

# MSE-735

24.11.2025

25.11.2025

26.11.2025

MED01618	
	<b>Introduction/Welcome</b>
10:00	<b>Introduction to STEM</b>
10:15	basics Signals, ADF/BF/HAADF Z-contrast, resolution
12:00	EO

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	<b>Cs-TEM vs Cs-STEM</b>
08:30	VB
09:30	pause
09:45	<b>Phase contrast imaging</b>
	HRTEM Simulations, NCSI MC
10:30	<b>practical: TEM image simulations, with JEMS</b>
	building a model, importing a CIF simulating diffraction patterns SAED, HRTEM MC
11:30	

Group 1		Group 2	
	<b>DEMO</b>		<b>DEMO</b>
09:00	STEM, EDX	08:30	Cs-TEM, Cs-STEM holography or DPC or EELS
10:00	Osiris: MXC.030	10:00	Themis: MXC.012
10:30	<b>DEMO</b>	10:30	<b>DEMO</b>
	Cs-TEM, Cs-STEM holography or DPC or EELS		STEM, EDX
12:00	Themis: MXC.012	11:30	Osiris: MXC.030

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	<b>EELS basics</b>
13:15	DR
14:15	pause
14:30	<b>STEM analysis beyond imaging using a pixelated detector</b>
	DPC 4D-STEM
16:30	VB

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	<b>practical: STEM image simulations with Dr. Probe software</b>
13:15	VB
14:15	<b>Field measurement in a TEM</b>
	Holography Lorentz-microscopy
15:00	pause
15:15	<b>advanced EDX microanalysis</b>
	artifacts, quantification
16:15	MC
16:15	<b>Tomography</b>
17:00	MC

Osiris  
DR

Themis  
VB

EO Emad Oveisi  
DR David Reyes  
VB Victor Boureau  
MC Marco Cantoni