Degree: **M.Sc. in Physics (PO von 2006)**

Module No.: physics630
Credit Points (CP): 12
Category: Elective
Semester: 8.

Fachgruppe
Physik und Astronomie
Universität Bonn

Module: Specialization II

Module Elements:

Nr.	Course Title	Number	CP	Type	Workload	Sem.
Particle Physics						
1.	Physics of Hadrons	physics632	6	Lect. + ex.	180 hrs	ST
2.	High Energy Collider Physics	physics633	6	Lect. + ex.	180 hrs	ST
3.	Advanced Topics in High Energy Particle Physics	physics639	6	Lect. + ex.	180 hrs	ST
Condensed Matter and Photonics						
1.	Quantum Optics	physics631	6	Lect. + ex.	180 hrs	ST
2.	Magnetism/Superconductivity	physics634	6	Lect. + ex.	180 hrs	ST
3.	Laser Spectroscopy	physics635	6	Lect. + ex.	180 hrs	ST
Theoretical Physics						
1.	Advanced Theoretical Particle Physics	physics636	7	Lect. + ex.	210 hrs	ST
2.	Advanced Theoretical Hadron Physics	physics637	7	Lect. + ex.	210 hrs	ST
3.	Advanced Theoretical Condensed Matter Physics	physics638	7	Lect. + ex.	210 hrs	ST

Requirements:

Preparation:

Content:
In depth knowledge on the basics of the research programme in physics at Bonn University

Aims/Skills:
The students shall learn the basics as well as the present state of current research in the fields

Form of Testing and Examination:
Requirements for the submodule examination (written or oral examination): successful work with exercises

Length of Module: 1 semester

Maximum Number of Participants: ca. 100

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

Note: The student must achieve 12 CP from one or two specialization areas.