



Course syllabus

Faculty of Technology
Kalmar Maritime Academy

1TP72K Lasthantering; Bulklast, 5 högskolepoäng
Bulk Cargo, 5 credits

STCW reference
Sektion A-II/1, A-II/2

Subject Group
Other Subjects within Technology

Level of classification
First Level

Progression
G1N

Date of Ratification
Approved by Faculty of Technology 2017-12-18
The course syllabus is valid from autumn semester 2018

Prerequisites
General entry requirements and Mathematics 2a / 2b / 2c, Physics 1b1 / 1a or Mathematics B, Physics A (Field-specific entry requirements 7/A7). Physics A, Physics 1b1/1a can be replaced by Science studies 2 or Deck Officer Training Course, Class VII 40 credits.

Objectives

Proficiency and comprehension

By the end of this course, students will be able to:

- describe different ship types used for transport of dry bulk
- describe different types and design of cargo hatches
- describe hazards and risks associated with handling and carriage of dry bulk on ships
- describe methods for how to maintain safe communications during cargo operations
- describe general handling procedures of dry bulk during loading, discharge and voyage
- describe how systematic and general inspections of cargo holds, ballast tanks, cargo equipment and cargo hold hatches are performed

Skills and abilities

By the end of this course, students will be able to:

- apply national and international legislation concerning loading, discharging and transporting dry bulk on ships

- with loadplanning software produce a stowage plan that ensures that the vessel isent exposed to unnatural stress during loading, discharging or voyage
- calculate the ships depature, intermediate and arrival condition with respect to trim, draught, stability, share-force and bending moments

Content

- International Maritime Solid Bulk Cargoes Code (Resolution MSC.393(95)) (*IMSBC Code*)
- International Code for the Safe Carriage of Grain in Bulk (Resolution MSC.23(59)) (*International Grain Code*)
- Code of Safe Practice for Safe Loading and Unloading of Bulk Carriers (Resolution MSC.304(87)) (*BLU Code*)
- International Code on the Enhanced Program of Inspections during Surveys of Bulk Carriers and Oil Tankers, 2011 (Resolution MSC.381(94)) (*ESP Code 2011*)
- bulk carriers design, cargo arrangement and ballast system
- bulk terminals and cargo handling equipment
- dry bulk characteristics, hazards and health hazards
- systematic surveys and general inspections of cargo holds, hatches and coamings
- draught survey
- planing and preparations prior to loading and discharging incl. the making of stowageplan
- manual and computerised cargo calculations

Type of Instruction

Instruction consists of lectures and exercises.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

Knowledge assessment takes place through individual written exam and through obligatory assignments. In order to receive the grade Pass with distinction, it must be obtained on the written exam.

Course Evaluation

During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed.

Required Reading and Additional Study Material

House, David J. Cargo work for maritime operations, seventh edition. Elsevier Butterworth-Heinemann, (25 pages)

Roberts, Peter. Watch keeping safety and cargo management in port. Nautical institute, (90 pages)

M/V Golden Ice, Trim & Stability and Grain Loading Calculation, Sjöfartshögskolan

International Maritime Solid Bulk Cargoes Code (Resolution MSC.393(95)) (*IMSBC Code*), (463 pages)

International Code for the Safe Carriage of Grain in Bulk (Resolution MSC.23(59)) (*International Grain Code*) (32 pages)

Code of Safe Practice for Safe Loading and Unloading of Bulk Carriers (Resolution

MSC.304(87)) (*BLU Code*) (26 pages)

International Code on the Enhanced Program of Inspections during Surveys of Bulk Carriers and Oil Tankers, 2011 (Resolution MSC.381(94)) (*ESP Code 2011*) (333 pages)