

PHY-M-VS 12

Effective WS 2011/12 / Please also read the comments in item 13.

1. Module title:		Computer-based Measurements with LabView			
2. Field / responsibility of:		Physics / the department, the Dean of Studies			
3. Module contents:		<ul style="list-style-type: none"> • Fundamentals of electronic measurement techniques • Introduction to the programming language LabView for process control and data acquisition • Small group projects with exemplary experimental arrangements 			
4. Qualification objectives of the module / competencies to be acquired:		Learning how to use a computer in the lab, identifying typical problems, e.g. with analog data acquisition. Using the graphical programming language LabView, implementing what has been learned in projects (in small groups).			
5. Prerequisites for participation:					
a) Recommended knowledge:		Good knowledge of any programming language, basic knowledge of electronics			
b) Prerequisite courses:		None			
6. Module can be used for:		M.Sc. (and B.Sc.) in Physics, Nanoscience, Computational Science			
7. Module is offered:		On a semiannual basis			
8. Module can be completed in:		1 semester			
9. Recommended semester of study:		1			
10. Overall module workload / number of credit points:		Workload: Total number of hours: 180 Allocation: 1. Attendance: 4 credit hours 2. Independent study (including exam preparation/ exam): 110 hours Credit points: 6			
The successful completion of all assignments listed in items 11 and 12 is a prerequisite for receiving the credit points mentioned in item 10.					
11. Module components:					
Nr.	Req./req. elective	Form of teaching	Subject area/topic	Credit hours	Coursework
PHY-M-VS 1 2.1	Compulsory	Lecture Practical course	Computer-based measurements	4	Successful completion of the practical exercises (with the instructor signing off each course session); project work
12. Module exam:					
Nr.	Competence / topic	Type of exam	Duration	Time / notes	Weighting for module grade
13. Notes:					
Successful participation in the practical course is a prerequisite for taking the module exam.					