Start period	Sat, 1 Dec 2018	Sun, 2 Dec 2018	Mon, 3 Dec 2018	Tue, 4 Dec 2018	Wed, 5 Dec 2018	Thu, 6 Dec 2018	Fri, 7 Dec 2018	Sat, 8 Dec 2018	Sun, 9 Dec 2018
	ARRIVAL	**INTRO**	**DATA COLL**	**DATA PROC**	**EXP PHASING**	**PHASING 2**	**MR**	**BUILDING/REFINEMENT**	**VALIDATION**
		CHAIR AM: K. McAuley	**CHAIR AM: M. Mazzorana**	**CHAIR AM: J. Parkhurst**	**CHAIR AM: S. Storm**	**CHAIR AM: K. Stevenson**	**CHAIR AM: A. Douangamath**	**CHAIR AM: S. Storm**	**CHAIR AM: M. Vollmar**
08:30									
08:45	Lecture Practical Other Break/Meal Bus	Registration							
09:00		Welcome to the course, and CCP4 roadmap D. Waterman	Data collection strategies R. Flaig	Data processing practicals / work with your own data	The phase problem G. Leonard	MX from an Industrial Perspective A. Powell	MR model selection, preparation and assessing the solution R. Keegan	Free time	PISA E. Krissinel
09:15									
09:30									
09:45		MX @ Diamond K. McAuley	DATA COLLECTION (3 SHIFTS) PROCESSING TUTORIALS		Pathologies and pseudosymmetry A. Lebedev	An introduction to Coot A. Casañal	Advanced molecular replacement M. Isupov	REFMAC G. Murshudov	Deposition J. Berrisford
10:00									
10:15	Self-service coffee available each morning until lunch								
10:30		Optimising the Diamond experience D. Lawson			SHELX for EP A. Thorn	MR introduction and theory M. Isupov	Phasing tutorials	ARP/wARP G. Chojnowski	CCP4MG S. McNicholas
10:45									
11:00									
11:15		ISPyB & register samples P. Aller			How do I know if my phasing experiment has worked? G. Leonard	Combined Likelihood MR/SAD in Phaser: Part 1 A. McCoy		Advanced Coot and ligand fitting P. Emsley	Model validation and optimisation R. Joosten
11:30									
11:45									
12:00			LUNCH RAL restaurant	LUNCH Atrium	LUNCH Atrium	LUNCH Atrium	LUNCH Atrium	LUNCH Atrium	LUNCH Atrium
12:15									
12:30		LUNCH Atrium							
12:45									
		CHAIR PM: D. Waterman		**CHAIR PM: J. Beale**	**CHAIR PM: D. Waterman**	**CHAIR PM: L. Fuentes-Monte**	**CHAIR PM: R. Keegan**	**CHAIR PM: L. Fuentes-Monte**	**CHAIR PM: L. Fuentes-Monte**
13:00		Data proc with DIALS J. Beilsten-Edmands	DATA COLLECTION (3 SHIFTS) PROCESSING	Assessing data quality K. Diederichs	SHARP C. Vonrhein	Combined Likelihood MR/SAD in Phaser: Part 2 A. McCoy	BUSTER C. Vonrhein	Ligands tutorial (Coot, dictionary, AceDRG, validation) P. Emsley / A. Casañal	General practical session / finish off your projects
13:15									
13:30									
13:45					Crank2 P. Skubak	DM K. Cowtan	BUSTER tutorial		
14:00		Data proc with XDS K. Diederichs		Data reduction P. Evans				Refinement practicals / work with your own data	
14:15									
14:30					EP practicals / work with your own data	Model Building K. Cowtan	MR practicals / work with your own data		
14:45									
15:00		Getting the best from photon counting detectors A. Förster							
15:15									
15:30									
15:45		Cryocrystallography E. Garman		COFFEE TALK VMXm - A. Warren	COFFEE TALK AUSPEX - A. Thorn	COFFEE TALK I23 - R. Duman	COFFEE TALK DIALS as LEGO - B. Williams	COFFEE TALK Machine learning - M. Vollmar	COFFEE BREAK
16:00									
16:15									
16:30		COFFEE BREAK/HANG POSTERS - Atrium		Data processing tutorials (data reduction / quality stats /multiple datasets)					Wrap up and feedback: "what have I learned?"
16:45									
17:00	Arrive at Ridgeway guesthouse								
17:15		Radiation damage E. Garman					FREE TIME / BUS TO OXFORD		
17:30									
17:45									
18:00		Poster session & drinks - Atrium		Introduction to space groups and twinning A. Thorn					
18:15									
18:30									
18:45									
19:00		DINNER - Atrium	DINNER - RAL restaurant	DINNER - RAL restaurant	DINNER - RAL restaurant	DINNER - RAL restaurant		DINNER - RAL Restaurant	WORKSHOP DINNER - The Berro Lounge - Didcot
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									