

Title of Course: Advanced Practical in the Focal Point Programme "Molecular Medicine" -“Proteomics in clinical research”					
Type: Mandatory practical with choices		185881	Workload 240 h	Intended for Semester 2	Duration 0.5 Semester
1	Module: Advanced Practical with seminar		Presence hours per course a) 112 h b) 14 h	Self-study 114 h	Credit Points 8 CP
2	Teaching Methods: a) Practical b) Seminar A five-week all-day practical lab course with a compulsory seminar presentation. Please note: A second Advanced Practical will have to be performed in the same semester to earn the full complement credits				
3	Group Size: Individual training				
4	Learning/Course Objectives: Students practice experimentation on a small, closely supervised project in a research lab. Students will learn how to plan experiments and how to document and evaluate them. They will also learn how to write scientific protocols. In addition, they will learn to present collected results in a lecture to others.				
5	Contents: During this course, the student will be supervised by a graduate student or postdoc and will work on a small independent research project. The proteomics methods will be applied including: sample preparation, protein isolation and tryptic digestion, peptide separation by liquid chromatography, protein identification and quantification by means of mass spectrometry, statistics and bioinformatics. Seminar: In the seminar the results of the course will be presented				
6	Degree Courses: Master of Science Biochemistry;				
7	Prerequisite(s): The four Modular Advanced Practicals of the first Master semester have to be passed				
8	Method(s) of Examination: Presentation and protocol				
9	Requirements for Acquiring Credit Points: Successful participation in laboratory work and presentation of results and a protocol of the course.				
10	Significance for Overall Grade: Weighted according to the 16 CPs for two practical courses the average grade of the two practicals provides 13.3% of the overall grade				

I1	Frequency: Every summer semester
I2	Supervisor(s): Prof. Sitek, Dr. Bracht, Dr. Bayer
I3	Additional Information: