DNA Sequencing Informatics II, BINP27, 16 February - 17 March, 2017

Dept. of Biology, http://www.biology.lu.se/education

We will mostly work hands on with next generation sequencing data and database and web programming. The location is the computer dungeon in the Chemistry building throughout the whole course. The malaria case-study will include gene prediction, alignments, phylogenetic trees, metabolic pathways, synteny, orthology, ontology, signal proteins, membrane proteins, secreted proteins, protein domains. Nearly all days, attendance is compulsory.

Course leader: Björn Canbäck, bjorn.canback@biol.lu.se, 046-2229419

Teachers/assistants: Hanna Siegeman, Jakob Willforss, Markus Ringnér, Nikolay Oskolkov

Location: Dungeon, basement of Chemistry building

Teaching activities: L (lecture), Sem (seminar), G (group exercise), Lab, Proj (Project), Ind (Independent studies)

All activities are compulsory except when stated otherwise. If you are absent from a compulsory activity without a valid reason you are not guaranteed to complete this part until the next time the course is offered. A valid reason is e.g. that you are ill, but not that you are travelling!

Literature: Handouts

Web page: L@L. Students have access around 1 week before the start of the course

Date	Time	Activity	Description	Teacher	Location
Th. 16 Feb.	09.00-11.00	Lab	Project presentations	BC	
	11.00-12.00	L	Introduction	BC	
	13.00-17.00		No scheduled classes		
Fr. 17 Feb.	09.00-13.00	Lab	Metabolic pathways, EMBOSS	BC	
Mo. 20 Feb.	09.00-10.00	L	Malaria	BC	
	10.00-15.00	Lab	Malaria - case study	BC, HS	
Tu. 21 Feb.	09.00-15.00	Lab	Malaria - case study	BC, HS	
We. 22 Feb.	09.00-15.00	Lab	Malaria - case study	BC, HS	
Th. 23 Feb.	09.00-12.00	Lab	Malaria - case study	BC, HS	
	13.00-18.00		Re-exam, courses autumn period 2		
Fr. 24 Feb.	09.00-13.00	Lab	Malaria - case study	BC, HS	
Mo. 27 Feb.	09.00-10.00	L	GWAS, singe cell sequencing, research	NO	
	10.00-15.00	Lab	Database programming	BC	
Tu. 28 Feb.	09.00-15.00	Lab	Web programming	BC, JW	
We. 1 Mar.	09.00-15.00	Lab	Web programming	BC, JW	
Th. 2 Mar.	09.00-12.00	Lab	Web programming	BC, JW	
	13.00-17.00		No scheduled classes		
Fr. 3 Mar.	09.00-13.00	Sem	Compute - machine learning?		Astronomy
Mo. 6 Mar.	09.00-10.00	L	About medical bioinformatics	MR	
	10.00-15.00	Lab	Gene ontology	BC	
Tu. 7 Mar.	09.00-12.00	Ind	Preparation for exam, optional	BC 9-12	

We. 8 Mar.	09.00-13.00		**Exam**	BC	
Th. 9 Mar.	09.00-12.00	Lab	Project work	BC	
	13.00-17.00		No scheduled classes		
Fr. 10 Mar.	09.00-13.00	Lab	Project work	BC 9-12	
Mo. 13 Mar.	09.00-15.00	Lab	Project work	BC 9-12	
Tu. 14 Mar.	09.00-15.00	Lab	Project work	BC 9-12	
We. 15 Mar.	09.00-15.00	Lab	Project work	BC 9-12	
Th. 16 Mar.	09.00-12.00	Lab	Project work	BC	
	13.00-17.00		No scheduled classes		
Fr. 17 Mar.	09.00-13.00	Lab	Project presentations	BC	