

Title of Course: Single nucleotide polymorphism (SNP) genotyping				
Type: Advanced practical course within the focal point program "Molecular Medicine"		Workload 120 h	Intended for Semester I	Duration I Semester
I	Module: Elective Practical	Hours per Week 5.25	Self-study 41.25 h	Credit Points 4 CP
2	Teaching Methods: a) A two-week all-day practical lab course b) A written protocol			
3	Group Size: 2 students			
4	Learning/Course Objectives: This practical course is dedicated to methods of SNP genotyping in human molecular genetics for diagnostic and research purposes. It covers different methodologies for SNP genotyping, After completion of the course the students will be able to (i) isolate DNA, (ii) perform DNA quality control measurement (iii) prepare samples for multiple analyses (iv) optimize PCR conditions, run PCR reactions and analyze genotyping results (v) organize data for further statistical analyses for genotyping			
5	Contents: This practical course is dedicated to methods of SNP genotyping in human molecular genetics for diagnostic and research purposes. It covers different methodologies for SNP genotyping, -DNA isolation and quality control -Sample preparation -Optimization and run of PCR reactions -Genotyping using different PCR-methodologies -Data analysis			
6	Degree Courses: Master of Science Biochemistry			
7	Prerequisite(s): Knowledge of basic laboratory techniques in molecular biology			
8	Method(s) of Examination: Assessment of active and successful participation in the practical (50%), a written project report (50%)			
9	Requirements for Acquiring Credit Points: Achievement of at least the mark "sufficient" regarding the above modes of examination			
10	Significance for Overall Grade: Weighted according to CPs			
11	Frequency: Winter semester 2020/21			
12	Lecturer(s): Wanda Gerding, Sabine Hoffjan			
13	Additional Information:			