GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Engineering Problems in Laryngology, PG_00064128		
Field of study	Mechanical and Medical Engineering		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
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	2	Language of instruction	Polish
Semester of study	4	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 -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	Andrzej Skorek	
	Teachers		

Lesson types

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

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	15	1.0	9.0	25

Subject objectives

Obtaining basic knowledge in the field of ENT, necessary in the work of a medical engineer.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_K02] is aware of importance of professional dealing and to fulfill ethics obligations, he/she understands other (nontechnical) abilities of mechanical engineering professional, their influence on the society and security of environment, he/she is aware of importance of social cooperation	The student is aware of the importance of professional conduct and compliance with the rules of professional ethics, understands the non-technical aspects of a mechanical engineer's activity	[SK5] Assessment of ability to solve problems that arise in practice
[K6_W01] has knowledge in the field of natural sciences, including mathematics, contemporary physics, chemistry, and human anatomy with physiology	The student is aware of the importance of combining knowledge in the field of otolaryngology with the knowledge of the operation and use of basic equipment and medical devices	[SW1] Assessment of factual knowledge
[K6_U08] is able to assess the human body physic and functioning of the body organs and is able to use medical knowledge to solve mechanical-medical problems in the scope of the study	The student is able to describe the structure of the human body and the functioning of the head and neck organs to a basic degree. He can explain the principles of operation of the organs of the head and neck to the extent that allows to combine medical knowledge with the knowledge of the polytechnic	[SU3] Assessment of ability to use knowledge gained from the subject

Subject contents

Course content – laboratory
Physiology, pathophysiology of the basic diseases of the ear, nose, throat, larynx.
Urgency in otolaryngology.
Basic procedures in otolaryngology.
Basic instruments in the diagnosis and surgical treatment of head and neck diseases.

Prerequisites and co-requisites

Basic knowledge of the anatomy of the head and neck.
Basic information on the construction of diagnostic devices in medicine.

<table>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Final credit – oral</td><td>50.0%</td><td>50.0%</td></tr>
<tr><td>Assessment work – written</td><td>50.0%</td><td>50.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Niemczyk K. Wykłady z otolaryngologii. MedPage, 2012</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Iwaszkiewicz J. Otolaryngologia dla studentów medycyny . PZWL 1967.</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">Surgical drills used in otolaryngology - structure, principle of operation.
Medical lasers used in otolaryngology - structure, principle of operation, the most common causes of failure.
Da Vinci robot in otolaryngology - indications, structure, principle of operation.
Endoscopes in otolaryngology - structure, principle of operation.
Devices for heating the laryngeal mirror - prototype.</td></tr>
<tr><td>Practical activites within the subject</td><td colspan="3">Not applicable</td></tr>
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