

Experimental Particle Physics guide, Master in Physics, University of Bonn

The Master in Physics in Bonn is a two-year study course with lectures in the first year and a master thesis project in the second year. In order to be admitted to the Master's thesis project, you are required to have 60 credit points from the first year of Master's studies (see: <https://www.physik-astro.uni-bonn.de/de/studium/pruefungsorganisation>)

Master of Physics									
Rheinische Friedrich-Wilhelms-Universität Bonn									
(valid from WS 2014/2015)									
		Course Phase							
		Compulsory		Elective					
1. Sem.	Oct	physics601: Advanced Laboratory Course	7 cp	Theoretical Physics (physics606 or - if done previously - 1 module out of physics751, physics754, physics755, physics760, physics7501)	7 cp	Specialization (at least 24 cp out of physics61a, -61b, -61c and/or physics62a, -62b, -62c)	24 cp	Elective Advanced Lectures (at least 18 cp out of physics70a, -70b, -70c, -70d)	18 cp
	Nov								
	Dec								
	Jan								
	Feb								
2. Sem.	Mar	Seminar (1 seminar out of physics65a, -65b, -65c)	4 cp						
	Apr								
	May								
	June								
	July								
3. Sem.	Aug	physics910: Scientific Exploration of the Master thesis topic	15 cp	physics920: Methods and Project Planning	15 cp				
	Sep								
	Oct								
	Nov								
	Dec								
4. Sem.	Jan	physics930: Master Thesis	30 cp						
	Feb								
	Mar								
	Apr								
	May								
5. Sem.	June								
	July								
	Aug								
	Sep								
	Oct								

As you can see from the study plan, there are two compulsory lectures,

- Advanced Laboratory course (physics601, 7 credits)
- Advanced Quantum Theory (physics606, 7 credits),

and three categories in which you must achieve a required number of credits

- Specialization (24 credits)
- Elective Advanced Lectures (18 credits)
- Seminar (4 credits)

This in total gives 60 credits, the required credits to start your master's thesis project.

Recommended experimental particle physics lectures

Specialization Winter term:

- Particle Physics (physics611). We regards this lecture as essential for any experimental work in particle physics.

As second specialization lecture in the winter term we recommend one lecture out of

- Physics of Particle Detectors (physics618)
- Accelerator Physics (physics612)
- Theoretical Particle Physics (physics615)

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Elective Winter term: A choice of

- Statistical Methods of Data Analysis (physics716)
- BCGS intensive week (HEP or Hadrons)
- Experiments on the Structure of Hadrons

Specialization Summer term:

Two lectures out of

- High Energy Collider Physics (physics633)
- Physics of Hadrons (physics632)
- Advanced Topics in High Energy Particle Physics (physics639)

Elective Summer term: A choice of

- Advanced Electronics and Signal Processing (physics712)
- Advanced Accelerator Physics (physics714)
- Advanced Methods of Data Analysis (physics724)

Please note that the credit sum for both semesters must reach 18 credits

Additional elective courses: Research project (physics799) in one of the experimental particle physics groups.