



## Training

# Practical Dosimetry for Radiotherapy

**Quality assurance is one of the foundations of radiotherapy practice. Due to a growing complexity of medical irradiation equipment, performing dosimetry is not always trivial. Therefore knowledge and expertise in dosimetry is of major importance to medical physics engineers and medical physicists.**

**After following the training Practical dosimetry for radiotherapy, participants are familiar with:**

- Understanding dosimetric concepts from a theoretical point of view;
- Understand the operating principle of commonly used detector types;
- Apply reference dosimetry in practice;
- Select and characterize measurement equipment;
- Autonomously set-up a measurement plan;
- Apply codes of practice in radiotherapy;
- Evaluate dosimetric results based on their uncertainties;
- Understand the principles of primary standards and traceability..

To achieve this, VSL provides a professional trainer with experience and knowledge of practical examples during this training. Of course there is enough room for your own practical examples and questions, so that participants can apply their acquired knowledge. After the training, the theory will be included in the form of a reference work.

### Target audience::

The training is suitable for participants with a bachelor's degree or higher in a technical discipline and is given at post-bachelor's/ academic level. It will help the participant to increase his/ hers expertise with using dosimetric concepts in practice. The course is beneficial for both starting and more experienced medical physicists, dosimetrists and medical physics engineers working in radiotherapy departments or standards laboratories.

### Registration:

Please go to our website <https://www.vsl.nl/en/services/training/> to fill in the registration form. zich inschrijven door het inschrijfformulier in te vullen op onze website.

### Duration:

The complete course program consists of two days of theory in which the general (G), the teletherapy (T) and the brachytherapy (B) modules are treated. Participants may choose to follow a dedicated program in which, together with the general modules (G), either teletherapy dosimetry (T) or brachytherapy dosimetry (B) is treated (1.5 day). The practical assignment for participants in all programs will be performed at the participant's institute, followed by a 0.5 day plenary review of the assignments at VSL.

## About VSL

VSL is the National Metrology Institute and recognized worldwide. VSL manages and develops primary measurement standards and primary reference materials on the instruction of the Minister of Economic Affairs and Climate Policy. These measurement standards are the foundation for reliable measurements in science, industry and fair trade and other areas. VSL makes measurement results from companies, laboratories and institutions directly traceable to international standards. VSL also participates in research projects to develop newer and better measurement methods. Metrologisch Instituut voor Nederland en internationaal erkend.

For more information on VSL and our offerings, please visit our website at <https://www.vsl.nl/en/services/training/>. Should you have any questions or wish to join our PTs, feel free to contact us.



**Fee:**

Complete programme: € 2.100,00 per participant excluding VAT.

Teletherapie programme: € 1.600,00 per participant excluding VAT.

Brachytherapy programme: € 1.600,00 per participant excluding VAT.

**Terms of payment:**

Payment in advance. Invoice will be sent 1 month before the start of the training. Payment is due within 30 days after invoice date.

**Estimated number of participants:**

Minimum 5 participants, maximum 10 participants.

If the number of participants remains smaller than the minimum number of participants, VSL reserves the right to cancel this training and will contact the registered participants to offer an alternative.

**Training location:**

VSL

Thijssseweg 11

2629 JA Delft

Nederland

**Language:**

This training will be given in English.

**Training content:**

The topics that will be discussed are:

- General modules
  - Interaction of ionizing radiation with matter
  - Dosimetric concepts and quantities
  - Absolute dosimetry: general aspects
  - Primary standards in dosimetry
- Teletherapy modules
  - Dosimetry protocols for teletherapy
  - Relative dosimetry for teletherapy
  - Practical assignment for teletherapy
- Brachytherapie modules
  - Wat is kalibreren, herleidbaarheid en wat is het belang daarvan?
  - Kalibratieproces, -procedure en -certificaat
  - Laboratoriumerkenning
- Onzekerheidsrekening
  - Dosimetry for brachytherapy
  - Dosimetry protocols for brachytherapy
  - Practical assignment for brachytherapy

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