

Location: Zoom Based Distance Teaching.

Times: Tuesday & Friday 9:00 – 10:30am

Date	Lecture number	
Sep 10		No Classes – TA Orientation
Sep 14 – MM	1	Course Introduction,
Sep 17 – MM Assign #1	2	X-ray attenuation and absorption
Sep 21 – MM	3	Thompson and Rayleigh scattering, Compton effect
Sep 24 – MM Assign#2	4	
Sep 28 – MM	5	Photoelectric effect, Pair production
Oct 1 – HC Assign #3	6	Electron interactions, Charged particles, stopping power
Oct 5 – HC	7	Stopping power (cont'd), LET
Oct 8 – HC Assign #3 Due	8	Exposure, Dose, Kerma
Oct 12 – HC	9	Heavy charged particles and neutrons
Oct 15	10	No class
Oct 19 – MM/HC		Mid-Term (NB this is 2.5 hours duration)
Oct 22 – MC	11	Introduction to Clinical Medical Physics
Oct 26 – MC Assign #4	12	Isotope Machines
Oct 29 – MC	13	Clinical X-ray Production
Nov 2 – MM		Atomic and Nuclear Structure, Radioactivity and Decay
Nov 5 – MC	14	LINACS
Nov 9 – MC	15	LINACS
Nov 12		Reading/Midterm Break – No Class
Nov 16 – MC	16	LINACS
Nov 19 – DH Assign #5	17	Radiation protection and safety – Introduction, effects and standards
Nov 23 – DH	18	Occupational & Medical & Public Exposure, General shielding calculations
Nov 26 – DH Assign #5 due Nov 28	19	Radiation Protection: Linac installation & Shielding calculations
Nov 30 – DH	20	Source handling, safety/shielding design, environment, waste
Dec 3 – MC/DH		Course Review

Course final mark weightings: Assignments 25%, Mid-Term Exam 37%, Final Exam 38%

NB: A BC Cancer Facility tour to be arranged at mutually agreeable time at the Vancouver, Kelowna & Victoria Clinics (usually after hours)

Course Coordinator WB = Dr. Wayne Beckham, BC Cancer – Victoria
 Lecturers: MC = Dr. Marco Carlone, BC Cancer – Kelowna
 DH = Dr. Derek Hyde, BC Cancer – Kelowna
 MM = Dr. Marie-Pierre Milette, BC Cancer – Kelowna
 HC = Dr. Haley Clark, BC Cancer – Surrey
 TA = Maryam Rostamzadeh

Contacts for Vancouver Students:

Dr. Samantha Lloyd, BC Cancer – Vancouver

Assignments: Unless otherwise stated, assignments are due in the same date as the next assignment is given.

The main textbook is:

E.B. Podgorsak, Review of
Radiation Oncology Physics:

A Handbook for Teachers and Students

(Freely available on IAEA website at:

https://www.google.ca/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwj6KmkqubUAhUX3WMKHWtLBu4QFggoMAA&url=http%3A%2F%2Fwww-pub.iaea.org%2Fmtcd%2Fpublications%2Fpdf%2Fpub1196_web.pdf&usg=AFQjCNHKVo-1doK6R5fgkun_C428WHleJA)

UVIC Requirement: Calculators – On all examinations the only acceptable calculator is the Sharp EL-510R.

This calculator can be bought in the Bookstore for about \$10. DO NOT bring any other calculator to examinations.

Revised 31 August, 2021