

Fundamentals of Diagnostic Imaging (CLSC-5102)

Course Calendar, Summer 2011

DATE	TOPIC
WEEK 1	
May 10	Course introduction and overview; the black box approach; case scenarios; history of diagnostic imaging
May 11	Review of physics concepts including matter, energy, electricity, magnetism and radiation
WEEK 2	
May 17	The big picture – starting with the end in mind; describing radiographs and imaging lexicon
May 18	The controlling factors, mAs and kVp, and how they affect the films
WEEK 3	
May 24	The tube – anatomy and cathode processes
May 25	The tube – anode processes and connecting back to the big picture
WEEK 4	
May 31	The generator – purpose and types
June 1	The generator – effect of type on dose and connecting back to the big picture
WEEK 5	
June 7	The subject – interactions with matter and differential absorption
June 8	The subject – subject contrast and connecting back to the big picture
WEEK 6	
June 14	The film and screen – image formation and intensifying screens
June 15	The processor – film processing and connecting back to the big picture
WEEK 7	
June 21	The extras – collimation, grids, filtration and beam hardening
June 22	The extras – geometric distortion and magnification, penumbra and image quality
WEEK 8	
June 28	In-class Exercise
June 29	Review for midterm exam
July 1	Midterm exam (7 AM)
WEEK 9	
July 5	Discuss midterm exam
July 6	Radiobiology and radiation protection
WEEK 10	
July 12	Digital x-ray imaging – computed radiography (CR) and digital radiography (DR)
July 13	Introduction to cross-sectional imaging and computed tomography (CT)
WEEK 11	
July 19	Introduction to magnetic resonance imaging (MR)
July 20	MR imaging continued

WEEK 12	
July 26	Nuclear medicine – radiotracers, scintigraphy and single photon emission computed tomography (SPECT)
July 27	Nuclear medicine – positron emission tomography (PET)
WEEK 13	
August 2	Ultrasound
August 3	Application of diagnostic imaging in clinical practice (case scenarios)
WEEK 14	
August 9	Review for final exams
August 10	Review for final exams
August 12	Final practical exam (7 AM)
WEEK 15	
August 15	Final written exam (11 AM)

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