



Modules for Security Screening

	Qualified Operator
	This person has an education of secondary level, corresponding to 10–12 years of schooling
Personal attributes The person need to have	1, communication skills; 2, leadership skills; (for supervisors) 3, analytical skills; 4, human–machine interface skills
	I–V; VII.1–5; 12, VII
	PART I. REVIEW OF FUNDAMENTALS I.1. Introduction. I.2. Basic physics and mathematics used in radiation protection. I.3. Interaction of radiation with matter. I.4. Sources of radiation. PART II. QUANTITIES AND MEASUREMENTS II.1. Quantities and units. II.2. Dosimetric calculations and measurements. II.3. Principles of radiation detection and measurement. PART III. BIOLOGICAL EFFECTS OF IONIZING RADIATION III.1. Effects of radiation at the molecular and the cellular level. III.2. Deterministic effects. III.3. Stochastic somatic effects.



III.4. Stochastic hereditary effects.

III.5. Effects on the embryo and foetus.

III.6. Epidemiological studies and issues.

III.7. The concept of radiation detriment.

PART IV. PRINCIPLES OF RADIATION PROTECTION AND THE INTERNATIONAL FRAMEWORK

IV.1. Conceptual framework.

IV.2. The role of international organizations in radiation protection.

IV.3. The development of safety culture.

PART V. REGULATORY CONTROL

V.1. Legal framework for radiation protection and the safe use of radiation sources.

V.2. Regulatory system.

V.3. Assessment of the effectiveness of the regulatory programmes.

PART VII. PROTECTION AGAINST OCCUPATIONAL EXPOSURE

VII.1. Organization and management.

VII.2. Methods of protection and the safe use of radiation sources; optimization.

VII.3. Individual and workplace monitoring.

VII.4. Health surveillance.

VII.5. Potential exposures.