

Elective Advanced Lectures: BCGS Courses - physics70d

<i>Module No.</i>	physics70d
<i>Category</i>	Elective
<i>Credit Points (CP)</i>	3-8
<i>Semester</i>	1.-2.

Module: Elective Advanced Lectures: BCGS Courses

Module Elements:

Nr	Course	Course No.	CP	Artkurz	Teaching hours	Semester
1	Particle physics (E)	Particles	4	Lecture	3	ST
2	Physics of Detectors (E/A)	Detectors	4	Lecture	3	ST
3	Nuclear physics II (E)	Nucl. physics II	5	Lecture	3	WT
4	Optical Spectroscopy (E/A)	Optical Spectr.	3	Lecture	2	WT/ST
5	Introduction to neutron scattering (E/A)	Neutron Scatt.	3	Lecture	2	ST
6	Physics of Surfaces and Nanostructures (E/A)	Surfaces	3	Lecture	2	WT
7	Experimental methods in condensed matter physics (E/A)	Meth CondMatt	3	Lecture	2	WT
8	Magnetism (E/A)	Magnetism	3	Lecture	2	WT
9	Superconductivity (E/A)	Supercond	3	Lecture	2	ST
10	Semiconductor Physics and Nanoscience (E/A)	Semicond. Phys.	3	Lecture	2	ST
11	Condensed Matter Physics II (E)	CondMatter II	4	Lecture	3	ST
12	Fundamentals of Molecular Symmetry (E/A/T)	FundMolSym	4	Lecture	2	ST
13	Astrochemistry (E/A)	Astrochemistry	4	Lecture	2	ST
14	Probability theory and stochastic processes for physicists (T)	Probability	4	Lecture	3	WT
15	Nonequilibrium physics with interdisciplinary applications (T)	Nonequilibrium	4	Lect. + ex.	2+1	ST
16	Disordered systems (T)	Disorder	8	Lect. + ex.	4+2	ST
17	Statistical physics far from equilibrium (T)	StatPhysNE	8	Lect. + ex.	4+2	ST
18	Statistical physics of soft matter and biomolecules (T/A)	SoftMatter	8	Lect. + ex.	4+2	ST
19	Physical biology (T/A)	PhysBio	8	Lect. + ex.	4+2	ST
20	Selected courses from catalogue	see catalogue	3-8	see catalogue		WT/ST
21	Relativity and Cosmology I (T)	GR I	8	Lect. + ex.	4+2	WT
22	Relativity and Cosmology II (T)	GR II	8	Lect. + ex.	4+2	ST
23	Quantum Field Theory I (T)	QFT I	8	Lect. + ex.	4+2	ST
24	Quantum Field Theory II (T)	QFT II	8	Lect. + ex.	4+2	ST
25	Geometry in Physics (T)	GiP	8	Lect. + ex.	4+2	ST

Nr	Course	Course No.	CP	Artkurz	Teaching hours	Semester
26	Topology for Physicists (T)	Topology	6	Lect. + ex.	3+1	ST
27	Groundbreaking experiments in nuclear physics (E)	ExpNuclPhys	3	Lecture	2	ST

Requirements for Participation: none

Form of Examination: see with the course

Content: Advanced lectures within the Bonn Cologne Graduate School of Physics and Astronomy (BCGS).

Aims/Skills: Preparation for Master's Thesis work; broadening of scientific knowledge

Course achievement/Criteria for awarding cp's: see with the course

Length of Module: 1 or 2 semester

Maximum Number of Participants: ca. 100

Registration Procedure: s. <https://basis.uni-bonn.de> u. <http://bamawww.physik.uni-bonn.de>

Note: Note: The student must achieve at least 18 CP out of all 4 Elective Advanced Modules