

## Faculty of Medicine



### RDTH3160 Techniques radiothérapiques (y compris bases physiques, dosimétriques, radiobiologiques et aspects cliniques)

[30h+90h exercises]

**Teacher(s):** Vincent Grégoire, Pierre Scalliet (coord.), Stefaan Vynckier  
**Language:** French  
**Level:** Third cycle

#### Main themes

- A. Production of radiotherapy beams :
- Cobalt-60,
  - linear accelerators,
  - neutron beams, proton beams, heavy ion beams.
- B. Definition of dosimetry quantities for radiotherapy:
- PDD, RTM, RTA, OAR, isodoses, BSF, PSF.
- C. Quality assurance in radiotherapy :
- definition and importance
  - recommendations
  - quality control in radiotherapy
  - quality control of CT scanners
  - quality control of linear accelerators
  - quality control of treatment planning systems
  - in-vivo dosimetry
- D. Calculation methods for external beam therapy
- matrix system in TPS
  - separation of scatter and primary beam
  - pencil beam methods
  - Monte Carlo calculations
- E. Dosimetry for Brachy therapy

#### Other credits in programs

<b>ESP31DS/RP</b>	Première année du diplôme d'études spécialisées en santé publique (Physique d'hôpital)	Mandatory
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