

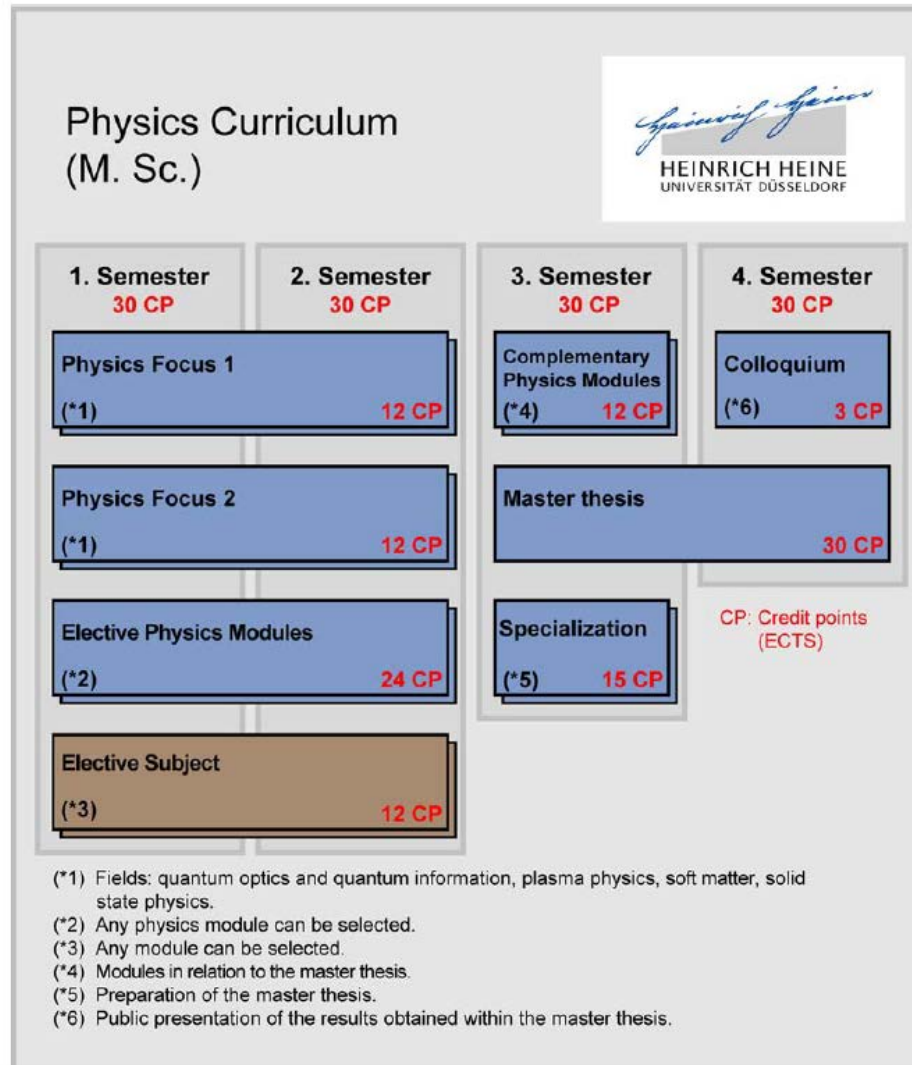


Welcome in the Master programme

Prof. Axel Görlitz, HHU Düsseldorf

06.04.2018

Master Programme in Physics



Physics Focus (Schwerpunkt)

- Plasma Physics, Quantum Optics and Quantum Information, Solid State Physics, Soft Matter Physics
- Two focus areas (12 ECTS each) have to be chosen
- In each focus area one experimental (type A) and one theoretical (type B) module (6 ECTS each) have to be chosen
- It is guaranteed that in all focus areas lectures of type A and type B are held regularly (i. e. once per year)

Schedule of lectures in the focus areas

SS 2018	WS 2018/19
Experimental Quantum Optics (A)	Experimental Plasma Physics (A)
Theoretical Quantum Optics and Quantum Information (B)	Theoretical Plasma Physics (B)
Theoretical Soft Matter (B)	Experimental Soft Matter (A)
Theoretical Solid State Physics (B) Mesoscopic Transport (A)	Surface Science I (A)*

