


EMBO Course on Image Processing for Cryo EM – Sep 1 - Sept 11, 2015– Timetable (ver 10/08/2015)

	9:30 –10:45	11:15-12:30	13:00-14:00	14:00-17:30	18:00-19:00	19:15-21:00
1 Tues				15:00 Overview of the course; Introduce all people E. Orlova, H. Saibil, P. Rosenthal 16:00 <u>Lecture 1</u> <i>EM preparation methods</i> Carolyn Moores	Dinner	Guest lecture 1 John Rubinstein
2 Wed	<u>Lecture 2</u> <i>Basic concepts of Fourier analysis, Concepts of convolution, and correlation</i> Paula da Fonseca	<u>Lecture 3</u> <i>Principles of TEM image formation</i> Peter Rosenthal	Lunch	Practical 1 <i>General principles of image processing: EMAN2.1, defocus determination, particle picking</i> Instructors: H.Saibil, N. Lukoyanova	Dinner	Poster Session, first group
3 Thurs	<u>Lecture 4</u> <i>Image acquisition, noise, particle detection, alignment</i> Helen Saibil	<u>Lecture 5</u> <i>Point group symmetries</i> Elena Orlova	Lunch	Practical 2 Relion Instructors: S. Scheres & G. Zanetti	Dinner	Guest lecture 2 David Bhella
4 Fri	<u>Lecture 6</u> <i>Contrast transfer & CTF correction</i> Helen Saibil	<u>Lecture 7</u> <i>MSA & classification of single particles</i> Dan Clare	Lunch	Practical 3 Relion Instructors: S. Scheres & G. Zanetti	Dinner	Guest lecture 3 Sriram Subramaniam
5 Sat	<u>Lecture 8</u> <i>Methods for determination of angular orientations.</i> Elena Orlova	<u>Lecture 9</u> <i>Reconstruction principles and Tomography strategy</i> Kay Grünewald	Lunch	Practical 4: (IMOD (tomography)) Instructors: Dan Clare	Dinner	Selected student talks (3)
6 Sun	Free day			Group excursion London Eye at 5:30 pm	Course dinner at 7:30 pm	
7 Mon	<u>Lecture 10</u> <i>Methods of 3D reconstructions</i> Sarah Butcher	<u>Lecture 11</u> <i>Validation of 3D EM reconstructions, assessment of resolution</i> Peter Rosenthal	Lunch	Ben Bammes Direct Detectors	Practical 5 <i>MSA+Angrec(IMAGIC)</i> Instructors: E. Orlova & M. Carroni	Dinner Poster Session, second group
8 Tues	<u>Lecture 12</u> <i>Image detectors</i> Paul Mooney (Gatan)	<u>Lecture 13</u> <i>High resolution structures</i> Wah Chiu	Lunch	Leica R. Ranner Ion beam surfacing	Practical 6 <i>3D reconstruction (IMAGIC)</i> Instructors: E. Orlova, & M. Carroni	Dinner Guest lecture 4 Gabriel Waksman
9 Wed	<u>Lecture 14</u> <i>Interpretation of maps, docking of atomic structures .</i> Maya Topf	<u>Guest lecture 15</u> Venki Ramakrishnan	Lunch	Jeol A. Yarwood	Practical 7 Fitting (<i>Chimera</i>) Instructors: M. Topf.	Dinner Guest lecture 6 Bridget Carragher
10 Thurs	<u>Lecture 16</u> <i>Cs-correctors</i> Felix de Haas (FEI)	<u>Guest lecture 17</u> Richard Henderson	Lunch	Practical 8 <i>Coot.</i> Instructors: Paul Emsley	Dinner	Selected student talks (3)
11 Fri	<u>Lecture 18</u> <i>Data deposition</i> Ardan Patwardhan	Questions, Suggestions, Summary Departure after lunch	Lunch			