

Elective Advanced Lectures: Applied Physics - physics70b

<i>Module No.</i>	physics70b
<i>Category</i>	Elective
<i>Credit Points (CP)</i>	3-6
<i>Semester</i>	1.-2.

Module: Elective Advanced Lectures: Applied Physics

Module Elements:

Nr	Course	Course No.	CP	Artkurz	Teaching hours	Semester
1	Modern Spectroscopy (E/A)	physics741	4		2+1	WT/ST
2	Internships in the Research Groups	physics799	4	internship		WT/ST
3	Physics in Medicine: Physics of Magnetic Resonance Imaging (A)	physics776	6	Lect. + ex.	3+1	WT
4	Hands-on Seminar: Detector Construction (E/A)	physics723	3		2	WT/ST
5	Selected courses from catalogue type "A" (Applied) or "E/A" (Experimental/A)	see catalogue	3-6	see catalogue		ST/WT
6	Also possible classes from M.Sc. in Astrophysics					
7	Advanced Electronics and Signal Processing (E/A)	physics712	6	Lect. + ex.	3+1	ST
8	Particle Detectors and Instrumentation (E/A)	physics713	6	Lect. + lab.	3+1	ST
9	Advanced Accelerator Physics (E/A)	physics714	6	Lect. + ex.	3+1	ST/WT
10	Programming in Physics and Astronomy with C++ or Python (E/A)	physics718	4	Lect. + ex.	2+1	ST
11	Low Temperature Physics (E/A)	physics731	6	Lect. + ex.	3+1	WT/ST
12	Optics Lab (E/A)	physics732	4	Laboratory		WT/ST
13	Holography (E/A)	physics734	3	Lecture	2	ST
14	Crystal Optics (E/A)	physics736	6	Lect. + ex.	3+1	WT
15	Lecture on Advanced Topics in Photonics (E/A)	physics739	4		2+1	WT/ST
16	Hands-on Seminar: Experimental Optics and Atomic Physics (E/A)	physics740	3		2	WT/ST
17	Environmental Physics & Energy Physics (A)	physics771	3	Lecture	2	WT
18	Physics in Medicine: Fundamentals of Analyzing Biomedical Signals (A)	physics772	6	Lect. + ex.	3+1	WT
19	Physics in Medicine: Fundamentals of Medical Imaging (A)	physics773	6	Lect. + ex.	3+1	ST
20	Electronics for Physicists (E/A)	physics774	6	Lect. + ex.	3+1	ST

Nr	Course	Course No.	CP	Artkurz	Teaching hours	Semester
21	Nuclear Reactor Physics (A)	physics775	3	Lecture	2	ST

Requirements for Participation: none

Form of Examination: see with the course

Content: Advanced lectures in applied physics

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