PHOTONICS - 2nd Cycle (Master of Science in Engineering) **Programme in English** **Plan of Studies** **RW 29.06.2017** Start in Acad. Year 2017/2018

4 semesters studies – starting from winter semester

COURSES	Sem. 1					Sem. 2					Sem. 3					Sem. 4				
	Hours/week			Exam	ECTS	Hours/week			Exam	ECTS	Hours/week			Exam	ECTS	Hours/week			Exam	ECTS
	L	C	La			L	C	La			L	C	La			L	C	La		
Quantum Physics	2	2		E	4															
Fundamentals of Optics	2	1		E	4															
Introduction to Photonics	1		1		3															
Photonic Devices	2		4		7															
Wave Optics Laboratory			4		5															
Laser Physics	2			E	3															
Supplementary Subjects [1)]	4				4															
Optical Information Processing						2	1	3	E	7										
Numerical Methods in Optical Techniques											**2**		**1**		**3**					
Solid State Optics						2		1	E	3										
Laser Technique											**2**		**3**		**5**					
Optical Waveguides and Fibers						2				3										
Semiconductor Optoelectronics						2		1		3										
Contemporary Optics Seminar							2			2										
Elective Subjects [2)]						4				4	4				4	3				3
Social and Humanistic Subjects											2				2	2				3
Fiber Optic Photonics											2			E	**3**					
Optical Microsystems						**2**	**1(P)**	**1**		**4**										
Presentation Techniques in Science							**2**			**2**										
Liquid Crystals Photonics											2				2					
Quantum Photonics											2	1		E	4					
Nonlinear Optics						**1**		**1**		**2**										
Diploma Laboratory													4		5					
Diploma Seminar												2			2		2			2
Photovoltaics																2				2
Master Thesis																		12	E	20
Total	**25**			**3**	**30**	**15**	**6**	**7**	**2**	**30**	**16**	**3**	**8**	**2**	**30**	**~~8~~ 7**	**2**	**12**	**1**	**30**

After semester 2 – obligatory professional training – 2 weeks, 3 ECTS over limit.

1) to be selected from: Programming Languages, Introduction to Solid State Physics, Programming of Virtual Devices, Electrodynamics, Mathematical Methods of Physics, Microprocessor's Systems.

2) to be selected from: Optics of Anisotropic Media, Fiber-Optic Communication Systems, Photonic Integrated Circuits, Design of Optical Systems, Optical Full-Field Measurements.

3 semesters studies – starting from summer semester*

COURSES	Sem. 1					Sem. 2					Sem. 3				
	Hours/week			Exam	ECTS	Hours/week			Exam	ECTS	Hours/week			Exam	ECTS
	L	C	La			L	C	La			L	C	La		
Optical Information Processing	2	1	3	E	7										
Numerical Methods in Optical Techniques						**2**		**1**		**3**					
Solid State Optics	2		1	E	3										
Laser Technique						**2**		**3**		**5**					
Optical Waveguides and Fibers	2				3										
Semiconductor Optoelectronics	2		1		3										
Contemporary Optics Seminar		2			2										
Elective Subjects [2)]	4				4	4				4	3				3
Social and Humanistic Subjects						2				2	2				3
Fiber Optic Photonics						2			E	**3**					
Optical Microsystems	**2**	**1(P)**	**1**		**4**										
Presentation Techniques in Science		**2**			**2**										
Liquid Crystals Photonics						2				2					
Quantum Photonics						2	1		E	4					
Nonlinear Optics	**1**		**1**		**2**										
Diploma Laboratory								4		5					
Diploma Seminar							2			2		2			2
Photovoltaics											2				2
Master Thesis													12	E	20
Total	**15**	**6**	**7**	**2**	**30**	**16**	**3**	**8**	**2**	**30**	**7**	**2**	**12**	**1**	**30**

After semester 1 – obligatory professional training – 2 weeks, 3 ECTS over limit.

2) to be selected from: Optics of Anisotropic Media, Fiber-Optic Communication Systems, Photonic Integrated Circuits, Design of Optical Systems, Optical Full-Field Measurements.

*) **Recruitment for 3 semester studies starting from winter semester is possible but individual plan of studies has to be established**