Fundamentals of Diagnostic Imaging (CLSC-5102)

Course Calendar, Spring 2012

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

WEEK 12	
March 27	Nuclear medicine – radiotracers, scintigraphy and single photon emission computed tomography (SPECT)
March 28	Nuclear medicine – positron emission tomography (PET)
WEEK 13	
April 3	Ultrasound
April 4	Application of diagnostic imaging in clinical practice (case scenarios)
WEEK 14	
April 10	Review for final exams
April 11	Review for final exams
April 13	**Final practical (7:30 AM)**
WEEK 15	
April 16	**Final exam (11 AM)**

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