Faculty of Maritime Studies / NAUTICAL STUDIES AND TRANSPORTATION / PRACTICAL NAVIGATION

Course:	PRACTICAL NAVIGATION			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
10234	Mandatory	2	5	2+1+1
Programs	NAUTICAL STUDIES AND TRANSPORTATION			
Prerequisites	No			
Aims	Familiarization of students with ship's manouvring, keeping of watch and COLREGs, all in accordance with obligations prescribed by the STCW '10 Convention(A-II/1), as well as IMO model course 7.03. (items 1.1.6, 1.2, 1.9.1).			
Learning outcomes	Upon passing the exam, it is expected that students will be able to describe and analyze factors affecting ship's manoeuvrability; describe and define ship's manoeuvring characteristics; describe shallow water effect; compare manoeuvring principles of different ship types in various conditions; describe MOB manoeuvring; explain berthing, unberthing and anchorage procedures including VTS; explain "blind pilotage" technique; analyze and apply COLREGs; describe the most important navigational equipment and its' usage; analyze watchkeeping principles in various circumstances; define principles and importance of bridge resource management.			
Lecturer / Teaching assistant	PhD Milorad Rašković, Capt. - Full professor / MSc Igor Stanovčić, Capt. - Assistant professor			
Methodology	Lectures, practical work including work on the simulator. Self-study and individual work on practical assignments. Debates and consultations.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Ship manoevuering and handling. Turning circles and stopping distances 1.9.1.1.1. Effect of wind and current on ship handling 1.9.1.1.2. Manoeuvres for rescue of person overboard 1.9.1.1.3			
I week exercises	Ship manoevuering and handling. Turning circles and stopping distances 1.9.1.1.1. Effect of wind and current on ship handling 1.9.1.1.2. Manoeuvres for rescue of person overboard 1.9.1.1.3			
II week lectures	Squat, shallow water and similar effects 1.9.1.1.4. Anchoring and berthing procedures 1.9.1.1.5. "Blind pilotage" technique 1.2.6			
II week exercises	Squat, shallow water and similar effects 1.9.1.1.4. Anchoring and berthing procedures 1.9.1.1.5. "Blind pilotage" technique 1.2.6			
III week lectures	Routing, weather routeing, use of routeing in accordance with general provisions on ships' routeing 1.2.4. Principles in keeping a navigational watch 1.2.2. Keeping a watch in port 1.2.2.2			
III week exercises	Routing, weather routeing, use of routeing in accordance with general provisions on ships' routeing 1.2.4. Principles in keeping a navigational watch 1.2.2. Keeping a watch in port 1.2.2.2			
IV week lectures	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
IV week exercises	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
V week lectures	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
V week exercises	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
VI week lectures	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
VI week exercises	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
VII week lectures	Thorough knowledge of the COLREG 1972, as amended 1.2.1 The first compulsory assignment			
VII week exercises	Thorough knowledge of the COLREG 1972, as amended 1.2.1 The first compulsory assignment			
VIII week lectures	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
VIII week exercises	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
IX week lectures	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
IX week exercises	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
X week lectures	Thorough knowledge of the COLREG 1972, as amended 1.2.1			
X week exercises	Thorough knowledge of the COLREG 1972, as amended 1.2.1			

XI week lectures	Thorough knowledge of the COLREG 1972, as amended 1.2.1
XI week exercises	Thorough knowledge of the COLREG 1972, as amended 1.2.1
XII week lectures	Thorough knowledge of the COLREG 1972, as amended 1.2.1
XII week exercises	Thorough knowledge of the COLREG 1972, as amended 1.2.1
XIII week lectures	The use of information from navigational equipment for maintaining a safe navigational watch 1.2.5
XIII week exercises	The use of information from navigational equipment for maintaining a safe navigational watch 1.2.5
XIV week lectures	Bridge resource management 1.2.3, Reporting in accordance with general principles VTS 1.2.7
XIV week exercises	Bridge resource management 1.2.3, Reporting in accordance with general principles VTS 1.2.7
XV week lectures	Steering control systems 1.1.6 The second compulsory assignment
XV week exercises	Steering control systems 1.1.6 The second compulsory assignment
Student workload	Teaching and the Final Exam: 6h 40min x 16 = 106 h 40min Necessary preparation before Term starting (admin., enrolment, verification): 6h 40 min x 2 = 13h 20 min Total hours for the course: 5 x 30 = 150h Additional hours for preparing correction of final exam, including the taking of the exam:0 - 30h Structure of the students' duties: 106h 40 min (lectures) + 13h 20min + 30h (additional work)

Per week	**Per semester**
5 credits x 40/30=6 hours and 40 minuts 2 sat(a) theoretical classes 1 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 (cources), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)**
Student obligations	Students are obliged to attend lectures, do practical work, take compulsory assignments and final exam.
Consultations	
Literature	1. I. Stanovčić, I. Mraković, Pravila držanja navigacione straže na brodu, Kotor, 2020 ***IMO recommendations:*** 1. Cockroft, AN. and Lameijer, J.N.F., A Guide to the Collision Avoidance Rules, 6th ed. Oxford, Butterworth-Heinemann, 2004. (ISBN : 0-7506-6179-8) 2. Macelrevey, D.H. Shiphandling for the Mariner, 4th ed. Centreville, Maryland, Cornell Maritime Press, 2004. (ISBN-13: 978-0870335587)
Examination methods	1. The First Compulsory Assignment, 0 to 22,5 points 2. The Second Compulsory Assignment, 0 to 22,5 points 3. Participation during lectures and debates, 0 to 5 points. 4. Final exam, 0 to 50 points. Positive mark requires not less than 50 points cumulatively.
Special remarks	If necessary, lectures can be organized in English.
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