

| Modulecode | Modultitel | ECTS | Sprache | findet statt | Dauer des Moduls (in Semestern) | Lehrveranstaltungen pro Modul* |
|--|---|------|-------------------------|--------------|-----------------------------------|--------------------------------|
| Module code | Module title | ECTS | Language of instruction | offered | Duration of module (in semesters) | Courses per module* |
| Module auf Masterniveau / Modules on Master's level | | | | | | |
| PAFMF002 | Theorie der Elektronenstruktur | 4 | English | SoSe | 1 | 2 |
| PAFMF003 | Solid State Optics | 8 | English | SoSe | 2 | 2 |
| PAFMF009 | Optoelectronics | 4 | English | SoSe | 1 | 2 |
| PAFMF018 | Quantum Information Theory | 4 | English, German | tba | 1 | 2 |
| PAFMF021 | 2D materials | 4 | English | WiSe | 1 | 2 |
| PAFM0001 | Fundamentals of Modern Optics | 8 | English | WiSe | 1 | 2 |
| PAFM0002 | Structure of Matter | 8 | English | WiSe | 1 | 2 |
| PAFM0004 | Laser Physics | 8 | English | SoSe | 1 | 2 |
| PAFM0005 | Optical Metrology and Sensing | 4 | English | WiSe | 1 | 2 |
| PAFM0006 | Introduction to Optical Modeling | 4 | English | WiSe | 1 | 2 |
| PAFM0007 | Experimental Optics | 6 | English | WiSe | 1 | 1 |
| PAFM0008 | Internship | 10 | English | SoSe | 1 | 1 |
| PAFM0009 | Research Lab | 18 | English | WiSe | 1 | 1 |
| PAFM0100 | Accelerator-based Modern Physics | 4 | English, p.r.n.German | WiSe + SoSe | 1 | 2 |
| PAFM0101 | Active Photonic Devices | 4 | English | WiSe | 1 | 2 |
| PAFM0102 | Analytical Instrumentations | 4 | English | SoSe | 1 | 2 |
| PAFM0103 | Applied Laser Technology I | 4 | English | SoSe | 1 | 2 |
| PAFM0104 | Applied Laser Technology II | 4 | English | WiSe | 1 | 2 |
| PAFM0106 | Atomic Physics at High Field Strengths | 4 | English, p.r.n.German | WiSe + SoSe | 1 | 2 |
| PAFM0107 | Attosecond Laser Physics | 4 | English | SoSe | 1 | 2 |
| PAFM0120 | Biomedical Imaging – Ionizing Radiation | 4 | English | WiSe | 1 | 2 |
| PAFM0121 | Biomedical Imaging – Non Ionizing Radiation | 4 | English | SoSe | 1 | 2 |
| PAFM0122 | Biophotonics | 4 | English | SoSe | 1 | 2 |
| PAFM0129 | Computational Imaging | 4 | English | SoSe | 1 | tba |
| PAFM0130 | Computational Photonics | 4 | English | SoSe | 1 | 2 |
| PAFM0131 | Fundamental Atomic and Nuclear Processes in Highly Ionized Matter | 4 | English, p.r.n. German | WiSe + SoSe | 1 | 2 |
| PAFM0132 | Design and Correction of Optical Systems | 4 | English | SoSe | 1 | 2 |