*additional lectures may be offered in the winter term 2018/19

Elective Physics Modules (Wahlpflichtbereich Physik)

- Focus modules, Laser Physics, Astrophysics, Biophysics, X-Ray Physics, Numerical Simulations, Advanced Quantum Mechanics, ...
- Modules with a total of 24 credit points have to be chosen (typically 4 modules with 6 credit points each); no restrictions
- Course enrolment and information on the lecture times in the online course overview (lsf.uni-duesseldorf.de)

Modules that can be chosen as elective physics module in SS2018

all focus (if not used in focus area)

Self-Assembly of Biomolecules (Selbstorganisation von Biomolekülen)

Numerical Simulations I (Numerische Simulationen I)

X-Ray Physics (Röntgenphysik)

Advanced Quantum Mechanics (Fortgeschrittene Quantenmechanik)

Fusion Plasma Physics (Fusionsplasmaphysik)

Nanotechnology (Nanotechnologie)

Classical Continuum Mechanics (Klassische Kontinuumsmechanik)

Key Experiments in Solid State Physics (Schlüsselexperimente der Festkörperphysik)

Stochastic Processes (Stochastische Prozesse)

Elective modules (Wahlbereich)

- Any university course including physics modules.
- Language courses (www.deutschkurse.de, <http://www.spz.hhu.de>) , advanced Mathematics, Chemistry, more Physics courses, transferable skills (<http://www.studierendenakademie.hhu.de>),...
- 1st year courses of the Bachelor programmes in physics or mathematics are excluded.
- Credit points for Bachelor courses of other disciplines may be reduced (please ask examination board (Prof. Getzlaff)).
- Graded courses/modules count for final grade.

2nd year of Master Programme

Complementary Physics (Ergänzungsbereich)

- Preparation for topic of Master thesis
- Modules with a total of 12 credit points have to be chosen

Specialization

- Training for Master thesis
- 15 Credit Points
- Register with thesis advisor

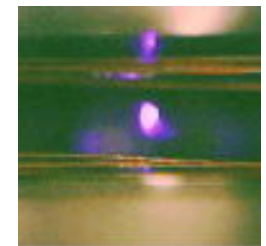
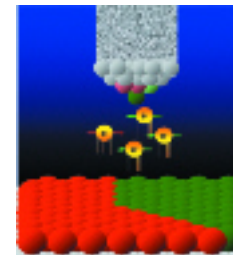
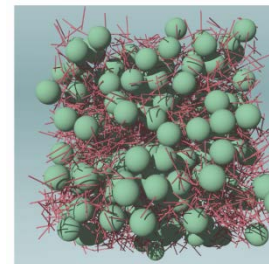
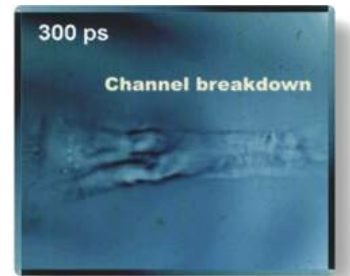
Colloquium

- Presentation of Master thesis
- 3 Credit Points

Master thesis

Research work in one of our primary research areas:

- Plasma Physics
- Soft Matter
- Solid State Physics/Nano Physics
- Quantum Optics/Quantum Information



Exams

- Cover entire moduls
- Exams are oral (date of exam may be individually arranged) or written (date will be announced in the lecture)
- Registration: 1 week before exam (usually online); this applies also for Bachelor students who already take Master courses
- **Exception** – Seminars: registration with professor
- **Exception** - Directed study, Specialization: registration with professor

More Information

Student advisor:

Prof. Dr. Axel Görlitz

studienberatung.physik@hhu.de

Regulations of examination: see webpage
([Prüfungsordnung](#), currently German only)

Description of modules: see webpage
([Handbook of Modules](#))