IIHG Bioinformatics Course

Tell us what you think:

Upon completion of the course, please take moment to provide your thoughts on the class. Your feedback is greatly appreciated and will be used to help improve future education initiatives!

[http://tinyurl.com/iihg-biocourse-feedback]

Bioinformatics Course "Cheat Sheet"

This file contains definitions and links to valuable tools and databases: Cheat Sheet

Agenda and slides for the IIHG Bioinformatics Short Course:

Day 1: Wednesday, August 1

Location	Time	Title (click to listen to recording)	Instructor	Slides/Lab Instructions
Kelch Conference Room 1289 CBRB	8:00 am to 9:00 am	"The Magic of MPS" (1 hour) ***Recording contains first 3 Wed. Morning lectures conjoined**	David Dimmock	Clinical Decision Making Based on Complete Genome Sequencing_Dimmock.pdf *Recording contains all Wed. Morning sessions conjoined
Kelch Conference Room 1289 CBRB	9:00 am to 9:30 am	Course Overview – Background, Goals for the Course, and Glossary of Terms (30 minutes) ***Recording contains first 3 Wed. Morning lectures conjoined**	Eliot Shearer	IIHG-course-overview.pdf
Kelch Conference Room 1289 CBRB	9:30 am to 10:20 am	Next-Gen Sequencers Overview – Pros and Cons of each system; library preparation overview (50 minutes) ***Recording contains first 3 Wed. Morning lectures conjoined**	Kevin Knudtson	Knudtson_GalaxyWorkshop_08012012.pdf
	10:20 am to 10:40 am	*Break*		
Kelch Conference Room 1289 CBRB	10:40 am to 11:30 am	Experimental Design – The importance of filtering: inheritance models, segregation analysis, limitations and possibilities, etc. (50 minutes)	Richard Smith	The Importance of Filtering.pdf
Kelch Conference Room 1289 CBRB	11:30 am to 12:00 pm	Tour of the Genomics Core at the University of Iowa College of Medicine (30 minutes)	Kevin Knudtson	
EMRB Atrium	*12:00 PM to 1:00 PM*	*Lunch*		
Hardin Information Commons	1:00 pm to 1:30 pm	Introduction to Data Analysis with MPS Data Sets (30 minutes) ***Recording contains into to lab session 1 as well**	Ann Black	IIHG_Bioinformatics_Course.pdf
Hardin Information Commons	1:30 pm to 5:00 pm	Lab Session 1: Experimental Design for MPS Experiments – Using Galaxy to manipulate large data sets; creating a BED file for experimental design ***Recording contains into to Data Analysis and Lab 1 Intro**	*Lab instructors*	Lab1_Instructions.pdf
Richard Smith's home (11 Cherry Lane; 338-6404)	*6:00 PM to 8:00 PM*	*BBQ Dinner*		

Day 2: Thursday, August 2

Location	Time	Title (click to listen to recording)	Instructor	Slides/Lab Instructions

Kelch Conference Room 1289 CBRB	8:00 AM to 9:00 AM	Quality Check / Quality Assessment of MPS Data, Sequence Capture Assessment (60 minutes) ***Recording contains first two Thursday morning lectures***	Andre Altmann	Lecture_20120802_Altmann_MPS_QC.pdf
Kelch Conference Room 1289 CBRB	9:00 AM to 9:50 AM	Read Alignment Algorithms (50 minutes) ***Recording contains first two Thursday morning lectures***	Tom Bair	IIHG_Bioinformatics_Course_alignment.pdf
	9:50 AM to 10:10 AM	*Break*		
Kelch Conference Room 1289 CBRB	10:10 AM to 11:10 AM	Variant Calling Algorithms – SNVs and indels, in pooled and non-pooled data sets (1 hour) ***Recording contains last two Thursday morning lectures***	Andre Altmann	Lecture_20120802_Altmann_MPS_SNPcall.pdf
Kelch Conference Room 1289 CBRB	11:10 AM to 12:10 PM	Detecting Copy Number Variants with MPS Data (1 hour) ***Recording contains last two Thursday morning lectures***	Alex S. Nord	ASN_CNV_20120731.pdf
EMRB Atrium	*12:10 PM to 1:00 PM*	*Lunch*		
Hardin Information Commons	1:00 PM to 5:00 PM	Lab Session 2: QC/QA of MPS data, Read Alignment, Variant Calling	*Lab Instructors*	Lab II-handout.pdf
		Dinner on your own.		

Day 3: Friday, August 3

Location	Time	Title (click to listen to recording)	Instructor	Slides/Lab Instructions
Kelch Conference Room 1289 CBRB	8:00 AM to 9:00 AM	Data Annotation and Filtering Overview (1 hour) ***Recording contains first two Friday morning lectures***	Alex S. Nord	ASN_Filtering_20120803.pdf
Kelch Conference Room 1289 CBRB	9:00 AM to 9:50 AM	Data management and data storage issues when dealing with NGS data sets (50 minutes) ***Recording contains first two Friday morning lectures***	Ben Rogers	BioinformaticsShortCourseDataManagementAndStorage.pptx
	9:50 AM to 10:10 AM	*Break*		
Kelch Conference Room 1289 CBRB	10:10 AM to 10:40 AM	Practical considerations for grants and budgets (30 minutes) ***Recording contains last two Friday morning lectures***	Ben Darbro	BioinformaticsCourseTalk.pdf
Kelch Conference Room 1289 CBRB	10:40 AM to 11:40 AM	Other Applications for MPS – RNASeq, Transcriptome, Methylome, etc. (1 hour) ***Recording contains first last Friday morning lectures***	Tom Bair	IIHG_Bioinformatics_other_tech-1.pdf
EMRB Atrium	*12:00 PM to 1:00 PM*	Lunch		
EMRB Atrium	*1:00 PM to 2:00 PM*	Breakout Sessions with Course Instructors -- Q & A		
Hardin Information Commons	2:00 PM to 5:00 PM	Lab Session 3: Annotating and Filtering Data Sets, Identifying Causal Variants, Exome Variant Data	*Lab Instructors*	LabSession3-overview.pdf annotation-explanation.pdf IIHG_Bioinformatics_Course-labsession3.pptx.pdf
	5:00 PM	Course Adjourns		