

<b>Research Module</b>					
Identification number	Workload	Credits	Term of studying	Frequency of occurrence	Duration
MN-P-For	900 h	30 CP	4 <sup>th</sup> semester	Depending on the individual choice	6 months
1	Type of lessons Lab work Oral presentation	Contact times 20 h 1 h	Self-study times 315 h 24 h	Intended group size Individual counseling	
2	<b>Aims of the module and acquired skills</b> Students acquire the scientific skills that are needed to carry out a substantial research project on one of the current topics of physics. They learn to present their results in written and oral form.				
3	<b>Contents of the module</b> As an integral part of the M.Sc. program, each student works on his/her own research project. The results of the project are written up as M.Sc. thesis. The thesis work is preceded by two introductory projects which introduce the student to the theme of the M.Sc. thesis and are evaluated separately. As a rule, the introductory projects and the M.Sc. thesis research are substantial pieces of scientific work, carried out in the area of specialization chosen by the student.				
4	<b>Teaching/Learning methods</b> The topic to be worked on is issued by the chairman of the examination board in consultation with the student's thesis research advisor.  In the research module, the self-study based on books and current scientific publications plays an important role. The students work individually on a problem of current research. In discussions with their supervisor and fellow students, they learn to solve challenging problems in a team and to present their approaches and results. During their research and by preparing and presenting the master thesis, they become acquainted with scientific methods and learn to communicate an advanced topic in a pedagogical way. They also learn to finalize a project in time and to manage their time efficiently.				
5	<b>Requirements for participation</b> Passed examinations of all modules of the first three semesters of the Master course and the contents of the previously completed introductory projects I and II.				
6	<b>Type of module examinations</b> The Master Thesis and the colloquium will be evaluated by two and in the exceptional case by three referees.  On the day of the colloquium the referee report/reports to the master thesis have to be present. The grading of the colloquium takes place on the day of the colloquium.				
7	<b>Requisites for the allocation of credits</b> The module is passed by successfully preparing the M.Sc. thesis and by passing the colloquium.				
8	<b>Compatibility with other Curricula</b> None				

9	<p><b>Significance of the module mark for the overall grade</b></p> <p>The total grade given for the module is the 3:1 weighted average of the two grades given for the written thesis and the colloquium talk.</p> <p>The weight of the module is <math>45/111 \approx 40.5\%</math>.</p>
10	<p><b>Module coordinator</b></p> <p>The chairman of the examination board</p>
11	<p><b>Additional information</b></p> <p>The Master Thesis and the Master Colloquium have to be registered at the examination office.</p> <p>The date of issue of the master topic is to be no later than two months after the student's completing the requirements for admission to the module. Students work on the introductory projects for three months each, and then on the M.Sc. thesis for six months. The topic and the problem posed have to be of such a kind that it is possible for the student to complete the M.Sc. thesis within the allotted time.</p> <p>To complete the M.Sc. thesis work, the student hands in a written thesis and subsequently reports on it by way of a colloquium open to members of the faculty. The length of the thesis should not exceed 70 pages (font 12pt, baselineskip 16pt). Both English and German are permitted as a language for the written thesis and the colloquium talk. No later than 8 weeks after completion of the Master thesis the candidate reports in a colloquium on the subject of the master thesis. Presentation time should not exceed 25 minutes; time for questions is limited to 20 minutes.</p> <p>Version: 05.06.2015 HK</p>