

CMI COURSE CURRICULUM COURSE ACTION

Course Title: Introduction to Engine Room Watchkeeping **Alpha Number:** MART 130 **CIP No.** 15.0806

Type of Action:

New Course (attach narrative justification for course creation)

Substantive Revision (attach narrative justification for changes, including assessment and/or achievement data and feedback from the advisory committee if relevant)

Select all that apply:

Change in number of credit hours

Change in prerequisite

Substantive change in course content

Change to SLOs Other:

Non-substantive Revision

Select all that apply:

Change in Alpha Number or Title (unless letter abbreviation has not previously been used)

Edit to course description that does not alter the substance of the course


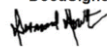

Change to recommended texts


Other: Change in number of contact hours from 386 to 360

Reinstitution of Archived Course (attach narrative justification for reinstitution, including evidence of demand, evidence of capacity, feedback from the advisory committee if relevant, and commentary that speaks directly to the reasons the course was initially archived))

Reaffirmation of Course (only allowable if course completion rate exceeds ISS, the benchmark has been met for the majority of SLO assessments, and there is no evidence of inequitable levels of achievement across subpopulations; attach evidence)

Approvals:

	Name	Signature	Date
Department Chair	Edward Adiniwin	DocuSigned by:  Edward Adiniwin 0A4D30580E1D40C...	9/2/2024
Curriculum Committee Chair	Desmond N. Doulatram	DocuSigned by:  Desmond N. Doulatram Employee signature/Department Co-Chair 8A4E9FDD06E14D5...	9/2/2024
Dean	Rigjeta R. Lord	Signed by:  Rigjeta R. Lord E719CB3192EB4F4...	9/2/2024

VPASA	Dr. Elizabeth Switaj	DocuSigned by:  89BEB3BDCC23455...	10/30/2024
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CMI COURSE OUTLINE

CIP No. 15.0806

Version No. 2

MART130

Introduction to Engine Room Watchkeeping

Alpha Number

Course Title

Previous Alpha Number:

Course Description: Introduces students to the requirements to contribute to a watch in a manned engine room or perform duties in a periodically unmanned engine room. Students practice relevant operational checks and assisting in the maintenance of marine diesel engines and associated auxiliary machinery in accordance with safety and statutory requirements. Instructional time includes classroom and shipboard hours.

Course originally prepared by: Mark Gooderham Consultant July/2022

Most recent revision by: Maritime Program WAVES August/2024

Course mode(s): Face to Face (including Zoom) Hybrid Distance Education

Credits calculated by: Credit Hour Clock Hour **Contact Hours:** 360

Type	No. of Hours	No. of Credits	Maximum No. of Hours Online
Lecture/Seminar/Workshop	90	6	45
Clinical			
Practicum			
Lab			
Fieldwork	270	6	
Studio Time			
Total	360	12	45

Purpose(s) of Course: Degree Requirement _____
 Degree Elective _____
 General Education _____
 Credit Certification CC in Rating forming Part of an Engine Room Watch
 Developmental _____
 CTE/TVET _____

ABE/Adult HS _____

Distribution Area: Humanities _____
 Social Sciences _____
 Mathematics (Credit) _____
 Science _____

Prerequisite: MART 102 and 103

Student Learning Outcomes: Upon completion of this course, students will be able to:

1. Explain the watchkeeping routines and general duties of a rating forming part of an engineering watch.
2. Demonstrate the use of lubrication schedules and the process for handling fuels and lubricants, including fulfilling record keeping requirements.
3. Describe the purpose, elements, and operational requirements of marine boilers. 4. Identify basic diesel engine components and the cleaning requirements of those components.
5. Describe the requirements of MARPOL and common types of pollution control equipment.
6. Identify the shaft configuration of propulsion plants and the required basic operational checks.

SLO Mapping:

Prerequisite Course SLO	Linked SLO from this Course	Explanation
MART 102 – 1. Add, subtract, multiply and divide whole numbers and fractions	2. Demonstrate the use of lubrication schedules and the process for handling fuels and lubricants, including fulfilling record keeping requirements.	Record keeping requires basic mathematics.
MART 103 – 2. Apply basic nautical terminology to work, class, and living situations	5. Describe the requirements of MARPOL and common types of pollution control equipment.	Students need to be able to understand MARPOL.

