

## List of regularly offered physics modules open for Erasmus incomings

### Bachelor in Physics/Medical Physics (everything is taught in German)

#### 1. In the Summer term (teaching period: April to September)

<b>Module</b>	<b>components (in hours per week)</b>	<b>credit points (ECTS)</b>
Atomphysik	Lecture: 3 Tutorial: 1 Exercises: 1	6
Bildverarbeitung	Lecture: 2	3
Electricity and Magnetism	Lecture: 3 Tutorial: 1 Exercises: 1	6
Analysis 2	Lecture: 4 Tutorial: 2	8
Grundpraktikum 2	Laboratory : 4	5
Informatik 2	Lecture: 4 Tutorial: 2	8
Kernphysik	Lecture: 3 Tutorial: 1 Exercises: 1	6
Mathematische Methoden der Physik 2	Lecture: 2 Tutorial: 2 Exercises: 1	4
Numerik	Lecture: 4 Tutorial: 2 Exercises: 1	9
Prinzipien der Organischen Chemie	Lecture: 4 Tutorial: 2	8
Quantenmechanik	Lecture: 3 Tutorial: 2 Exercises: 1	8
Theoretische Mechanik	Lecture: 3 Tutorial: 2 Exercises: 1	8
Thermodynamik	Lecture: 3 Tutorial: 1 Exercises: 1	6
Wahrscheinlich- keitstheorie	Lecture: 4 Tutorial: 2	9

#### 2. In the Winter term (teaching period: October to March)

<b>Module</b>	<b>components (in hours per week)</b>	<b>credit points (ECTS)</b>
Allgemeine und Anorganische Chemie	Lecture: 4 Tutorial: 2	8

Analysis 1	Lecture: 4 Tutorial: 2	8
Analysis 3	Lecture: 4 Tutorial: 2	8
Bildgebende Verfahren	Lecture: 2	3
Einführung in die Bildverarbeitung	Lecture: 2	3
Einführung in die Biologie	Lecture: 4	6
Einführung in die Stochastik	Lecture: 4 Tutorial: 2	9
Elektrodynamik	Lecture: 3 Tutorial: 2 Exercises: 1	8
Elektronik	Lecture: 2 Practical: 3	6
Experimentelle Mechanik	Lecture: 3 Tutorial: 1 Exercises: 1	6
Experimentelle Festkörperphysik	Lecture: 3 Tutorial: 1 Exercises: 1	6
Fortgeschrittenen- Praktikum Medizinphysik	Med.Phys.: 3 Physik: 3	8
Fortgeschrittenen- Praktikum Physik	Laboratory Physics: 5 Seminar: 2	10
Grundlagen der Medinischen Physik	Lecture: 4 Tutorial: 1 Seminar: 1	9
Grundpraktikum 1	Laboratory : 4	5
Informatik 1	Lecture: 4 Tutorial: 2	8
Lineare Algebra 1	Lecture: 4 Tutorial: 2	8
Lineare Algebra 2	Lecture: 4 Tutorial: 2	8
Mathematische	Lecture: 3	

Methoden der Physik 1	Tutorial: 3 Exercises: 1	6
Optik und Wellenlehre	Lecture: 3 Tutorial: 1 Exercises: 1	6
Statistische Mechanik	Lecture: 3 Tutorial: 2 Exercises: 1	8

**Master in Physics / Medical Physics ( The language of the title is the teaching language):**

1. In the Summer term (teaching period: April to September):

<b>Module</b>	<b>components (in hours per week)</b>	<b>credit points (ECTS)</b>
Colloquium	Seminar: 2	3
Medizintechnik	Lecture: 2 Excursion: 1	4
Moderne Mikroskopieverfahren	Lecture: 2 Tutorial: 1 Laboratory : 1	6
Röntgenphysik	Lecture: 2 Practical: 1	5

2. In the Winter term (teaching period: October to March):

<b>Module</b>	<b>components (in hours per week)</b>	<b>credit points (ECTS)</b>
Artificial atoms: the physics and technology of quantum dots	Lecture: 3 Tutorial: 1	6
Bildgebende Verfahren	Lecture: 2	3
Biophysik	Lecture: 3 Tutorial: 1	6
Einführung in die Bildverarbeitung	Lecture: 2	3
Experimentelle Festkörperphysik	Lecture: 3 Tutorial: 1 Exercises: 1	6
Statistische Mechanik	Lecture: 3 Tutorial: 2 Exercises: 1	8

3. Either in Winter or in Summer term (please contact the Erasmus contact person in Physics if you need to know which modules are offered in the semester of your choice):

<b>Module</b>	<b>components (in hours per week)</b>	<b>credit points (ECTS)</b>
Advanced Quantum Information Theory	Lecture: 2 Tutorial: 1	4
Advanced Quantum Mechanics	Lecture: 3 Tutorial: 2 Exercises: 1	8
Bose-Einstein Condensation	Lecture: 2 Tutorial: 1	4
Computational Physics	Lecture: 3 Tutorial: 1	6
Dynamics of dense liquids	Lecture: 2	3
Experimental Plasma Physics	Lecture: 3 Seminar: 2	6
Experimental Polymer Physics	Lecture: 2	3
Experimental Quantum Optics	Lecture: 3 Tutorial: 1	6
Experimental Soft Matter Physics	Lecture: 3 Tutorial: 1	6
Introduction to molecular Physics	Lecture: 2	3
Journal Club on Quantum information theory	Seminar: 2	3
Laser Physics	Lecture: 3 Tutorial: 1	6
Magnetism 1	Lecture: 4	6
Magnetism 2	Lecture: 2 Seminar: 2	6
Mesoscopic Transport	Lecture: 3 Tutorial: 1	6
Nanotechnology	Lecture: 2 Seminar: 2	6

Numeric Simulations 1	Lecture: 2 Tutorial: 2	6
Numeric Simulations 2	Lecture: 2 Tutorial: 2	6
Physics of Biomolecules	Seminar: 2	3
Precision Measurements in Atomic Physics	Seminar: 2	3
Quantum transport in nanostructures	Lecture: 2 Tutorial: 1	4
Semiconductor Physics	Lecture: 3 Tutorial: 1	6
Simple and Complex Fluids	Lecture: 3 Tutorial: 1	6
Surface Physics 1	Lecture: 3 Seminar: 1	6
Surface Physics 2	Lecture: 2 Seminar: 2	6
Theoretical Plasma Physics	Lecture: 3 Tutorial: 1	6
Theoretical Quantum Optics and Quantum Information	Lecture: 3 Tutorial: 1	6
Theoretical Soft Matter Physics	Lecture: 3 Tutorial: 1	6
Theoretical Solid State Physics	Lecture: 3 Tutorial: 1	6
Theory of complex fluids	Lecture: 2	3
Theory of Phase Transitions	Lecture: 2	3
Ultracold Collisions	Lecture: 2	3