



Subject card

Subject name and code	Electric Drive Designing, PG_00057238						
Field of study	Ocean Engineering						
Date of commencement of studies	February 2023	Academic year of realisation of subject			2023/2024		
Education level	second-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Marine Mechatronics -> Faculty of Ocean Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Wojciech Leśniowski					
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	30.0	0.0	45
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	45		10.0		20.0	75
Subject objectives	To acquaint students with the basic principles of designing electric drives						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_W05] has an organized, widened knowledge on design, construction and operation of ocean technology objects and systems	He can identify the basic devices and components of electric drive			[SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge		
	[K7_U07] in compliance with a formulated specification and with the aid of appropriate tools and methods, is able to complete an advanced engineering task within the range of design, construction and operation of ocean technology objects and systems	The student is able to choose the drive for the assigned task			[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
	[K7_W06] has an organized, widened knowledge on engineering methods and design tools allowing the conducting of advanced projects within the construction and operation of ocean technology objects and systems	Student is able to formulate the technical assumptions of the chosen device concept, make calculations of basic loads and strength of important assemblies and construction elements and perform preliminary drawing documentation			[SW1] Assessment of factual knowledge		
Subject contents	Electric drives of ship equipment, electric and hybrid drives of vessels						
Prerequisites and co-requisites	Knowledge of technical drawing, basics of machine construction, basics of electrotechnical systems						
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
		50.0%			50.0%		
		50.0%			50.0%		

Recommended reading	Basic literature	<p>1.Elektrotechnika okrętowa. Czytanie schematów J. WYSZKOWSKI</p> <p>2.Elektrotechnika okrętowa. Napędy elektryczne J. WYSZKOWSKI</p> <p>3.Elektrotechnika teoretyczna. Obwody prądu stałego T. PIOTROWSKI</p> <p>4.Eksploatacja i diagnostyka elektrycznych urządzeń okrętowych J. MAJEWSKI</p> <p>5.Bezpieczna praca elektryka i elektronika na statku H. ŁĄCZYŃSKI</p> <p>6.Elektryczne urządzenia okrętowe. Laboratorium R. BIAŁEK,W. WOLCZYŃSKI, T. NOWAK, P. RUPNIK</p> <p>7.Elektrotechnika i elektronika okrętowa - nowe wyd. R. BIAŁEK</p>
	Supplementary literature	Catalogs of manufacturers of electric motors
	eResources addresses	
	Example issues/ example questions/ tasks being completed	<p>Electric drive of a small passenger ferry</p> <p>Electric drive for rope winch</p>
Work placement	Not applicable	