

Faculty of Maritime Studies / NAUTICS / SHIP'S INSPECTION TECHNIQUES AND SURVEY

Course:	SHIP'S INSPECTION TECHNIQUES AND SURVEY			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
3528	Mandatory	5	5	3+1+0
Programs	NAUTICS			
Prerequisites	No prerequisites for course enrollment and attending			
Aims	The aim of this course is to introduce students with the basic techniques of ship's surveys and inspections during its exploitation period, according to the STCW-10 requirements (Tables A-II/1 and A-II/2) as well as IMO Model Course 7.01 (Item 2.2., 3.2. and 3.4.) and IMO Model Course 7.03 (Item 2.1., 2.2., 3.1. and 3.6.).			
Learning outcomes	Demonstrates a knowledge and understanding of the relationship between maritime organizations and contracting governments as well as implementation of different conventions. Understand and describe content of most important conventions such as SOLAS and MARPOL, different surveys based on international regulations as well as importance of Flag State and Port state controls. Distinguish different safety procedures and safety equipment. Understand and distinguish specific survey techniques and methods. Distinguish methods of NDT testing. Describe, analyze and compare specific surveys of different ship's systems and parts.			
Lecturer / Teaching assistant	PhD Špiro Ivošević – professor, Radmila Gagić – assistant			
Methodology	Lectures, exercises, consultations, preliminary exams, case Studies.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Basic maritime terms and concepts.			
I week exercises	Examples of correlations between different subjects in maritime industry.			
II week lectures	Key Maritime Organizations related to survey and inspection matters. IMO, Flag State, shipping companies.			
II week exercises	The role of different subjects (participants) in the process of creation and application of maritime legislation. ILO, Classification Societies, Recognized organizations.			
III week lectures	International maritime regulations on navigational safety and environmental protection. Maritime Conventions and Codes.			
III week exercises	The application of the international maritime conventions, codes and recommendations.			
IV week lectures	Ensuring the safety of navigation through the implementation of safety requirements on ships. Surveys and inspections that are carried out in the purpose of safety. Mandatory and optional inspections and audits. Ship's documents (papers, certificates, boo			
IV week exercises	Examples of different ships documentation.			
V week lectures	The role of shipping companies related to ISM requirements. The role of Flag State in terms of performing ship inspection.			
V week exercises	Examples of inspections' supervision conducted by Port Facility Authorities and Classification Societies.			
VI week lectures	Safety procedures for conducting inspections and surveys on board. Persons (participants) in surveys. Safety equipment.			
VI week exercises	Examples of conducting surveys of certain construction elements of the ship.			
VII week lectures	Realization of ship surveys and inspections by different subjects in maritime industry. Examples of well known incidents in maritime industry.			
VII week exercises	The First Compulsory Assignment.			
VIII week lectures	Damages of hull structures and machinery. Failures and damages on ship's construction.			
VIII week exercises	Examples of the influence of various factors on the structural integrity of the ship's structure.			
IX week lectures	The types and levels of damage to the ship's structural elements. Ship's construction fatigues.			
IX week exercises	Examples of different types of damages on various types of ships.			
X week lectures	Methods and techniques of surveys. Choosing an adequate NDT method. Basic principles of implementing visual control during a performance of different types of surveys.			

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X week exercises	Practical application of NDT methods during inspection and surveys of ship's hull. Choosing an adequate NDT method.					
XI week lectures	Non destructive testing methods. Pressure and clamping tests. Functional tests.					
XI week exercises	Examples of conducting surveys using particular NDT methods.					
XII week lectures	Thickness measurements of the structural elements. Measuring tightness. Measuring vibrations.					
XII week exercises	Examples of conducting surveys on different types of ships during different moments of ship's exploitation cycle.					
XIII week lectures	Detailed review of different types of surveys: hull surveys, cargo hold surveys, hatch coaming surveys.					
XIII week exercises	Examples of conducting surveys on different types of ships during different moments of ship's exploitation cycle.					
XIV week lectures	Inspection and survey of ballast tanks. Reporting on conducted control surveys.					
XIV week exercises	Examples of different types of surveys and reports.					
XV week lectures	Inspection and survey.					
XV week exercises	The Second Compulsory Assignment.					
Student workload	During semester Teaching and the Final Exam: 5h + 20 min. x 16 = 85h + 20 minutes Necessary preparation before Term starting (admin., enrolment, verification): 5h + 20 min x 2 = 10h + 40min Total hours for the course: 4 x 30 = 120h Additional hours for preparing correction of final exam, including the taking of the exam: 24h Structure of the students' duties: 85h + 20 min.(lectures) + 10h + 40min + 24h (additional work)					
Per week			Per semester			
5 credits x 40/30=6 hours and 40 minuts 3 sat(a) theoretical classes 0 sat(a) practical classes 1 excercises 2 hour(s) i 40 minuts of independent work, including consultations			Classes and final exam: 6 hour(s) i 40 minuts x 16 =106 hour(s) i 40 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 6 hour(s) i 40 minuts x 2 =13 hour(s) i 20 minuts Total workload for the subject: 5 x 30=150 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 30 hour(s) i 0 minuts Workload structure: 106 hour(s) i 40 minuts (courses), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)			
Student obligations			Students are required to attend classes (lectures and exercises) and to take Preliminary Exams and the Final Exam.			
Consultations			Monday and Wednesday from 11 to 13.			
Literature			1. Classification Societies' (BV, LR, DNV, NKK, GL, RINA, ABS) Rules and Regulations regarding ship surveys and inspections. 2. International Conventions STCW 95, MARPOL 73/78, SOLAS; 3. Script: Ships' Inspection and Control Techniques, Š. Ivošević;			
Examination methods			During the teaching process, the student has the option to obtain total 100 points that are consisted of two Preliminary Exams (35 points) and The Final Exam (30 points). The Final Exam includes the whole Course material. Passing mark is awarded if the st			
Special remarks						
Comment						
Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points