



Subject card

Subject name and code	, PG_00062292						
Field of study	Mechanical and Naval Engineering						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group				
Mode of study	Part-time studies		Mode of delivery		e-learning		
Year of study	1		Language of instruction		Polish		
Semester of study	1		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Institute of Manufacturing and Materials Technology -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Aleksandra Suchta				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	18.0	0.0	0.0	0.0	0.0	18
	E-learning hours included: 18.0						
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	18		0.0		0.0	18
Subject objectives	To familiarize students with the basic concepts and principles of classical genetics. Understanding the inheritance of phenotypic traits and Mendel's laws related to them. Learning to interpret and analyze the results of genetic crosses. Preparing students to independently conduct genetic experiments and analyze data.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_W15] possesses a knowledge necessary to understand the ex-technical conditions of engineering activity, possesses knowledge on management, including quality management and running commercial enterprise, within the range of protection of intellectual property and patent law; knows general principles of creating and developing forms of individual entrepreneurship and basic HSE rules applicable to machine industry	[K6_W15] has the necessary knowledge for non-technical understanding business conditions engineering, has knowledge in the field management, including management quality and handling business activity, in scope of property protection intellectual and legal patent; knows the general rules creation and development of forms individual entrepreneurship and safety rules and occupational hygiene applicable in the machinery industry	[SW1] Assessment of factual knowledge
	[K6_K01] is aware of the need for complementing the knowledge throughout the whole life, is able to select proper methods of teaching and learning, critically assesses the possessed knowledge; is aware of the importance of professional conduct and following the rules of professional ethics; is able to show resourcefulness and innovation in the realisation of professional projects	[K6_K01] has consciousness the need to supplement knowledge throughout his life and can choose proper methods of teaching yourself and others, criticizes them knowledge; has awareness of importance professional conduct and compliance with ethical principles professional; can prove himself entrepreneurship and innovation in implementation professional projects	[SK3] Assessment of ability to organize work
	[K6_U14] is able to analyse the operation of devices and compare the construction solutions applying usage, safety, environmental, economic and legal criteria	[K6_U14] can perform analysis device operation and compare construction solutions using performance criteria safety, environmental, economic and legal	[SU1] Assessment of task fulfilment
Subject contents	1) Explanation of basic concepts in the field of classical genetics 2) What are Mendel's Laws and what is the inheritance of monogenic traits? 3) Genetic crosses: methods and interpretation of results. 4) Inheritance of polygenic and polygenic traits. 5) Genotypes and phenotypes: gene cooperation and allele interactions. 6) Genotyping: techniques and their applications. 7) Genetic mutations and their impact on inheritance. 8) Gene mapping and crossover studies. 9) Sex inheritance and sex chromosomes. 10) Population analysis and genetic evolution. 11) Application of classical genetics in medicine and agriculture.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test	60.0%	100.0%

Recommended reading	Basic literature	<p>1. Genetics, Revised Edition. Vipond, Karen. Lantern Publishing. 2013</p> <p>2. Kapur & Suri'S Basic Human GeneticsPaperback 2016 by Trivedi Dipali J (Author) Jaypee Brothers Medical Publishers; third edition (2016) ISBN-13: 978-9352500277</p> <p>3. Human Genetics Paperback Import, 23 Nov 2009 by S. D. Gangane (Author) ISBN-13: 978-8131211281</p>
	Supplementary literature	Genetyka medyczna; Connor, Ferguson, Tobias Edward. Wydawnictwo: PZWL; 2013.
	eResources addresses	Adresy na platformie eNauczanie: Podstawy genetyki klasycznej - Moodle ID: 42318 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=42318
Example issues/ example questions/ tasks being completed	<p>Explanation of basic concepts in the field of classical genetics.What are Mendel's Laws and what is the inheritance of monogenic traits?</p>	
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.