Alexandria Technical and Community College

MGEM 2608: Marine Engine Systems

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 1
Lab Hours/Week: 2
OJT Hours/Week: *
Prerequisites:
This course requires the following prerequisite
MGEM 2606 - Marine Fuel Systems (Number of Years Valid: 5)
Corequisites: None
MnTC Goals: None

Learners study engine designs and theory of operation. Overhaul, repair, and service are included. All
engine components are covered in the instruction. The focus is on engine designs and factory methods
used to overhaul, measure, and recondition all the internal parts of a modern marine power plant. Mercury,
Johnson/Evinrude, Honda, Yamaha, Mercruiser, and Volvo Penta are covered. Personal and shop safety
are stressed. This course also provides time for learners to gain hands-on experience. Prerequisite: First
year of the Marine and Small Engine Mechanic program or instructor approval and MGEM2606.

B. COURSE EFFECTIVE DATES: 06/01/2003 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Review 2-stroke engine theory.
2. Review 4-stroke engine theory.
3. Identify engine components.
4. Perform precision measurements
5. Identify & test 2-stroke lubrication systems.
6. Identify & test 4-stroke lubrication systems.
7. Demonstrate the safe use of tooling & equipment.
8. Identify & test tooling system components.

D. LEARNING OUTCOMES (General)

1. The learner will identify engine designs and service tools.
2. The learner will demonstrate understanding and rebuilding procedures.
3. The learner will demonstrate understanding and servicing procedures of inboard/outboard power
   plants.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted