Week	Module	Session	Date	Time	Topics	Assignment
1						Pre-course evaluation
	Introductory	1	17-Aug	13-14:30	Introduction to computational biology and class logistics	
2		2	21-Aug	13-14:30	Statistics and computational thinking I	
		3	24-Aug	13-14:30	Statistics and computational thinking II	Problem set 1
3	Genomics	4	28-Aug	13-14:30	Principles and applications of DNA sequencing	
		5	31-Aug	13-14:30	DNA sequencing data processing strategies	
4		6	4-Sep	13-14:30	Sequence alignment and homology	Problem set 2
		7	7-Sep	13-14:30	Phylogenetics and molecular evolution	
5		8	11-Sep	13-14:30	Metagenomics	
	Transcriptomics	9	14-Sep	13-14:30	Transcriptomics technology	
6		10	18-Sep	13-14:30	Tabular gene expression data analysis with Excel	Problem set 3
		11	21-Sep	13-14:30	RNA-seq data processing strategies	
7		12	25-Sep	13-14:30	Differential expression analysis with R	
		13	28-Sep	13-14:30	Functional enrichment analysis with online tools	Problem set 4
8	Single-cell	14	2-Oct	13-14:30	Single-cell omics	
		15	5-Oct	13-14:30	Single-cell transcriptomics analysis on Google Colab	
9	Advanced topics	16	9-Oct	13-14:30	Principles of proteomics with mass spectrometry	
		17	12-Oct	13-14:30	Protein database search with MaxQuant	Problem set 5
10		18	16-Oct	13-14:30	Biological networks	
		19	19-Oct	13-14:30	Visualizing biological networks with CytoScape	Problem set 6
11		20	23-Oct			
		21	26-Oct	13-14:30	Probing chromatin conformation	
12		22	30-Oct	13-14:30	Dynamics modeling for systems biology	
		23	2-Nov	13-14:30	Useful online resources and databases	Problem set 7
13	Python programming	24	6-Nov	13-14:30	Python programming	
		25	9-Nov	13-14:30	Data handling with pandas and numpy	Problem set 8
14		26	13-Nov	13-14:30	Data visualization with matplotlib and seaborn	
		27	16-Nov	13-14:30	Statistical inference with scipy	Problem set 9
15	Machine learning	28	20-Nov	13-14:30	Principles of machine learning	
		29	23-Nov	13-14:30	Dimensionality reduction and clustering	Problem set 10
16		30	27-Nov	13-14:30	Building predictive models	
		31	30-Nov	13-14:30	Introduction to deep learning in life sciences	Post-course evaluation
17		32	4-Dec			
		33	7-Dec			