

# Fundamentals of Diagnostic Imaging (CLSC-5102)

## Course Calendar, Summer 2010

DATE	TOPIC
<b>WEEK 1</b>	
May 11	Course introduction and overview; the black box approach; history of diagnostic imaging
May 13	Review of physics concepts including matter, energy, electricity, magnetism and radiation
<b>WEEK 2</b>	
May 18	Starting with the end in mind; describing radiographs and imaging vocabulary
May 20	The controlling factors, mAs and kVp, and how they affect the films
<b>WEEK 3</b>	
May 25	The tube – anatomy and cathode processes
May 27	The tube – anode processes and connecting back to the big picture
<b>WEEK 4</b>	
June 1	The generator – purpose and types
June 3	The generator – effect of type on dose and connecting back to the big picture
<b>WEEK 5</b>	
June 8	The subject – interactions with matter and differential absorption
June 10	The subject – subject contrast and connecting back to the big picture
<b>WEEK 6</b>	
June 15	Review for midterm written exam
<b>June 17</b>	<b>Midterm written exam</b>
<b>WEEK 7</b>	
June 22	The film and screen – image formation and intensifying screens
June 24	The processor – film processing and connecting back to the big picture
<b>WEEK 8</b>	
June 29	Discuss midterm written exam
<b>July 1</b>	<b>Midterm practical exam</b>
<b>WEEK 9</b>	
July 6	The extras – collimation, grids, filtration and beam hardening
July 8	The extras – geometric distortion and magnification, penumbra and image quality
<b>WEEK 10</b>	
July 13	Radiobiology and radiation protection
July 15	Digital x-ray imaging – computed radiography (CR) and digital radiography (DR)
<b>WEEK 11</b>	
July 20	Introduction to cross-sectional imaging and computed tomography (CT)
July 22	CT imaging continued
<b>WEEK 12</b>	
July 27	Introduction to magnetic resonance imaging (MR)
July 29	MR imaging continued

<b>WEEK 13</b>	
August 3	Nuclear medicine – radiotracers, scintigraphy and single photon emission computed tomography (SPECT)
August 5	Nuclear medicine – positron emission tomography (PET)
<b>WEEK 14</b>	
August 10	Review for final exams
August 12	<b>Final practical exam</b>
<b>WEEK 15</b>	
August 16	<b>Final written exam</b>

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