Course organisation: Lecture content

1	26.10.21	Introduction	
2	2.11.21	VL1	Basic Anatomy of the Electron Microscope; Electron Guns; EM Lenses; Detectors; Visit to the microscope @ 9am
3	9.11.21	VL2	Electron Column; Sample Chamber; Energy Filters; Vacuum System; Safety
4	16.11.21	VL3	Image Formation- Amplitude and Phase Contrast; Wave Propagation and Phase Shifts
5	23.11.21	VL4	Contrast Transfer Function; Defocus and its Effects
6	30.11.21	VL5	Envelopes and CTF Correction
7	7.12.21	VL6	Fundamental Challenges in Biological TEM- Sample Preparation; Room Temperature Methods and Methods Involving Freezing; Grids
8	14.12.21	VL7	3D Reconstruction and Dose Limitations
9	04.01.22	VL8	Tomography; Identifying Objects of Interest
10	11.01.22	VL9	Tomography- Data Collection and 3D Reconstruction; Limitations
11	18.01.22	VL10	Single Particle Analysis; SPA Sample Preparation and Data Collection
12	25.01.22	VL11	SPA Reconstruction; Basic Workflow; Interpretations and Limitations
13	01.02.22	VL12	2D Crystallography, Data Collection and Reconstruction
14	8.02.22	VL13	What's new since 2015? Techniques and software developments.
15	15.02.22	VL14	How to plan a cryo EM experiment. Introduction into cellular complexes.