Links to Program Learning Outcomes:

SLO	Linked PLO	I/P/M	Explanation of Link
1	1. Carry out basic engine room watchkeeping duties.	P	Students fully understand expectations for these duties.

2	2. Perform the lubrication/fuel and record keeping duties of an engine room rating in accordance with established procedure and safety requirements.	P	Students show that they can carry out these duties.
3	3. Carry out relevant operational checks of marine boilers, marine diesel engines, and related systems in accordance with established procedure and safety/statutory requirements.	P	Students must understand boilers in order to check them appropriately.
4	3. Carry out relevant operational checks of marine boilers, marine diesel engines, and	P	Students must understand diesel engines in order to check them appropriately.
	related systems in accordance with established procedure and safety/statutory requirements.		
5	4. Safely operate the on board pollution control machinery and equipment in accordance with safety, statutory and environmental requirements. 8. Describe the importance of marine environmental awareness and relevant precautions.	P	Students understand the requirements and the functioning of pollution control machinery.

6	5. Carry out operational checks on the shafting components of a marine propulsion plant and relevant hydraulic systems, including steering gear in accordance with established procedure and safety requirements.	P	Students must understand propulsion plants in order to check them appropriately.
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Course Content: Students in this course will be introduced to:

1. Keeping a Boiler Watch
2. Engine Room Watchkeeping Duties
3. Fuel, Lubricants and Records
4. Marine Diesel Engines
5. Pollution Control from the Engine Room
6. Propulsion Types, Shafting and Gearing

Higher Order Thinking Skills: Students in this course will experience:

- Analyzing the basic elements of an idea, experience, or theory
- Making judgments about the value or soundness of information, arguments, or methods
- Applying theories or concepts to practical problems or in new situations

Recommended Methods of Instruction

- Demonstration
- Lecture
- Small group discussion
- Class discussion
- Audio-Visual Aids
- Laboratory
- Supervised Practice
- Field Trips
- Other: Guest speaker (s)

Recommended Assessment Tool Type(s):

- Case Study
- Critique of Performance
- Exam/Quiz In-Course
- Exam/Quiz Standardized (attach narrative describing development and validation process)
- Focus Group
- Group Project
- Individual Project
- Observation
- Portfolio Review
- Presentation
- Simulation
- Skill Performance

Supervisor Evaluation

Survey

Written Assignment

Laboratory practical

Required Forms of Regular and Substantive Interaction for Hybrid or Distance Education Courses (Selected at Least Two):

Direct instruction through:

Live video lectures

Live audio-only lectures

Live text chats

Assessing or providing feedback on a student's coursework

Providing information or responding to questions about the content of a course or competency through:

Live video discussions

Live audio-only discussions

Live text chats

Asynchronous message boards or text chats

Facilitating a group discussion regarding the content of a course or competency through:

Live video discussions

Live audio-only discussions

Live text chats

Asynchronous message boards or text chats

Other, specify:

Note: for distance education courses, if only two are selected, both must occur within the course on a weekly basis. If more than two are selected, the instructor may choose which two are used during each week.

Equipment and Materials:

1. Recommended texts: Course notes.
2. Equipment/Facilities: PPE. Hand tools. Workshop area. Training vessel. Vessels of opportunity (Fieldwork). Teaching Facility
3. Materials and Supplies: PPE. Engine filters.

Connection to College Mission:

The CMI Mission states, "The College of the Marshall Islands will provide our community with access to quality, higher and further educational services, prioritize student success through engagement in relevant Academic, Career and Technical Education, and be a center for the study of Marshallese Culture. It will also provide intellectual resources and facilitate research specific to the needs of the nation". BOR approved 1st December, 2020

The course will provide access to quality further education which will prioritize student success through engagement in relevant Academic, Career and Technical Education.

Connection to Department Mission:

The mission of the department is "providing a high-quality educational service in maritime related vocational training to the Marshallese people and to students from other nations

who desire maritime career opportunities in the area of maritime studies". The course will provide high quality maritime vocational training to students who desire career opportunities in the area of maritime studies.

Justification for Hybrid:

The online component can deliver theoretical knowledge such as engine room protocols, safety procedures, and equipment management through interactive modules, videos, and simulations, allowing students to engage with the material at their own pace and revisit complex topics as needed. This flexibility is crucial for accommodating the schedules of working professionals and students in remote locations. In-person sessions will focus on hands-on training and real-world applications, such as operating engine room equipment and responding to emergencies, ensuring that students gain practical experience and skills.