PHYSICS 539 COURSE OUTLINE: JAN-APR 2016

EVALUATION: Assignments - 35%, Lab Reports - 15% Midterm -20% Final - 30%
SCHEDULE:

- Lecture times are Mondays 14:30 -16:00 and Fridays 9:00 - 10:30
- Labs (see 4 dates below) will be from 16:30 - 18:00

Date	Material Covered	Instructor	VCC Location
Mon 4 Jan	Intro to course and Review: fundamentals of radiation dosimetry ; Photon and electron interactions	CD/TP	RT Classroom, VC room 214
Fri 8 Jan	Intro to absolute dosimetry techniques: Calorimetry and chemical dosimetry	CD	RT Classroom, VC room 214
Mon 11 Jan	Stopping power ratios, Spencer-Attix Cavity theory (Dose to Water)	TP	RT Classroom, VC room 214
Fri 15 Jan	Cavity Ionization Chambers, Chamber correction factors	TP	RT Classroom, VC room 214
Mon 18 Jan	TG-51 protocol, photon and electron beam calibration 2:30 pm to 4:00 pm	TP	RT Classroom, VC room 214
Fri 22 Jan	Introduction to Monte Carlo simulation	TP	RT Classroom, VC room 214
Mon 25 Jan	Simulation of photon and electron interactions LAB 1: TG-51 (UBC students) 4:30 pm, meet at physics library on 3rd floor	TP CD	RT Classroom, VC room 214
Fri 29 Jan	No lecture due to lab		RT Classroom, VC room 214
Mon 1 Feb	Linac head simulation with BeamNRC	TP	RT Classroom, VC room 214 Meet at Physics Library 3rd floor@ 4:30 pm
Fri 5 Feb	Intro to Relative Dosimetry Techniques: Thermoluminescent/ Optically Simulated Luminescence dosimetry; Relative Dosimetry Techniques Film Dosimetry	CD	RT Classroom, VC room 214
8-12 Feb	Medical Physics Mid-Term Break (subject to change - to discuss with class on Jan 4th)		
Mon 15 Feb	Midterm exam (subject to change - to discuss on Jan 4th)	TP/CD	RT Classroom, VC room 214
Fri 19 Feb	Relative Dosimetry Techniques : Diodes, MOSFETs and EPIDs ; scintillation dosimeters	CD	RT Classroom, VC room 214
Mon 22 Feb	Special problems in radiation Dosimetry: 3D Dosimetry, surface dose and very small fields LAB 2: OSLD/TLD Dosimetry 4:30 pm, meet at physics library on 3rd floor	CD CD	RT Classroom, VC room 214 Meet at Physics Library 3rd floor@4:30 pm
Fri 26 Feb	No lecture due to lab		RT Classroom, VC room 214
Mon 29 Feb	Special problems in radiation Dosimetry: 3D Dosimetry, surface dose and very small fields, part II LAB 3: Film Dosimetry for UBC students 4:30 pm, meet at physics library on 3rd floor	CD CD	RT Classroom, VC room 214 Meet at Physics Library 3rd floor@4:30 pm

Fri 4 Mar	No lecture due to lab		RT Classroom, VC room 214
Mon 7 Mar	Ortho-voltage x-ray dosimetry ; Proton beam dosimetry Lab 4: Detector arrays 4:30 pm, meet at physics library on 3rd floor	CD CD	RT Classroom, VC room 214 Meet at Physics Library 3rd floor@4:30 pm
Fri 11 Mar	No lecture due to lab		RT Classroom, VC room 214
Mon 14 Mar	Dosimetry and Brachytherapy source calibration, TG 43 protocol Lab	TP	RT Classroom, VC room 214
Fri 18 Mar	Radiation protection dosimetry	PP	RT Classroom, VC room 214
Mon 21 Mar	Course review	CD/TP	RT Classroom, VC room 214
TBA	Exam		RT Classroom, VC room 214

DIRECTIONS TO VCC LECTURE LOCATIONS:

All lectures will be held in room 214 at the Vancouver Centre of the BC Cancer Agency, 600 West 10th Avenue Vancouver BC

For UVic Students:
All lectures will be at the BCCA - Vancouver Island Centre, 2410 Lee Avenue, Victoria. They will be in room 1603 - Physics Training Room