

SCIENTIFIC PROGRAMME

Course Directors

Tommy Knöös
Brendan McClean

Faculty

Anders Ahnesjö
Maria Mania Aspradakis
Crister Ceberg
Núria Jornet

DAY 1 – SATURDAY 4 MARCH

Time	Lecture	Speaker
Introduction		
09:00 – 09:30	Introduction to course and Faculty	Tommy Knöös & Brendan McClean
09:30 – 10:30	Basic concepts, definitions, cavity theory, convolution, superposition ray trace, fluence and the Boltzmann transport equation, etc.	Crister Ceberg
Input Data		
10:30 – 11:00	Practical on Basic Concepts	Crister Ceberg & Anders Ahnesjö, All
11:00 – 11:30	<i>Coffee break</i>	
11:30 – 12:30	Linac head design	Tommy Knöös
12:30 – 13:30	Multisource models part I	Anders Ahnesjö
13:30 – 14:30	<i>Lunch</i>	
14:30 – 15:30	Multisource models part II	Anders Ahnesjö
15:30 – 16:40	MU calculations – factor-based model incl. calculation examples	Maria Mania Aspradakis
16:40 – 17:10	<i>Coffee break</i>	

DAY 2 – SUNDAY 5 MARCH

Time	Lecture	Speaker
09:00 – 09:30	Recap and MCQ for Sunday lectures	
09:30 – 10:30	Dose measurements; Part 1 The best detector for different jobs –detectors for input data collection	Núria Jornet
10:30 – 11:15	Small fields: Measurement challenges	Maria Mania Aspradakis
11:15 – 11:45	<i>Coffee break</i>	
Modelling		
11:45 – 12:45	Point Kernels for dose calculations	Anders Ahnesjö
12:45 – 13:25	Pencil Kernels for dose calculations	Anders Ahnesjö
13:25 – 14:30	<i>Lunch</i>	
14:30 – 15:10	Deterministic solution of the Boltzmann Linear Transport equation – A Numerical Grid Based Approach	Crister Ceberg
15:10 – 15:50	Electron modelling I	Tommy Knöös
15:50 – 16:30	Electron modelling II incl. Monte Carlo	Tommy Knöös
16:30 – 17:00	<i>Coffee break</i>	
17:00 – 17:30	Guest Lecture -Modelling of TG in TP systems	n/a

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DAY 3 – MONDAY 6 MARCH

Time	Lecture	Speaker
09:00 – 09:30	Recap and MCQ for Monday lectures	
09:30 – 10:15	Patient Modelling	Brendan McClean
10:15 – 11:00	Dose to medium and/or water – review of management in common TPS	Tommy Knöös
11:00 – 11:30	<i>Coffee break</i>	
11:30 – 12:15	Clinical examples and comparisons of different approaches	Crister Ceberg
12:15 – 12:45	MU calculations in some TPSs	Maria Mania Aspradakis
12:45 – 13:15	Out of field dose	Brendan McClean
13:15 – 14:15	<i>Lunch</i>	
14:15 – 15:00	Uncertainties and action levels	Brendan McClean
15:00 – 16:00	Dose measurements; Part 2 The best detector for different jobs – detectors for verification measurements	Núria Jornet
16:00 – 16:30	<i>Coffee break</i>	

DAY 4 – TUESDAY 7 MARCH

Time	Lecture	Speaker
09:00 – 09:30	Recap and MCQ for Tuesday lectures	
09:30 – 10:15	Methods for Data Comparison - TG 218	Tommy Knöös
10:15 – 10:45	<i>Coffee break</i>	
10:45 – 11:45	Small fields	Maria Mania Aspradakis
11:45 – 12:30	Phantoms for verification and PSQA	Crister Ceberg
12:30 – 13:30	<i>Lunch</i>	
13:30 – 15:30	Practical exercises I – Measurements, modelling, verification, and PSQA	All
15:30 – 16:00	<i>Coffee break</i>	
16:00 – 17:30	Practical exercises II – Measurements, modelling, verification, and PSQA	All

DAY 5 – WEDNESDAY 8 MARCH

Time	Lecture	Speaker
<i>Summing up</i>		
09:00 – 09:30	Recap and MCQ for Wednesday lectures	
09:30 – 10:15	PSQA including in-vivo dosimetry, EPID...	Núria Jornet
10:15 – 10:45	<i>Coffee break</i>	
10:45 – 12:30	Summing up the course using a practical example of commissioning SBRT	All
12:30 – 13:00	Final Course Recap	All