

**Master's degree program in Medical Engineering - In English
as of 2020/2021 academic year**

CURRICULUM

ECTS subject code T MDSe SN₂													
<ul style="list-style-type: none"> • T – type of course: B for BEng, M for MEng; • MDSe – “ Medical Engineering ”- In English; • SN₂ – subsequent number of the subject; 													
Lectures (L), tutorials (Tut), labs (Lab), Auditorium Total (AT), Self-Study (SS);													
Exam (E), continuous assessment (CA), semester project (SP), semester assignment (course work) (SA).													

№	Subject	Semester load						Assessment				ECTS code	ECTS credits
		L	Tut	Lab	AT	SS	Total	E	C A	SP	SA		

SEMESTER I

1	Physics of Medical Equipment	45	15	15	75	75	150	1				MMDSe 01	5
2	Medical Informatics	30	0	15	45	75	120	1				MMDSe 02	4
3	Materials for Medical Technology	30	0	15	45	75	120	1				MMDSe 03	4
4	Medical Instrumentation	45	0	30	75	75	150	1				MMDSe 04	5
5	Non-Metallic Materials for Medical Applications	30	0	15	45	75	120		1		1	MMDSe 05	4
6	Measurements in Medicine	30	0	15	45	75	120		1	1		MMDSe 06	4
7	Micro-Electromechanical Medical Equipment	30	0	15	45	75	120		1			MMDSe 07	4
Tota		240	15	120	375	525	900	4	3	1	1		30

SEMESTER II

8	Optical Methods and Devices in the Medicine	30	0	15	45	45	90	1		1		MMDSe 08	3
9	Analytical Measurements in Medicine	15	0	15	30	30	60		1		1	MMDSe 09	2
10	Photonics and Laser Technologies in Medicine	30	0	15	45	45	90		1		1	MMDSe 10	3
11	Optional subject (List - 1)	30	0	30	60	60	120	1		1		MMDSe 11	4
12	Optional subject (List - 2)	30	0	15	45	45	90	1				MMDSe 12	3
13	Diploma project					450	450	Diploma project defense			MMDSe 13	15	
Total		135	0	90	225	675	900	3	2	2	2		30

NOTES:

The list of optional subjects are annually updated and approved by the Faculty Council of Mechanical Engineering Faculty.

Subjects MMDS_e11.1 and MMDS_e12.1 form Master Program - “ **Electromedical Engineering**”.

Subjects MMDS_e11.2 and MMDS_e12.2 form Master Program - “ **Technical Assurance, Legislation and Standardization for Medical Equipment** ”.

Subjects MMDS_e11.3 and MMDS_e12.3 form Master Program - „**Human Prosthetics and Orthotics**“.

LIST OF OPTIONAL SUBJECTS

List - 1 MMDS _e 11 (ECTS credits - 4)		Code
1	Equipment for Medical Images	MMDS _e 11.1
2	Technical Legislation and Standardization for Medical Equipment	MMDS _e 11.2
3	Human Prosthetics	MMDS _e 11.3

List - 2 MMDS _e 12 (ECTS credits - 3)		Code
1	Electromagnetic Systems for Biomedical Applications	MMDS _e 12.1
2	Technical Assurance of Medical Equipment	MMDS _e 12.2
3	Human Orthotics	MMDS _e 12.3

LIST OF FACULTATIVE SUBJECTS

№	Subject	Semester load						Assessment				ECTS code	ECTS credits
		L	Tut	Lab	AT	SS	Total	E	C A	SP	S A		

SEMESTER I

1	Human Vision and Optometry	30	0	30	60	60	120		1			FaMMDS _e 01	4
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SEMESTER II

2	Photonics Interactions, Photonic Sensors, Sources, Devices and Systems for Medical Purposes	30	0	30	60	60	120		1			FaMMDS _e 02	4
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