Hibbing Community College

DSL 2524: Power Shift Transmissions & Torque Converters

A. COURSE DESCRIPTION
   Credits: 3
   Lecture Hours/Week: 1
   Lab Hours/Week: 4
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None

   Power Shift Transmissions & Torque Converters focuses on the Allison automatic transmissions and converters and the theory of operation and their repair. Credits: 3 (1 Lec/2 Lab)

B. COURSE EFFECTIVE DATES: 08/24/2005 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Planetary Theory
   2. Clutch Designs and Their Role
   3. Power Flow/Torque Path Through the Transmission
   4. Hydraulic Circuits and Oil Flow
   5. Torque Converter Components
   6. How the Torque Converter Transmits Power
   7. Torque Multiplication Within the Converter
   8. Various Styles of Torque Converters in Use Today

D. LEARNING OUTCOMES (General)
   1. Students will identify planetary gearing.
   2. Students will explain basic planetary principles
   3. Students will disassemble power shift transmission, inspect, and rebuild.
   4. Students will explain torque converter operation.
   5. Students will use schematic to competently follow and explain power flows through the transmission.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
HCC COMPETENCIES MET:
Working Productively & Cooperatively
Communicating Clearly & Effectively
Thinking Creatively & Critically
Social Responsibility

STUDENT CONTRIBUTIONS:
Students are expected to attend all lectures and lab sessions, participate and contribute to class discussions, complete all assignments on time and request assistance when needed. Attendance is critical in this class.

METHODS FOR EVALUATING STUDENT LEARNING:
Performance objectives and exams will be translated to points and the points to grades. Methods of evaluation include tests, quizzes, class participation, assignments, attendance, and lab tasks.

AASC APPROVAL DATE: January 17, 2018
REVIEW DATE: January 2023