



# Study Plan

## M.Sc. Mechatronics

### Specialization: Photonic Engineering

Faculty of Mechatronics

*Study plan for reference only; may be subject to change.*

#### Semester 1

Course	Lecture (hours)	Tutorial (hours)	Labs (hours)	Projects (hours)	ECTS
Design of Optical Systems	15			30	4
Diffraction and Fourier Optics	30				4
Image Processing and Recognition	30			15	4
Medical Optics	30				4
Elective lecture 1/ Liquid Crystals	30				3
Elective lecture 2/ Instrumental Optics	30		30		3
Elective lecture 3/ Fundamentals Of Photonics	45				3
Interim project					5
Total ECTS					30

#### Semester 2

Course	Lecture (hours)	Tutorial (hours)	Labs (hours)	Projects (hours)	ECTS
Physics /Solid State Optics	30	15			4
Mathematics / Numerical Methods	30		15		4
HES Humanistics / Economics Studies	30				2
Optical microsystems	30	15		15	5
Optical full-field measurement	45	30			6
Mechatronic Systems	30	15		15	7
Elective lecture 4/ Optical Waveguides and Fibers	30				2
Total ECTS					30

**Semester 3**

<b>Course</b>	<b>Lecture (hours)</b>	<b>Tutorial (hours)</b>	<b>Labs (hours)</b>	<b>Projects (hours)</b>	<b>ECTS</b>
Numerical Methods in Optical Techniques	15		15	15	4
Elective Lecture / Fiber Optic Photonics	30				2
Elective Lecture / Photovoltaics	30				2
Diploma seminar	30				2
Diploma work					20
Total ECTS					30