Fundamentals of Diagnostic Imaging (CLSC-5102)

Course Calendar, Fall 2011

DATE	TOPIC
WEEK 1	
September 6	Course introduction and overview; history of diagnostic imaging
September 7	Review of physics concepts including matter, energy, electricity, magnetism and radiation
WEEK 2	
September 13	The big picture – starting with the end in mind; describing radiographs and imaging lexicon
September 14	The controlling factors, mAs and kVp, and how they affect the films
WEEK 3	
September 20	The tube – anatomy and cathode processes
September 21	The tube – anode processes and connecting back to the big picture
WEEK 4	
September 27	The generator – purpose and types
September 28	The generator – effect of type on dose and connecting back to the big picture
WEEK 5	
October 4	The subject – interactions with matter and differential absorption
October 5	The subject – subject contrast and connecting back to the big picture
WEEK 6	
October 11	The film and screen – image formation and intensifying screens
October 12	The processor – film processing and connecting back to the big picture
WEEK 7	
October 18	The extras – collimation, grids, filtration and beam hardening
October 19	The extras – geometric distortion and magnification, penumbra and image quality
WEEK 8	
October 25	In-class Exercise
October 26	Review for midterm exam
October 28	**Midterm exam (7 AM)**
WEEK 9	
November 1	Discuss midterm exam
November 2	Radiobiology and radiation protection
WEEK 10	
November 8	Digital x-ray imaging – computed radiography (CR) and digital radiography (DR)
November 9	Introduction to cross-sectional imaging and computed tomography (CT)
WEEK 11	
November 15	Introduction to magnetic resonance imaging (MR)
November 16	MR imaging continued

WEEK 12	
November 22	Nuclear medicine – radiotracers, scintigraphy and single photon emission computed tomography (SPECT)
November 23	Nuclear medicine – positron emission tomography (PET)
WEEK 13	
November 29	Ultrasound
November 30	Application of diagnostic imaging in clinical practice (case scenarios)
WEEK 14	
December 6	Review for final exams
December 7	Review for final exams
December 9	**Final practical (7:30 AM)**
WEEK 15	
December 12	**Final exam (11 AM)**

The course director reserves the right to make changes to this document, at any time, with or without notice.