DATES	LABORATORY Mon 8:30, Wed 12:15 room 105		LECTURE Tuesday 12:15-14:00 room 12	
	nr	topic	nr	topic
29.09-3.10.14			1	bioinformatics - basic definitions; 3 important portals: NCBI, EBI & Expasy; (PubMed, CiteXplore, Espacenet); useful databases; Sequences as data: NCBI, EMBL, DDBJ agreement; different sequence data formats;
6-10.10.14	1	literature search: PubMed, EuroPubMed, Espacenet; useful databases: BRENDA & KEGG, OMIM, Taxonomy	2	What we can lern from a sequence? global and local paiwise sequence allignment algorithms and scoring matrices
13-17.10.14	2	sequence databases nucleotide: GenBank - Gene, nucleotide, microbial genomes; protein: Uniprot; pairwise alignment (global v. local), gap penalties etc	3	BLAST & FASTA - how do they work, advanced versions of BLAST: megaBLAST PSI-BLAST & PHI-BLAST
20-24.10.14	3	BLAST database search with different BLOSUM matrices; PSI-BLAST& PHI-BLAST (+PROSITE);	4	multiple sequence alignment (Clustal, T-coffe, MUSCLE); molecular phylogeny
27.10-31.10.14	4	multiple sequence alignment (Clustal, MUSCLE & t-coffe), trees building - MEGA	5	tools for protein properties and structure prediction based on sequence; PDB
3-7.11.14	5	PDB, pyMOL introduction	6	deciphering unknown nucleotide sequences - ORF finding, PCR design;
10-14.11.14		**no classes - 11th on Mon; day shifts**		
17-21.11.14	6	PCR design: primer BLAST; restriction sites: NEBcutter; genomes comparison	7	Bioinformatics applied in science: the hottest topics in the "bio" research field
24-28.11.14	7	functional genetics project	8	**lecture test (max 4,5)**
1-5.12.14	8	***projects results presentations***		
8-12.12.14				***oral questionning for 5***
15-19.12.14				
22-26.12.14		**CHRISTMAS**		
29.12-2.01.15				