PHY-M-VS 05

Effective WS 2011/12

1. Module title:	**Linux: Basics, Concepts, Applications**
2. Field / responsibility of:	Physics / the department, the Dean of Studies
3. Module contents:	- Linux and Unix - File system, important Linux commands - Process administration, I/O redirection, pipes - Linux distributions - Overview of user software on Linux - Installation of Linux - Devices and processes - Networking fundamentals, ISO/OSI model - Computer access using keys - Kernel, booting, logging, package administration - User administration, server services, security - Shell programming with the bash - Regular expressions, find/grep/awk - Software development on Linux, libraries
4. Qualification objectives of the module / competencies to be acquired:	This module enables participants to use Linux competently even for advanced scientific purposes.
5. Prerequisites for participation:	
a) Recommended knowledge:	None
b) Prerequisite courses:	None
6. Module can be used for:	M.Sc. in Physics, M.Sc.in Nanoscience, M.Sc. in Computational Science, Teacher Training for Academic Secondary School, Teacher Training for Physics
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: 90** **Allocation:** **1. Attendance: 2 credit hours** **2. Independent study (including exam preparation/ exam): 60 hours** **Credit points: 3**

In order to obtain the credit points listed in section 10, all requirements given in sections 11 and 12 must be met.

11. Module components:

Nr.	Req./req. elective	Form of teaching	Subject area/topic	Credit hours	Coursework
PHY-M -VS 5	Compulsory	Lecture Practical course	Linux: Basics, concepts, applications	2	Practical exercises

12. Module exam:

Nr.	Competence / topic	Type of exam	Duration	Time / notes	Weighting for module grade
PHY-M -VS 5	Linux: Basics, concepts, applications	Project work		Completion of all practical exercises	0 - ungraded