# Visiting Professors

## Academic year 2018/2019

### 2nd term

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>Medical Physics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific area</td>
<td>Physics applied in Medicine</td>
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<tr>
<td>Department of</td>
<td>Physics</td>
</tr>
<tr>
<td>Language used to teach</td>
<td>English</td>
</tr>
<tr>
<td>Teaching Commitment</td>
<td>48 hours</td>
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</tbody>
</table>

### Course summary
- Ionizing radiation dosimetry (photons and charged particles).
- Elements of radiobiology.
- Tools and techniques in radiotherapy and imaging.
- Topics in nuclear medicine.
- Additional lectures will be given by Researchers active in the fields of:
  - neutron dosimetry
  - radiotherapy with protons and carbon ions
  - use of advanced computing techniques in medicine

### Learning objectives

A) Knowledge and understanding
- knowledge of the basics of the interaction of ionizing radiation with biological tissue and dosimetry
- knowledge of some models of cellular inactivation induced by radiation
- understanding of the physics needed in the application to medicine of ionizing radiation in therapy, imaging and radiation protection

B) Applying knowledge and understanding
- ability in solving numerical problems used in some techniques of medical physics, radiotherapy, imaging and radiation protection

### Other activities besides the course: i.e. seminars and conferences addressed to PhD students and research fellows, dissemination conferences
- Seminars will be given to Students of the Specialisation School in Medical Physics on the subject of monitoring and dosimetry of particle and conventional radiation therapy.

### Visiting Professor Profile
- The Candidate will have a strong involvement in research and teaching in the field of Experimental Physics applied to Medicine, with particular emphasis on the experimental tools to be used in the
diagnosis and cure of cancer. Preference will be given to Candidates with a strong background in Radiation Physics for cancer therapy.

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