NAME OF THE COURSE	Ocean Physics 1				
Code	PMP163	Year of study	1		
Course teacher	Žarko Kovač, PhD, Assistant Professor	Credits (ECTS)	5		
Associate teachers		Type of instruction (number of hours)	L	S	E	F
			30	0	15	0
Status of the course	Compulsory	Percentage of application of e-learning				

COURSE DESCRIPTION

Course objectives	- gaining knowledge on basic dynamical and physical processes in the ocean - provide knowledge of equations describing the physical dynamics of the oceans - acquiring basic knowledge about the impact of physical on biological and chemical processes in the oceans
Course enrolment requirements and entry competences required for the course	- basics of physics - basics of mathematics - basics of fluid mechanics - basic programming
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	- knowledge of physical processes in the sea - knowledge of basic equations of physical oceanography - knowledge of boundary conditions - formulation of simple mathematical models in physical oceanography - introductory knowledge about the effect of physical on biological processes in the ocean - introductory knowledge of the transport of tracers by ocean currents
Course content broken down in detail by weekly class schedule (syllabus)	1. Non-inertial reference frame (2 hours of lectures) 2. Coriolis force (2 hours of lectures) 3. Inertial oscillations (4 hours of lectures) 4. Equations of motion (4 hours of lectures) 5. Geostrophic balance (4 hours of lectures) 6. Continuity equation (2 hours of lectures) 7. Energy conservation equation and equation of state (4 hours of lectures) 8. Boundary conditions (2 hours of lectures) 9. Interaction of light and sea water (4 hours of lectures)
Format of instruction	☒ lectures ☐ seminars and workshops ☒ exercises ☐ *on line* in entirety ☐ partial e-learning ☒ field work ☒ independent assignments ☐ multimedia ☐ laboratory ☐ work with mentor ☒ homework
Student responsibilities	Attend at least 70% of lectures and 70% of exercises.

Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*						
	Class attendance	1	Research		Practical training	
	Experimental work		Report		Homework	1
	Essay		Seminar essay		(Other)	
	Tests		Oral exam	2	(Other)	
	Written exam	1	Project		(Other)	

Grading and evaluating student	During the first 7 weeks of classes, students receive 5 homework assignments from the first 5 teaching units. These assignments are handed over at the end of the 8th week of classes. During the next 7 weeks of classes, students receive 5 new

work in class and at the final exam	homework assignments from the last 4 teaching units. These assignments are handed over at the end of the 15th week of class. Students who submit assignments on time and achieve more than 50% of the possible points are exempted from taking the written part of the exam. Students who do not pass assignments or achieve less than 50% of the possible points must take a written exam. The final grade is formed on the basis of homework / exam (1/2 grade) and the answer to the oral exam (1/2 grade).		
Required literature (available in the library and via other media)	**Title**	**Number of copies in the library**	**Availability via other media**
	Benoit Cushman-Roisin & Jean-Marie Beckers **Introduction to Geophysical Fluid Dynamics: Physical and Numerical Aspects** Academic Press, 2007	0	yes
	Robert H. Stewart **Introduction To Physical Oceanography** Texas A & M University, 2000	0	yes
Optional literature (at the time of submission of study programme proposal)	Steven Pond & George L. Pickard **Introductory Dynamical Oceanography** Butterworth-Heinemann, 1983 George L. Pickard & William J. Emery **Descriptive Physical Oceanography: An Introduction** Pergamon Press, 1982 Lynne D. Talley, George L. Pickard, William J. Emery, James H. Swift **Descriptive Physical Oceanography: An Introduction** Academic Press, 2011		
Quality assurance methods that ensure the acquisition of exit competences	Exam results statistics and student evaluation through an anonymous survey at the end of the course. The survey is conducted according to the regulations of the University of Split.		
Other (as the proposer wishes to add)			