

MNG 110 - ENGINEERING MECHANICS

Course Description

Survey of the construction, operation, and maintenance of shipboard systems. The major emphasis will be on piping, valves, control valves, and pumps. Practical application of the above items will be supported in the lab portion of this course with computer simulation exercises. STCW.

Credit Hours

3

Contact Hours

3

Lecture Hours

2

Lab Hours

2

Required Prerequisites

All prerequisites for all GLMA courses are satisfied by following the approved Course Sequence Guide and any deviation from this guide needs to be approved by the cadet's adviser.

Corequisites

MNG 104

Course Learning Outcomes

Knowledge:

- Identify the components of the auxiliary systems of a large merchant vessel.
- Describe the safe operation proper of the auxiliary systems of a large merchant vessel.
- Properly maintain the auxiliary systems of a large merchant vessel.

Application:

- Identify the components of the auxiliary systems of a large merchant vessel.
- Repair and maintain the type of valves that are commonly used in engine rooms of large merchant vessels.
- Break down and re-assemble valves and valve controls.

Integration:

- Relate the components of the auxiliary systems view them as a system and not individual parts.
- Identify, maintain, and repair the components that comprise the auxiliary systems of a large merchant vessel.

Human Dimension:

- Reflect on the many responsibilities of a merchant marine officer.
- Work together in lab groups to obtain information and solve problems.

Caring - Civic Learning:

- Recognize that the auxiliary systems are critical to safe operation of a vessel and compliance with pollution control regulations.

- Appreciate the auxiliary systems realizing it is as critical to shipboard operation as other engineering systems.

Learning How to Learn:

- Demonstrate the STCW Code Knowledge, Understanding and Proficiencies (KUPs) for Ratings Forming Part of an Engineering Watch: 1.2.E.
- Demonstrate the STCW Code KUPs for Able Seafarer-Engine Task numbers: 5.1.C, 7.5.A, 7.6.A, 10.3.A.
- Demonstrate the STCW Code KUPs for Officer in Charge of an Engineering Watch: 5.1.A, 8.2.A, 8.2.B, 8.2.C, 8.2.D, 9.1.A, 9.1.B.