Lecture
Practical
Other
Break/Meal
Bus

Start period	Sat, 30 Nov 2019	Sun, 1 Dec 2019	Mon, 2 Dec 2019	Tue, 3 Dec 2019	Wed, 4 Dec 2019	Thu, 5 Dec 2019	Fri, 6 Dec 2019	Sat, 7 Dec 2019	Sun, 8 Dec 2019
	ARRIVAL	**INTRO**	**DATA COLL**	**DATA PROC**	**EXP PHASING**	**MR**	**MR/BUILDING**	**BUILDING/REFINEMENT**	**VALIDATION**
		CHAIR AM: K. McAuley	**CHAIR AM: N/A**	**CHAIR AM: E. Beale**	**CHAIR AM: J. Beilsten-Edman**	**CHAIR AM: J. Parkhurst**	**CHAIR AM: M. Mazzorana**	**CHAIR AM: D. Waterman**	**CHAIR AM: D. Waterman**
08:30									
08:45		Registration							
09:00		Welcome to the course, and CCP4 roadmap E. Krissinel	ISPyB & register samples P. Aller	Assessing data quality K. Diederichs	Pathologies and pseudosymmetry A. Lebedev	MX from an Industrial Perspective A. Powell	MR model selection, preparation and assessing the solution R. Keegan	ARP/wARP G. Chojnowski	PISA E. Krissinel
09:15									
09:30									
09:45		MX @ Diamond K. McAuley	DATA COLLECTION (3 SHIFTS) PROCESSING TUTORIALS		SHELX for EP I. Sikharulidze (for T. Grüne)	An introduction to Coot 0.9 P. Emsley	Advanced molecular replacement M. Isupov	REFMAC O. Kovalevskiy	Machine Learning M. Vollmar
10:00				Data reduction J. Beilsten-Edmands					
10:15									
10:30		Optimising the Diamond experience D. Lawson			Crank2 P. Skubak	MR introduction and theory M. Isupov	DM K. Cowtan	Model validation and optimisation R. Joosten	CCP4MG S. McNicholas
10:45									
11:00									
11:15		Data collection strategies D. Aragao		Introduction to space groups and twinning A. Lebedev	Bioinformatics for structural biologists D. Rigden	Combined Likelihood MR/SAD in Phaser: Part 1 A. McCoy	Model Building K. Cowtan		
11:30									
11:45									
12:00									
12:15		LUNCH Atrium	LUNCH Atrium	LUNCH DLS Coffee Lounge	LUNCH Atrium	LUNCH DLS Coffee Lounge	LUNCH Atrium	LUNCH Atrium	LUNCH Atrium
12:30									
12:45									
		CHAIR PM: D. Hall	**CHAIR PM: N/A**	**CHAIR PM: D. Axford**	**CHAIR PM: K. McAuley**	**CHAIR PM: E. Krissinel**	**CHAIR PM: K. Stevenson**	**CHAIR PM: V. Uski**	**CHAIR PM: M. Vollmar**
13:00		Getting the best from photon counting detectors A. Förster	DATA COLLECTION (3 SHIFTS) PROCESSING	The phase problem E. Lowe	SHARP C. Vonrhein	Combined Likelihood MR/SAD in Phaser: Part 2 A. McCoy	Advanced Coot and ligand fitting P. Emsley	Refinement practicals / work with your own data	General practical session / finish off your projects
13:15									
13:30									
13:45		Data proc with DIALS Nick Devenish		Experimental phasing case studies P. Salgado	EP practicals / work with your own data	MR tutorials	Ligands tutorial (Coot, dictionary, AceDRG, validation) P. Emsley		
14:00									
14:15									
14:30		Data proc with XDS K. Diederichs		Data processing practicals / work with your own data					
14:45						Electron diffraction E. Beale (for T. Grüne)	BUSTER C. Vonrhein		
15:00									
15:15		Cryocrystallography E. Lowe (for E. Garman)							
15:30				COFFEE - DLS Lounge	COFFEE	COFFEE - DLS Lounge	COFFEE	COFFEE	COFFEE
15:45				I24 S. Storm		I23 R. Duman	XFEL Hub A. Butryn	VMXi J. Sanchez-Weatherby	cryoEM C. Palmer
16:00		COFFEE							
16:15		HANG POSTERS							
		CHAIR EVE: M. Vollmar	**CHAIR EVE: N/A**	**CHAIR EVE: F. Bertram**	**CHAIR EVE: B. Williams**	**CHAIR EVE: F. Bertram**	**CHAIR EVE: N/A**	**CHAIR EVE: N. Devenish**	**CHAIR EVE: M. Vollmar**
16:30		Radiation damage R. Owen (for E. Garman)		Data processing tutorials (data reduction / quality stats /multiple datasets)			FREE TIME WANTAGE DICKENSIAN EVENING	Crystallisation facility H. Mikolajek	Wrap up and feedback: Student 5 mins talks "what have I learned?"
16:45									
17:00	Arrival								
17:15		Poster session & drinks - Atrium							
17:30									
17:45									
18:00									
18:15									
18:30									
18:45									
19:00		DINNER - Atrium	DINNER - RAL restaurant	DINNER - RAL restaurant	DINNER - RAL restaurant	DINNER - RAL restaurant	SPEAKERS MEAL	DINNER - RAL restaurant	WORKSHOP DINNER Wildwood Wantage
19:15									
19:30									
19:45									
20:00			DATA COLLECTION (3 SHIFTS) PROCESSING	FREE TIME	hands on	hands on		hands on	
20:15									
20:30									
20:45									
21:00									