



Syllabus for Radiation Safety section of CCPM Membership Exam for Radiation Oncology, Nuclear Medicine and Diagnostic Radiology sub-specialties.

Topics

1. Objectives and principles of radiation protection
2. ALARA
3. Dosimetric quantities and units
4. Natural and human-made sources of radiation exposure
5. Biological Effects of Ionizing Radiation
6. Instrumentation
7. Counting statistics
8. Basic External Dosimetry
9. Basic Internal Dosimetry
10. Familiarity with Canadian and international Agencies
11. CNSC regulations (see www.nuclearsafety.gc.ca)
12. Organization and administration of Radiation Safety Programs (licensing, relationships to hospital administration/occupational health & safety)
13. Monitoring and interpretation
14. Transportation and waste
15. Emergencies & incident preparation/planning and response

References

Note: This list is not to be considered comprehensive

1. Canadian Nuclear Safety Commission documents, including:
 - Nuclear Safety and Control Act
 - General Nuclear Safety and Control Regulations
 - Class II Nuclear Facilities and Prescribed Equipment Regulations
 - Nuclear Substances and Radiation Devices Regulations
 - Radiation Protection Regulations
 - Packaging and Transport of Nuclear Substances Regulations
2. Health Canada, *Safety Code 35: Radiation Protection in Radiology — Large Facilities*
3. International Commission on Radiation Protection (ICRP) publications 60 and 103
4. National Council on Radiation Protection and Measurements (NCRP) reports 49, 51, 147, 151 (facility design, diagnostic and therapy) and report 93
5. H. Cember, and T. Johnson, *Introduction to Health Physics*, McGraw-Hill.
6. J. Martin, *Physics for Radiation Protection: A Handbook*, Wiley VCH.
7. P.R. Bevington and D.K. Robinson, *Data Reduction and Error Analysis for Physical Sciences*, McGraw-Hill.
8. J. Van Dyk, *The Modern Technology of Radiation Oncology. A Compendium for Medical Physicists and Radiation Oncologists*. Medical Physics Publishing.
9. G.F. Knoll, *Radiation Detection and Measurement*, Wiley & Sons Inc.