GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Geometry and Technical Drawing, PG_00041993						
Field of study	Power Engineering						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
Education level	first-cycle studies		Subject group	Obligatory subject group in the field of study 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	English			
Semester of study	1		ECTS credits	3.0			
Learning profile	general academic profile		Assessment form	assessment			
Conducting unit	Department of Machine Design and Vehicles -> Faculty of Mechanical Engineering and Ship Technology -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Jacek Łubiński				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	30.0	0.0	0.0	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		7.0	23.0		75
Subject objectives	Ability of sketching assembly drawings and drawings of details						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U04] is able to design a simple device structure and prepare the accompanying technical documentation, conduct a basic technical and economic analysis of energy systems, including technologies using renewable and pro-ecological energy sources as well as conventional and nuclear energy, design energy installations for them and their basic elements (including electric lighting)); select, operate and control the most commonly used electrical devices and drive systems.	Competency in engineering graphics, as reqiured to design machines.	[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment
[K6_U04] is able to design a simple device structure and prepare the accompanying technical documentation, conduct a basic technical and economic analysis of energy systems, including technologies using renewable and pro-ecological energy sources as well as conventional and nuclear energy, design energy installations for them and their basic elements (including electric lighting)); select, operate and control the most commonly used electrical devices and drive systems.	Competency in engineering graphics, as reqiured to design machines.	[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment
[K6_K01] is aware of the need for training and self-improvement in the profession of energy and the possibility of further education; can think and act in a creative and entrepreneurial manner; can define priorities for the implementation of an individual or group task	Conscious recognition of the role of the energy sector to technology and economy. Understanding of the necessity in engineering to read the technical documentation expressed in the form of techincal drawings and possessing the skills sufficient for the creation of simple technical drawings, as required in day-to-day maintenance of energy production/conversion systems.	[SK2] Assessment of progress of work [SK5] Assessment of ability to solve problems that arise in practice [SK4] Assessment of communication skills, including language correctness
[K6_K01] is aware of the need for training and self-improvement in the profession of energy and the possibility of further education; can think and act in a creative and entrepreneurial manner; can define priorities for the implementation of an individual or group task	Conscious recognition of the role of the energy sector to technology and economy. Understanding of the necessity in engineering to read the technical documentation expressed in the form of techincal drawings and possessing the skills sufficient for the creation of simple technical drawings, as required in day-to-day maintenance of energy production/conversion systems.	[SK2] Assessment of progress of work [SK5] Assessment of ability to solve problems that arise in practice [SK4] Assessment of communication skills, including language correctness
[K6_U04] is able to design a simple device structure and prepare the accompanying technical documentation, conduct a basic technical and economic analysis of energy systems, including technologies using renewable and pro-ecological energy sources as well as conventional and nuclear energy, design energy installations for them and their basic elements (including electric lighting)); select, operate and control the most commonly used electrical devices and drive systems.	Skills in engineering graphics as required fo ruse in machine design tasks.	[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment
[K6_K01] is aware of the need for training and self-improvement in the profession of energy and the possibility of further education; can think and act in a creative and entrepreneurial manner; can define priorities for the implementation of an individual or group task	Conscious recognition of the role of the energy sector to technology and economy. Understanding of the necessity in engineering to read the technical documentation expressed in the form of techincal drawings and possessing the skills sufficient for the creation of simple technical drawings, as required in day-to-day maintenance of energy production/conversion systems.	[SK2] Assessment of progress of work [SK5] Assessment of ability to solve problems that arise in practice [SK4] Assessment of communication skills, including language correctness

<table>
<tr><td>Subject contents</td><td>Course content – lecture
Basic geometry elements and relationship. Axonometric and orthographic projection. Point & line in space. Solids cross sections. Principles of dimensioning. Surface finish, tolerances and fits. Presenting of welded, screwed, keys elements, rolling bearing, gears in engineering drawing. Assemby drawing and working drawing of element of machinery</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>command of the English language, minimum level B2</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>projects sheets</td><td>65.0%</td><td>50.0%</td></tr>
<tr><td>final test</td><td>65.0%</td><td>50.0%</td></tr>
</table>
</td></tr>
<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Zapis konstrukcji, część I, Geometria Wykreślna, A. Rigall, J. Sadaj,
Rysunek Techniczny Maszynowy,T.Dobrzański,
Engineering Graphics handbook (preferrably an European release)</td></tr>
<tr><td>Supplementary literature</td><td>Zbiór zadań z rysunku technicznego maszynowego, Z.Lewandowski
The Fabric of Reality, David Deutsch
A Brief History of Time, Stephen Hawking
The Axemaker's Gift, James Burke, Robert Ornstein
Catch 22, Joseph Heller
The Trial, Franz Kafka
Animal Farm, George Orwell</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table>
</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Sketch the assembly draing of an energetic device based on detail drawings.</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
</table>

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