

CONTAINERIZATION AND MODERN CARGO STOWAGE

MT-3261 Spring 2022

COURSE

Containerization and Modern Cargo Stowage

CREDITS

3 / 25 - 1h 15m Lectures, 2 per week

COURSE INFORMATION

Description: The course covers the information, knowledge and use of practical skills necessary for a junior deck officer to stand an effective cargo watch on board a variety of modern dry cargo vessel types. Load planning, preparation of holds, operation of ships' cargo gear, and the importance of adequately securing cargo to prevent damage to the ship or cargo are covered. Detailed materials on cargo containers including proper handling of refrigerated cargo containers are included. Proper stowage and segregation of hazardous cargo and the IMDG Code are addressed. Dry bulk cargo stowage including the associated hazards and precautions needed for safe loading and unloading is introduced.

Prerequisites: Basic Seamanship (MT-2231) & Ship Construction (MT-2141)

COURSE OBJECTIVES

After completing this course, students should:

- Have the knowledge necessary to supervise the loading and unloading of cargo on board various types of dry cargo vessels
- Fully understand the modern cargo container, its proper handling, stowage, and securing including proper handling of refrigerated containers
- Be able to identify dangerous goods and know they are to be stowed, segregated, and labeled.
- Know proper dry bulk handling practices

STCW Knowledge-Based Learning Objectives:

Completion of this course will demonstrate knowledge and understanding of the following STCW elements:

- ABD-C1.3 Ramps, side/bow/stern doors or elevators
- ABD-C1.3 Cranes, derricks, winches
- ABD-C1.1 Function and uses of hoists, cranes, booms, and related equipment
- ABD-B1.2 Basic knowledge of and precautions to observe in connection with particular types of cargo
- ABD-B1.2 Identification of IMDG labelling
- ABD-B1.1 Procedures for safe handling, stowage and securing of cargoes and stores, including dangerous, hazardous and harmful substances and liquids
- OICNW-B1.2 Knowledge of safe handling, stowage and securing of cargoes, including dangerous, hazardous and harmful cargoes, and their effect on the safety of life and of the ship
- OICNW-B2.1 Knowledge and ability to explain where to look for damage and defects most commonly encountered due to: loading and unloading operations

Grading of tests and examinations will be used to determine satisfaction of these objectives.

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COURSE OUTCOMES

As a result of completing the course and successfully passing the associated examinations, Cadets will:

- Demonstrate the knowledge necessary to stand an effective cargo watch on deck of various types of dry cargo vessels
- Exhibit a comprehension of the basics of cargo load planning
- Show a familiarity with how to operate ship's cargo handling equipment
- Demonstrate an understanding of the details of cargo containers; proper handling, stowage and lashing including proper handling of refrigerated cargo containers as well as labeling, stowage, and segregation of hazardous cargo
- Display an understanding of dry bulk cargo operations

Grading of tests and examinations will be used to determine satisfaction of these outcomes.

COURSE CONDUCT

It is expected all students will soon be ship's officers. They will be addressed and treated as such.

- Course conduct will be in accordance with the MMA regimental system. All students **shall** wear the appropriate uniform of the day to each class.
- The MMA honor code will be strictly followed during the course of the semester. Any submitted work be that examinations, tests, exercises, assignments, etc. is expected to be only your work. No outside sources may be used in the production of your work. No collaboration with any individual is permitted unless specifically authorized by the instructor for example during lecture breakout sessions. If the instructor has any concern about a possible violation of the MMA Honor Code, the submitted work will be given a grade of zero and the instance may be pursued with the Commandant of Cadets after referral to the Vice President of Academic Affairs. In serious cases, violations of the Honor Code may result in dismissal from the Academy.
- Cell phone texting or calls during class sessions is not permitted. **Cell phones SHALL be put away at the beginning of class and remain away until the end of class, unless otherwise directed by the instructor. Use of your cell phone during lecture will result in immediate dismissal from class and a zero for that day's class. Repeated violations of this classroom policy may result in a reduction of your overall grade by one letter grade and a report of the repeated violations to Dean of Undergraduate Studies and/or VP of Academic Affairs.**
- Laptop computer use for social media or Internet surfing during class time is strictly prohibited. **Repeated violations of this classroom policy may result in a reduction of your overall grade by one letter grade and a report of the repeated violations to Dean of Undergraduate Studies and/or VP of Academic Affairs**
- Students **shall not** spend in class time studying and working on License Seminar materials.

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COURSE CONDUCT CONTINUED:

- The Academy offers, upon request, accommodations to students with documented learning disabilities. The ADA Coordinator, Asst. Dean Elaine Craghead, evaluates the documentation provided, determines appropriate services, and is available to discuss accommodations with students. The Disability Resources office is located in the Academic Resource Center, ABSIC 320. Students can drop in during normal business hours, M-F 0800-1600, or call x5120, or email ADAcompliance@maritime.edu.

