volt charging systems  
6. Read electrical schematics/diagrams

COURSE GOALS/OBJECTIVES/OUTCOMES:  
1. Students will demonstrate a basic understanding of Atomic structure, Electron theory.  
2. Students will test conductors, semiconductors, and insulators.  
3. Students will test and understand storage batteries.  
4. Students will demonstrate a basic understanding of Ohms law.  
5. Students will study and demonstrate the operation of 12/24 volt starting systems.  
6. Students will study and demonstrate the operation of 12/24 volt charging systems.

MNTC GOALS AND COMPETENCIES MET:  
N/A

HCC COMPETENCIES MET:  
Working Productively and Cooperatively  
Thinking Creatively and Critically

STUDENT CONTRIBUTIONS:  
Students are expected to prepare for class, attend class, attend all lectures and labs, participate in all class activities, complete work on time and request assistance if needed.

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

Curriculum Committee Approval Date: May 1, 2018

AASC APPROVAL DATE: May 9, 2018  
REVIEW DATE: May 2023