

### 1. Semester

Subjects	SWS	CP	Lecturer
<b>Compulsory Courses</b>		<b>16</b>	
→ Optical Engineering	V2+Ü1	4	Stork
→ Fundamentals of Optics and Photonics	V4+Ü2	9	Klingshirn
→ Electromagnetics and Numerical Calculation of Fields	V2	3	Dössel
<b>Optics and Photonics Lab I</b>	<b>P4</b>	<b>6</b>	
<b>Adjustment courses</b>		<b>6</b>	
→ Modern Physics	V4+Ü1	6	Goll
→ Measurement and Control Systems	V3+Ü1	6	Stiller
→ Chemistry	V4	6	Anson
<b>Additive key competencies</b>	<b>V2</b>	<b>3</b>	<b>HoC</b>

### 2. Semester

Subjects	SWS	CP	Lecturer
<b>Compulsory Courses</b>		<b>18</b>	
→ Spectroscopic Methods	V2	3	Kappes
→ Theoretical Optics	V2+Ü1	4	Busch
→ Optoelectronic Components	V2+Ü1	4	Freude
→ Nonlinear Optics	V2+Ü1	4	Leuthold
→ Microoptics and Lithography	V2	3	Saile
<b>Optics and Photonics Lab II</b>	<b>P4</b>	<b>6</b>	
<b>Industry Internship: Introduction</b>		<b>5</b>	

**3. Semester**

<b>Subjects</b>	<b>SWS</b>	<b>CP</b>	<b>Lecturer</b>
<b>Elective Courses Photonic Materials and Devices</b>		<b>12</b>	
→ Solid-State Optics	V4+Ü1	6	Hetterich, Schaadt
→ Field propagation and coherence	V2+Ü1	4	Freude
→ Advanced Optical Materials	V3+Ü1	5	Wegener, Linden
→ Numerical Methods in Photonics	V2+Ü2	6	Busch
→ Advanced Inorganic Materials	V2	3	Feldmann
→ Plastic Electronics	V2	3	Lemmer
→ Photovoltaics	V2	3	Lemmer
→ Optical Communication Systems	V2+Ü1	3	Leuthold
<b>Elective Courses Advanced Spectroscopy</b>		<b>12</b>	
→ Molecular Spectroscopy	V2+Ü1	5	Kappes
→ Combustion Diagnostics	V2	3	Spicher
→ Nano-Optics	V2	3	Naber
→ Laser Metrology	V2+Ü1	4	Hugenschmidt
→ Solid-State Optics	V4+Ü1	6	Hetterich, Schaadt
→ Numerical Methods in Photonics	V2+Ü2	6	Busch
→ Advanced Inorganic Materials	V2	3	Feldmann
→ Laser Physics	V2+Ü1	4	Eichhorn
<b>Elective Courses Biomedical Photonics</b>		<b>12</b>	
→ Imaging Techniques in Light Microscopy	V2	3	Bastmeyer
→ Optics and Vision in Biology	V3+Ü1	6	Nick et al.
→ Nano-Optics	V2	3	Naber
→ Molecular Cell Biology	V2	3	Bastmeyer
→ Optics in Medical Technologies (dt. in WS 08/09)	V2+Ü1	3	Kaschke, Lemmer
→ Photochemistry	V2	3	Podlech
→ Laser Physics	V2+Ü1	4	Eichhorn
<b>Elective Courses Optical Systems</b>		<b>12</b>	
→ Systems and Software Engineering	V2+Ü1	3	Müller-Glaser
→ Machine Vision	V3+P1	6	Stiller
→ Optical Communication Systems	V2+Ü1	3	Leuthold
→ Light and Display Engineering	V2+Ü1	3	Lemmer
→ Field propagation and coherence	V2+Ü1	4	Freude
→ Numerical Methods in Photonics	V2+Ü2	6	Busch
→ Plastic Electronics	V2	3	Lemmer
→ Laser Metrology	V2+Ü1	4	Hugenschmidt
→ Laser Physics	V2+Ü1	4	Eichhorn
→ Optics in Medical Technologies (dt. in WS 08/09)	V2+Ü1	3	Kaschke, Lemmer
<b>Seminar Course (Research Topics in Optics &amp; Photonics)</b>	<b>P2</b>	<b>4</b>	<b>Busch</b>
<b>Industry Internship: Specialization and Report</b>		<b>7</b>	
<b>Additive key competencies</b>	<b>V2</b>	<b>3</b>	<b>HoC</b>
<b>Project Courses (Research Lab) to Elective Courses</b>		<b>4</b>	<b>Linden/ Busch</b>

**4. Semester**

<b>Subjects</b>	<b>SWS</b>	<b>CP</b>	<b>Lecturer</b>
<b>Master Thesis</b>		<b>30</b>	