

A new attractive model for attracting physics students to radiation protection and medical physics

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Introduction

In Malta the Radiation Protection and Medical Physics professions faced an acute shortage of new entrants owing to the low popularity of two year masters and the irregular number of physics/engineering graduates.

Under such conditions of uncertainty the two professions would not only fail to grow but inevitably decline, leaving patients, staff and public with inadequate radiation protection and medical physics services. A formula needed to be found to:

- address the paradox of having to reduce the masters programme to one year at a time when the knowledge-skills-competences required for modern radiation protection and medical physics practice are expanding rapidly owing to the increasing complexity of medical device technology
- ensure that the potential stock of entrants to the profession would be independent of erratic student numbers in other departments and faculties.

Objectives

To design a new innovative future oriented Bachelor programme to attract more physics and mathematics students to Radiation Protection and Medical Physics.

Methodology

We surveyed undergraduate physics courses which included components of medical physics and radiation protection for elements of good practice.

Results

It was decided that the best way forward would be to opt for an inter-faculty programme that combined physics, medical physics and radiation protection. The resulting four year programme consists of 5 parallel strands namely physics/mathematics/statistics, radiation-protection/medical-physics, basic-medical-sciences, research and hospital placements. Graduates can continue their studies in Physics, Medical Physics and Radiation Protection. This innovative curricular experiment has been a great success. The combination of pure and applied physics, the inter-faculty nature of the programme (where students share lectures with both physics and healthcare professions students) together with the element of clinical practice have been found to be the most attractive features of the programme.

Conclusion

The new programme has provided a very welcome boost for both Radiation Protection and Medical Physics.

More information can be found here:

Programme overview

<https://www.um.edu.mt/courses/overview/UBSCHPMRFT-2020-1-O>

Curriculum details

<https://www.um.edu.mt/courses/programme/UBSCHPMRFT-2020-1-O>

Year	Physics Mathematics Statistics	Anatomy Physiology Pathology	Medical Physics Radiation Protection	Hospital Placement	Research Ethics Legislation Professional Issues
Year 4	**		*****	*	***
Year 3	***	*	****	*	*
Year 2	****	**	**	*	*
Year 1	****	****	*		*

