GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Technology and Civilization, PG_00056482		
Field of study	Management and Production Engineering		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	e-learning
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Institute of Mechanics and Machine Design -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Wojciech Owczarzak	
	Teachers	dr inż. Wojciech Owczarzak	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

E-learning hours included: 15.0

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	15	1.0	9.0	25

Subject objectives

Presentation of the development of civilization and technology from the dawn of humanity to the present day.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_K01] feels the need for self-realization by learning throughout life, is looking for modern and innovative solutions in their actions, is able to think creatively and act in an entrepreneurial way		
[K6_U11] is able to identify and formulate simple engineering tasks related to the diagnostics of the technical condition of machines and devices using appropriate methods, techniques and tools		
[K6_W12] has detailed, theoretically founded knowledge of methods and techniques used in production quality control processes, statistical process control, modern techniques and measurement systems in quality assurance and information techniques in production systems		

Subject contents

Definitions: techniques, civilization, culture. The key invention of mankind is a container for transporting fire. Migrations. Paleolithic: first mechanical tools, first construction of seats. Neolithic: circle and circle. Bronze: mechanical processing of metals. Iron: the beginnings of metallurgy, plastic working of metals, precise tools in applied and decorative arts. Antiquity: a girder as a structural element, skeletal structures in shipbuilding, a pulley, a screw conveyor, an arch in construction, aqueducts as the first waterworks, a throwing weapon. Theodolite prototype. The development of philosophy and mathematics. Middle Ages: printing press, water wheel and windmills: mechanical gears, mechanical energy accumulators, trigger mechanisms. Artesian wells. Renaissance: da Vinci designs, the constructions of Galileo, Kepler, Gilbert, Newton. The French Revolution: The Guillotine. Industrial revolution: steam engine, mechanical spinning mill, programmable weaving machine, mines, Bessemer steel mills, riveted bridge, steel ships, railroads, tunnels, planes, tanks, telegraph, telephone, radio, internal combustion engine, car, production line, machine gun, patent law. World War I: mechanization of works, development of high-rise construction, construction of large machines (turbines), bridges, tunnels, canals; diesel engine, jet plane, rocket, tank. Present: space mechanics, nanomechanics, ecomechanics.

<table>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>The presentation</td><td>50.0%</td><td>100.0%</td></tr>
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</td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>1. Calendar of the history of the world. PWN Encyclopedia. 2005 2. History of the world. PWN Encyclopedia. 2008</td></tr>
<tr><td>Supplementary literature</td><td>1. The Great PWN Encyclopedia, 2008</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>The impact of the indicated discovery / invention on the development of civilization.

The most important technical achievements of the Bronze Age
Stonehenge's hypothetical functions</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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