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| PAFM0140 | Diffractive Optics | 4 | English | WiSe | 1 | 2 |
| PAFM0150 | Renewable Energies | 4 | English, p.r.n. German | WiSe | 1 | 2 |
| PAFM0151 | Experimental Nonlinear Optics | 4 | English | WiSe | 1 | 2 |
| PAFM0160 | Fiber Optics | 4 | English | SoSe | 1 | 2 |
| PAFM0170 | High-Intensity/Relativistic Optics | 4 | English | WiSe | 1 | 2 |
| PAFM0171 | History of Optics | 4 | English, German | WiSe | 1 | 1 |
| PAFM0180 | Image Processing | 4 | English | SoSe | 1 | 2 |
| PAFM0181 | Image Processing in Microscopy | 4 | English, p.r.n. German | WiSe | 1 | 2 |
| PAFM0182 | Imaging and Aberration Theory | 4 | English | WiSe | 1 | 2 |
| PAFM0183 | Introduction to Nanooptics | 4 | English | WiSe | 1 | 2 |
| PAFM0184 | Integrated Quantum Photonics | 4 | English | WiSe | 1 | tba |
| PAFM0185 | Innovation Methods in Physics | 4 | English | WiSe | 1 | tba |
| PAFM0200 | Laser Driven Radiation Sources | 4 | English, p.r.n. German | WiSe | 1 | 2 |
| PAFM0201 | Laser Engineering | 4 | English | WiSe | 1 | 2 |
| PAFM0203 | Lens Design I | 4 | English | SoSe | 1 | 2 |
| PAFM0204 | Lens Design II | 4 | English | WiSe | 1 | 2 |
| PAFM0205 | Light Microscopy | 4 | English | WiSe | 1 | 2 |
| PAFM0206 | Light Source Modeling | 4 | English | SoSe | 1 | 2 |
| PAFM0220 | Micro/Nanotechnology | 4 | English | SoSe | 1 | 2 |
| PAFM0221 | Microscopy | 4 | English | SoSe | 1 | 2 |
| PAFM0222 | Modern Methods of Spectroscopy | 4 | English, German | SoSe | 1 | 2 |
| PAFM0230 | Nano Engineering | 4 | English | WiSe | 1 | 2 |
| PAFM0231 | Nonlinear Dynamics in Optical Systems | 4 | German, p.r.n. English | SoSe | 1 | 2 |
| PAFM0242 | Optics for Spectroscopists: Optical Waves in Solids | 4 | English | SoSe | 1 | 1 |
| PAFM0250 | Particles in Strong Electromagnetic Fields | 4 | English | WiSe | 1 | 2 |
| PAFM0251 | Physical Optics Design | 4 | English | WiSe | 1 | 2 |
| PAFM0252 | Physical Optics Modeling | 4 | English | SoSe | 1 | 2 |
| PAFM0253 | Physics of Free-Electron Laser | 4 | English | SoSe | 1 | 2 |

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| PAFM0254 | Physics of Ultrafast Optical Discharge and Filamentation | 4 | English | WiSe | 1 | 2 |
| PAFM0255 | Plasma Physics | 4 | English | SoSe | 1 | 2 |
| PAFM0256 | Physics of Photovoltaics | 4 | English | SoSe | 1 | 2 |
| PAFM0257 | Physical Optics | 4 | English | SoSe | 1 | 2 |
| PAFM0260 | Quantum Optics | 4 | English | SoSe | 1 | 2 |
| PAFM0261 | Quantum Computing | 4 | English | SoSe | 1 | tba |
| PAFM0262 | Quantum Communicaton | 4 | English | SoSe | 1 | tba |
| PAFM0263 | Quantum Imaging and Sensing | 4 | English | SoSe | 1 | tba |
| PAFM0265 | Semiconductor Nanomaterials | 4 | English | SoSe | 1 | 2 |
| PAFM0266 | Strong-Field Laser Physics | 4 | English | SoSe | 1 | 2 |
| PAFM0270 | Theory of Nonlinear Optics | 4 | English | SoSe | 1 | 2 |
| PAFM0271 | Thin Film Optics | 4 | English | WiSe | 1 | 2 |
| PAFM0272 | Terahertz Technology | 4 | English | SoSe | 1 | tba |
| PAFM0280 | Ultrafast Optics | 4 | English | WiSe | 1 | 2 |
| PAFM0290 | XUV and X-Ray Optics | 4 | English | SoSe | 1 | 2 |
| PAFM0901 | Topics of Current Research 1 | 4 | English | tba | 1 | 2 |
| PAFM0902 | Topics of Current Research 2 | 4 | English | tba | 1 | 2 |
| PAFM0903 | Topics of Current Research 3 | 4 | English | tba | 1 | 2 |
| PAFM0904 | Topics of Current Research 4 | 4 | English | tba | 1 | 2 |

Erklärung /

explanation:

SoSe - Sommersemester / summer semester

WiSe - Wintersemester / winter semester

* Um Credits für ein Modul zu erwerben, müssen Sie alle Lehrveranstaltungen eines Moduls besuchen. Siehe auch Modulkatalog und Vorlesungsverzeichnis. / To earn credits for a module, all courses within that module must be attended. See also module catalogue and course catalogue.