



RPS courses

Radiation Protection Supervisors

Programme for users of

**laboratory
radiochemicals**



Radman Associates
Specialists in radiological protection

RPS COURSES

- Short Courses at regional centres
- Special advisory courses of 1 or 2 days are held at company premises by arrangement and with programmes designed to particular requirements.

Full particulars may be obtained from:

Courses Administrator

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Bollington
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Telephone: **01625 576000**

Web: www.radman.co.uk/rps-training-courses



Radiation Protection Supervisors

Under the Ionising Radiations Regulations 2017 reg 18(5) the employer must appoint one or more suitable Radiation Protection Supervisors for the purpose of securing regulatory compliance in any area made subject to Local Rules.

In order to assist the employer in achieving optimal radiation safety in the workplace the RPS must be sufficiently trained in the basic principles of radiation protection and the legislative controls for restricting exposures.

The course content enables delegates to become conversant with the properties of the radiations and their respective hazards, and with modern methods of managing radiation protection on site. The course programmes are planned to give a thorough familiarity with the requirements of the Regulations. Recent enforcement action or recommendations made by the regulators are particularly highlighted and emphasis is given to the practical methods of protection with demonstrations and syndicate exercises to encourage delegate participation.

Whilst principally aimed at RPSs, therefore, these courses are suitable for all staff who have responsibility for, or duties concerned with sources of ionising radiation.

Two separate programmes are conducted throughout the year for uses of:

- **Sealed Sources and X-Rays:** for those using radioactive sources or X-rays in industrial process controls or research applications, with emphasis on external radiation exposures.
- **Laboratory Radiochemicals:** for those using unsealed radioactive materials in tracer quantities, with emphasis on contamination control.

An important feature of the course is their introduction, where members declare the particular radiation sources they are concerned with. The tutors then ensure to include the radiological characteristics and control measures relevant to those sources and opportunity is given for individual discussion.

On successful completion of the Course Questionnaire delegates receive an e-copy of their RPS training certificate as evidence for the Radiation Safety File.



Radiation Protection Supervisors (Laboratory Radiochemicals)

Course Programme

Day 1

- 13.00 - 13.15 **Introduction to Course**
Course members describe their use of radiochemicals.
- 13.15 - 14.00 **Ionising Radiations**
Radioisotopes and their radiations; decay and half-life; units of activity; significant quantities and energies; soft beta emitters in biochemical research; properties of the radiations.
- 14.00 - 14.30 **Radiation Dose**
Dose quantities and units; background exposures; benchmarks of dose; dose coefficients; laboratory exposure levels.
Break
- 15.00 - 15.30 **Video : 'Contamination control'**
- 15.30 - 16.30 **Legislation**
The Environmental Permitting Regulations 2016
- for managing radioactive substances and waste;
The Ionising Radiations Regulations 2017 and ACoP
- for restricting exposures in the workplace; CDG transport regulations for consigning sample materials; enforcing remits of the environment agencies (EA, NRW, SEPA) and the HSE.
- 16.30 - 17.15 **Risk Assessments and Contingency Plans**
Requirements for undertaking prior risk assessment and assessing the exposure risk from accidents, inc. example for radiochemical work.
- 17.15 - 18.15 **Evening syndicate work**
Groups discuss actions for typical laboratory scale accidents confronting the RPS, for presentation to the group at the end of Day 2.
Dinner
- End of day 1**



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Course Programme

Day 2

08.45 - 09.00	Day 1 Review
09.00 - 09.30	Biological Basis of Dose Limitation Biological effects; assumptions about human response to irradiation; stochastic and deterministic effects; evidence of radiation damage; dose limits and ALARP.
09.30 - 10.15	Radiation Monitoring Selection of appropriate instruments; checks and calibrations; monitoring routines; swab tests; interpretation of results.
	<i>Break</i>
10.45 - 11.30	External Radiation Doses Relating source activity to dose rate; skin doses from soft beta emitters; finger doses from ^{32}P ; whole-body exposures from ^{125}I .
11.30 - 12.00	Video : 'Key to contamination control'
12.00 - 12.30	ALARP in the Lab Preventing and limiting contamination; designated areas; authorised workers; instruction and training; waste disposal.
	<i>Lunch</i>
13.30 - 14.00	RPS Duties and Local Rules A summary of RPS duties and management of radiation safety by supervision of the Local Rules.
14.00 - 14.30	Management of Incidents Laboratory scale incidents for consideration and action.
14.30 - 15.00	Video : 'A spill has occurred!'
	<i>Break</i>
15.15 - 16.30	Syndicate Reports Short presentations are made by each group outlining their analysis of the problem and course of action.

Close of Course

