A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 3
Lab Hours/Week: 2
OJT Hours/Week: *.*

Prerequisites:
This course requires the following prerequisite
  MGEM 2634 - Marine Engine Systems (Number of Years Valid: 5)

Corequisites: None
MnTC Goals: None

This is a course in advanced methods of marine drive repair. Bombardier Recreational Division, Mercury Marine, Mercruiser Marine, Volvo Pent, and Yamaha are studies. The focus is on gear case designs, measurements, overhaul procedures, and reconditioning of all the parts in the modern marine drives. Water pumps and maintenance procedures are thoroughly reviewed.

B. COURSE EFFECTIVE DATES: 03/06/2020 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Define outboard propulsion systems.
2. Define sterndrive propulsion systems.
3. Identify proper lubricants.
4. Assemble and verify sea water cooling system operation.
5. Demonstrate the safe use of tooling and equipment.
6. Remove, install and adjust modern outdrives.
7. Identify and service transom assemblies.
8. Define propeller characteristics.
9. Perform factory rebuild procedures.

D. LEARNING OUTCOMES (General)

1. The learner will identify gear case designs and service procedures.
2. The learner will demonstrate rebuild procedures for complete drive systems.
3. The learner will demonstrate transom assembly service procedures.
4. The learner will demonstrate service procedure on stern drive systems.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted