

<b>Week 14</b>			<b>Monday (31/3)</b> E10:3309 BMC	<b>Tuesday (1/4)</b> E10:3309, BMC	<b>Wednesday (2/4)</b> Rita Levi-Montalcini, Rudbeck vån 3, C11/R4	<b>Thursday (3/4)</b> E10:3309, BMC	<b>Friday (4/4)</b> E10:2309, BMC
	9:00 - 10:00	Optional: Exercise supervision and QA		Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA
	10:15 - 12:00	Lectures	M1: Course overview. Introduction to Python programming.	M1: The Python standard library, containers, loops, functions and classes.	M2: Numpy and numerical arrays. Plotting matplotlib.	M2: Summary statistics and statistical tests. Importing data using Pandas.	M2: Linear, nonlinear and logistic regression.
	13:15 - 15:00	Supervised computer exercises	M1: Installation of Python interpreter. Writing first python scripts.	M1: Introductory programming exercises.	M2: Loading, saving, manipulating and plotting tabular and 1D data.	M2: Exercises in computing summary statistics and statistical tests.	M2: Exercises on using regression methods.
<b>Week 15</b>			<b>Monday (7/4)</b>	<b>Tuesday (8/4)</b>	<b>Wednesday (9/4)</b> E10:2309, BMC	<b>Thursday (10/4)</b> E10:3309, BMC	<b>Friday (11/4)</b> E10:3309, BMC
	9:00 - 10:00	Optional: Exercise supervision and QA			Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA
	10:15 - 12:00	Lectures			M3: High dimensional data in biomedical research. <b>Linear algebra for data analysis.</b> Plotting 2D and 3D data with matplotlib.	M3: Data clustering.	M3: Principal component analysis (PCA) and linear dimensionality reduction.
	13:15 - 15:00	Supervised computer exercises			M3: Exercises in linear algebra and working with and plotting higher dimensional data.	M3: Exercises in data clustering.	M3: Exercises in applying PCA.

			Monday (14/4) E10:3309, BMC	Tuesday (15/4) E10:3309, BMC	Wednesday (16/4) E10:2309	Thursday (17/4)	Friday (18/4)
<b>Week 16</b>	9:00 - 10:00	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	<b>Easter</b>	<b>Easter</b>
	10:15 - 12:00	Lectures	M3: Manifold learning and non-linear dimensionality reduction.	M3: Data preprocessing, support vector machines and random forests. Historical perspective on AI and neural networks.	M4: Digital image processing and analysis.		
	13:15 - 15:00	Supervised computer exercises	M3: Exercises in applying manifold learning, t-SNE and UMAP.	M3: Exercises in using support vector machines and random forests for classification and regression.	M4: Loading, manipulating and plotting images using scikit-image, simpleITK and matplotlib.		
<b>Week 17</b>			Monday (21/4)	Tuesday (22/4) E10:2309, BMC	Wednesday (23/4) E10:3309, BMC	Thursday (24/4) Rita Levi-Montalcini, Rudbeck vån 3, C11/R4	Friday (25/4) E10:3309, BMC
	9:00 - 10:00	Optional: Exercise supervision and QA	<b>Easter</b>	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA
	10:15 - 12:00	Lectures		M4: Neural networks and deep learning	M4: Deep learning for image analysis.	10:00 - 11:00 Guest lecture: Precision medicine (Åsa Johansson, IGP)	10:00 - 11:00 Guest lecture: AI (Thomas Schön, IT)
13:15 - 15:00	Supervised computer exercises	M4: Exercises on using neural networks to perform regression and classification tasks with pytorch.		M4: Exercises on using deep neural networks to perform image analysis tasks with pytorch.	Optional: Exercise supervision and QA (Barbara McClintock, Rudbeck)	Optional: Exercise supervision and QA	

<b>Week 18</b>			<b>Monday (28/4)</b> E10:3309, BMC	<b>Tuesday (29/4)</b> E10:3309, BMC	<b>Wednesday (30/4)</b>
	9:00 - 10:00	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA	<b>Valborg</b>
	10:15 - 12:00	Lectures	Summarizing lecture	Example exam and QA	
13:15 - 15:00	Supervised computer exercises	Optional: Exercise supervision and QA	Optional: Exercise supervision and QA		

Sometime in May
<b>Exam</b>