GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Technology and Civilization, PG_00056482		
Field of study	Mechanical Engineering		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2021/2022
Education level	first-cycle studies	Subject group	Optional subject group Humanistic-social subject group
Mode of study	Full-time studies	Mode of delivery	at the university
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: 0.0

Adresy na platformie eNauczanie:

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_W12] possesses basic knowledge necessary to understand the ex-technical conditions of engineering activity, possesses basic 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	The student has a basic knowledge of selected issues related to the development of technology in individual epochs of human history.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation
[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	The student has a basic knowledge of selected issues related to the development of technology in individual epochs of human history.	[SK5] Assessment of ability to solve problems that arise in practice [SK2] Assessment of progress of work
[K6_U11] is able to analyse the operation of devices and compare the construction solutions applying usage, safety, environmental, economic and legal criteria	The student has a basic knowledge of selected issues related to the development of technology in individual epochs of human history.	[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject

<table>
<tr><td>Subject contents</td><td>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.</td></tr>
<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>
</table>
</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></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>
</table>