Thereafter, you must make your instructors aware of any determined accommodations so that they may be implemented.

ATTENDANCE

- Since this is an STCW course, no allowance for unexcused absence will be made. Students are required to attend their scheduled lecture class in-person. Missing more than two meetings of lecture for ANY reason will result in at least one full letter reduction of your final grade, or an incomplete, or possibly a failing grade for the course.
- It is your duty to keep up with the material, and to arrange to make up any tests, exercises, assignments, or examinations of material missed ***in advance***. Make your arrangements beforehand, or a zero will be recorded for that work.
- Assignments and exercises **will not be accepted for credit past their due date**.

REQUIRED COURSE MATERIALS AND EQUIPMENT:

- Recommended Text:
Cargo Work for Maritime Operations, 8th ed., House, 2016 (CW)
Marine Cargo Operations, A Guide to Stowage, 4th ed., Meurn 2011 (MC)
Any additional Materials will be posted on Blackboard

REFERENCES

Materials used to develop course content in addition to the text will be identified in lecture notes and slides.

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GRADING POLICY

- It is planned that four (4) to five (5) unit tests will be administered during lecture meetings. Tests will be announced and given during a full or partial lecture period the duration of each will be determined by the instructor.
 - A single final examination will be held at the conclusion of the course. It will be a cumulative capstone examination covering all of the content of the course.
 - Examinations and tests may utilize written materials consisting of any of the following or a combination of such; multiple choice questions, fill in the blank, true or false, short answer, or technical sketches.
 - STCW knowledge-based assessments will be conducted as part of this course and incorporated into the tests and examination. Students are required to achieve a minimum grade of 70% in this course to satisfy the knowledge components of STCW. **Students failing to achieve a minimum grade of 70% will be required to retake this course and achieve a minimum grade of 70% prior to graduation.**
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- Class Participation and Attendance: 5%
 - Tests: 60%
 - Homework Assignments 10%
 - Final Examination: 25%

Final Course Grading:

100 - 93%	A	76.9 - 73%	C
92.9 - 90%	A-	72.9 - 70%	C-
89.9 - 87%	B+	69.9 - 67%	D+
86.9 - 83%	B	66.9 - 63%	D
82.9 - 80%	B-	62.9 - 60%	D-
79.9 - 77%	C+	Below 60%	F

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INSTRUCTOR

CDR John Belle Office # 317A

jbelle@maritime.edu

Office Hours: Mon.& Wed., & Thurs 1400-1450, **any other time by appointment.**

My duty is to:

- guide you through the material,
- answer all your questions, e-mails, texts, etc.,
- be available should you need further explanation, and
- promptly return and comment on assignments, quizzes and tests.

It is your responsibility to:

- Come to class prepared to discuss the reading and subject matter for that day,
- Actively participate in classroom discussions,
- Stop me at any point that you don't understand as I will be glad to go over it again, and
- Learn the material.

Your comprehension of the material can only come from your active involvement in the reading assignments and the lectures.

It is my personal goal to see each and every one of you to succeed with this material. If you feel you are falling behind or are having trouble understanding some of the subject matter, and I have not detected this on my own, be sure to contact me or stop by my office for extra help. I will be available for as long as it takes to help you.

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TOPICS / LESSON PLAN:

Meeting 1	Course Introduction Dry Cargo Introduction - Types of Cargos and Ships
Meeting 2	Containerization – History & The Intermodal System
Meeting 3	Containerization – Cargo Containers, Parts
Meeting 4	Containerization – Cargo Containers, Types
Meeting 5	Containerization - Terminals & Ships
Meeting 6	Cargo Containers - Handling
Meeting 7	Cargo Containers - Securing
Meeting 8	Cargo Containers – Refrigerated Cargo
Meeting 9	Hazardous Cargo
Meeting 10	Hazardous Cargo – IMDG Code
Meeting 11	Cargo Operations - Officer Responsibilities
Meeting 12	Cargo Handling Equipment – Derricks & Cranes
Meeting 13	General Cargo Ops and Stowage
Meeting 14	General Cargo Load Planning and Calculations
Meeting 15	Caring For the Cargo - Responsibilities
Meeting 16	Deck Cargo
Meeting 17	Roll On / Roll Off Cargo Ops Part 1
Meeting 18	Roll On / Roll Off Cargo Ops Part 2
Meeting 19	Cargo Documentation, Claims & Claim Prevention
Meeting 20	Heavy Lift Cargos
Meeting 21	Timber Carriers
Meeting 22	Offshore Supply Boats (OSVs)
Meeting 23	Military Sealift Underway Replenishment
Meeting 24	Dry Bulk Cargo
Meeting 25	Hatch Covers & Ballast

FINAL EXAMINATION

This syllabus and course schedule is tentative and may be adjusted as required to meet the goals and objectives of the course. Notification of any changes will be made as soon as possible.