



SCIENTIFIC PROGRAMME

Teaching Course on

Dose Modelling and Verification for External Beam Radiotherapy

Day 1	Sunday 9 March	
	Introduction	
09:00 - 09:15	Introduction to course and faculty	TK/BMcC
09:15-10:00	Basic concepts	GH
10:00 - 10:30	Convolution/superposition	GH
10:30 - 11:00	Coffee	
	Input Data	
11:00 - 12:00	Linac head design	JO
12:00 - 13:00	Multisource models	AA
13:00 - 14:00	Lunch	
14:00 - 14:45	Patient characterisation	BMcC
14:45 - 15:30	Phantoms	MMA
15:30 - 16:00	Coffee	
	Modelling 1	
16:00 - 16:45	Point kernels	AA

Day 2	Monday 10 March	
	Modelling 1 (continued)	
09:00 - 09:45	Pencil kernels	JO
09:45 - 10:10	Grid Based approaches	AA
10:10 - 10:30	Preparatory lecture for modeling exercises	AA
10:30 -11:00	Coffee	
11:00 - 11:45	Relative dose away from reference conditions	GH
11:45 - 12:30	Detectors for measurement; The best detector for different jobs. Part 1: Detectors	
12:30 - 13:30	Lunch	
	Verification 1	
13:30 - 14:15	Detectors for measurement; The best detector for different jobs. Part 2: 2D/3D detectors	NJ
14:15 -15:00	Uncertainties in our measurements	JO
14:45 - 15:15	Coffee	
	Modelling 2	

15:15 - 16:00	How is collected data used in the Beam Model?	TK
16:00 - 16:45	Small fields	MMA

Day 3	Tuesday 11 March	
	Modelling 2 (continued)	
09:00 - 09:45	Electrons modelling	TK
09:45 - 10:30	Factor based MU calculations	BMcC
10:30 - 11:00	Coffee	
11:00 - 12:00	MU Calculation Workshop 1	GH/MMA/JO
12:00 - 13:00	MU Calculation Workshop 2	GH/MMA/JO
	Free Afternoon	

Day 4	Wednesday 12 March	
	Verification 2	
09:00 - 10:00	Methods for data comparison	TK
10:00 - 11:00	Commissioning, performance and periodic TPS tests	BMcC
11:00 - 11:30	Coffee	
11.30 - 12:15	DVH and dose based metrics	BMcC
12:15 - 12:45	Out of field dose modelling	AA
12:45 - 13:00	Preparation for Modelling exercises	All
	Modelling 3	
13:00 - 14:00	Lunch	
14:00 - 15:00	Practical on Modelling 1	AA/MMA
15:00 - 15:30	Coffee	
15:30 - 16:30	Practical on Modelling 2	AA/MMA

Day 5	Thursday 13 March	
09:00 - 09:45	In-vivo dosimetry	NJ
09:45 - 10:15	Margins in dose calculation	AA
10:15 - 10:45	Coffee	
10:45 - 11:30	Guest LECTURE	
11:30 - 13:00	Questions and answers session	All