| Course Name | Date | Class | Topic |
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| PH20-20 | 26/02/2014 | COURSE PH1+2<br>(Intro + Genetics)<br><br>Formation of groups | Intro, setting the pace, homeworks and projects, concepts in molecular biology revisited |
| UA | 24/03/2014 | CLASS 1 | Setting the pace, class organization, homework organization.<br>Intro in genetic epidemiology |
| UA | 25/03/2014 | CLASS 2 | Population genetics: basic concepts |
| PH20-20 | 26/03/2014 | COURSE PH3+4<br>(GWAs) | Genetic epidemiology; what is it and what is it not? Basic concepts in population genetics<br><br>Assignment 1 (due 23/4) |
| UA | 27/03/2014 | CLASS 3 | Genetic association studies: basic concepts |
| UA | 28/03/2014 | CLASS 4 | Genetic association studies: an example for unrelated individuals |
| UA | 31/3/2014 | CLASS 5 | Genetic association studies: an example for related individuals |
| UA | 1/04/2014 | CLASS 6 | Traveling a world of interactions: the body as a system |
| PH20-20 | 02/04/2014 | COURSE PH5+6<br>(GWAs) | Primer on genetic association studies |
| UA | 4/4/2014 | CLASS 7 | Genetic epidemiology: Public health or personalized medicine oriented?<br><br>Open discussion via paper reading |
| PH20-20 | 23/04/2014 | COURSE PH7+8<br><br>Recap class | Group presentations of HW1<br><br>Genomewide association studies: theory and practice; promise and limitations |
| UA | 25/4/2014 | CLASS 8 | Presentation of Project |
| PH20-20 | 7/05/2014 | COURSE PH9+10<br>(Incorporating environment + cellular complexity) | The genetic epidemiology of interactions, focus on gene-gene interactions<br><br>Assignment 2 (due 28/5) |
| PH20-20 | 14/5/2014<br>(or 15/5/2014) | COURSE PH11+12<br>(Incorporating environment + cellular | The genetic epidemiology of interactions, focus on gene-environment interactions |

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| | | complexity) | |
| UA | 27/5/2014 | EXAM | EXAM |
| PH20-20 | 28/5/2014 | COURSE PH13+14 | Group presentations of HW2<br><br>Adding data and analysis complexity to main effects GWAs |
| PH20-20 | 13/6/2014 | Recap class<br>EXAM | EXAM |
| *BIOINF15-15* | *05/03/2013* | *COURSE 1+2*<br><br>*Assignments: split up the work and generate one report per group* | *Intro, setting pace, **epidemiology** in R –concepts in epidemiology (finding resources), highlight the variation in available tools such as the FBAT **software**, R SNPassoc and GenABEL, PLINK*<br>*Assignment1: e.g., what are the key properties of these software packages* |
| *BIOINF15-15* | *19/03/2013* | *COURSE 3+4* | *Quality control: genome-wide association studies, confounders, environmental effect modificators (i.e., quality control of environmental constructs)*<br>*Assignment 2: Compare quality control measures in PLINK with those available via GenABEL (or R in general), look up the theory behind, report, discuss + when using the same QC-ed data, perform an association study in GenABEL and PLINK (compare the results, are they different or the same and why?)* |
| *BIOINF15-15* | *15/04/2013* | *COURSE 5+6* | *Pedigrees or not? (linkage versus association, family-based association tests, families and next generation sequencing)*<br>*Showcase in class of how FBAT works*<br>*Assignment 3: Perform a GenABEL analysis and compare with results obtained from FBAT, report and discuss* |
| *BIOINF15-15* | *29/04/2013* | *COURSE 7+8* | *Genome-wide association interaction analysis: theory with MB-MDR* |

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| | | | *Assignment 4: Perform a gene-gene interaction analysis using GenABEL and interpret your findings (annotate)* |