

# A New Swedish Master's Degree Programme in Applied Radiation Protection

Rääf C.L.<sup>a</sup>, Isaksson M.<sup>b</sup> and Bernhardsson C.<sup>a</sup>

<sup>a</sup>Department of Clinical Sciences Malmö, Medical Radiation Physics, Lund University, Sweden

<sup>b</sup>Department of Radiation Physics, Institute of Clinical Sciences, Sahlgrenska Academy, University of Gothenburg, Sweden

## 1. MOTIVATION FOR THE PROGRAMME

At the beginning of the 2000s the Swedish Radiation Safety Authority (SSM) identified several shortcomings in the competence required to achieve the Government's goal of a "radiation-safe society". Its two main findings were:

- The lack of expertise and advanced competence in the field increases the risk of harm to individuals and damage to the environment as a consequence of non-voluntary exposure to ionizing radiation due to radiological or nuclear misadventures, accidents and terrorist attacks.
- As a consequence of the previous finding, there is a need for a generally oriented radiation protection programme at university level, intended for personnel not only within the health care sector and nuclear industry, but also in environmental and radiation protection authorities and other organisations involved in the emergency preparedness.

## 2. THE STRUCTURE OF THE PROGRAMME

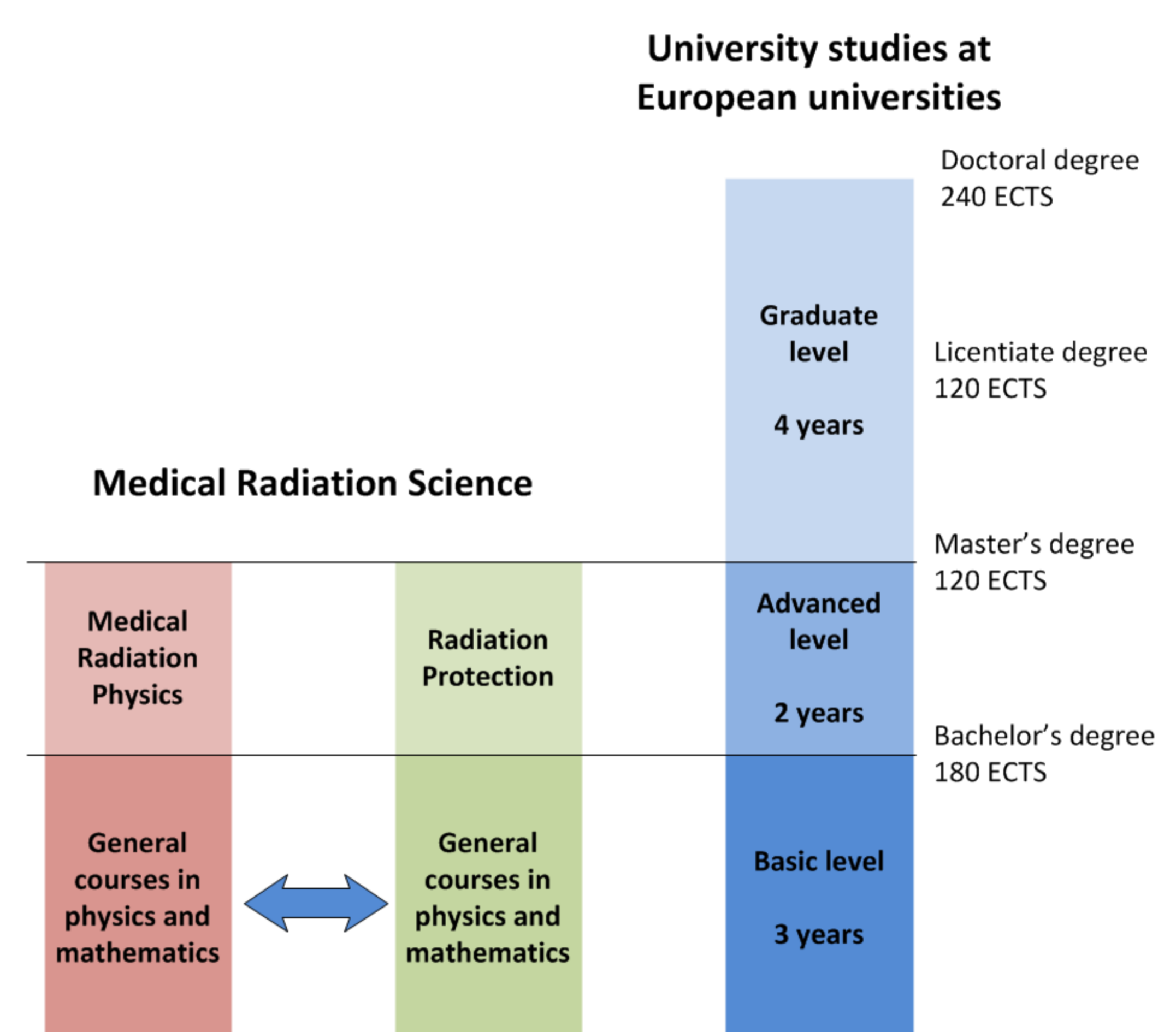
In response to the above findings, a Master's programme in *Applied Radiation Protection* was developed by lecturers at the universities of Gothenburg and Lund. Most of the courses will be given at the University of Gothenburg, and it is planned to introduce the programme in the autumn of 2012.

YEAR 1 (Advanced level)			
Autumn semester	Recommended introductory course 7.5 ECTS	National emergency preparedness for radiation protection 7.5 ECTS	Radiation protection and environmental impact of the nuclear fuel cycle 7.5 ECTS
			Optional course 7.5 ECTS
Spring semester	Optional course 7.5 ECTS	Optional course 7.5 ECTS	Radioecology 7.5 ECTS
	Optional course 7.5 ECTS		

Some of the obligatory courses will also be available as separate courses for continuous professional development (CPD). These are outlined in red. Details of the individual courses, as well as recommended optional courses, can be obtained by contacting one of the authors (contact information is given below).

YEAR 2 (Advanced level)	
Autumn semester	Detectors and measurement methods in radiation protection and emergency preparedness, including practical field exercises 15 ECTS
	Radiation protection in medical emergency preparedness 7.5 ECTS
	Optional course 7.5 ECTS
Spring semester	Master's Dissertation 30 ECTS

The programme is equivalent to 120 ECTS (advanced level) and results in a Master's degree. It also provides a good basis for those who wish to continue with PhD studies.



## 3. APPLICATION AND ADMISSION

There are two main entries:

### 1. Entry at the Basic level

*The aim during the first two years is to provide a general understanding of and knowledge in mathematics and physics. Semesters five and six in the third year provide courses in radiation physics.*

### 2. Entry at the Advanced level

*Entrants at the advanced level must have the equivalent of 180 ECTS in general physics and mathematics (applications can be individually reviewed).*

## 4. ADDITIONAL INFORMATION

As the programme is still being developed, information is being updated continuously. A homepage will be available later this year at: [www.radfys.gu.se/utbildning/master/](http://www.radfys.gu.se/utbildning/master/). For more information, or to apply to the programme, please contact one of the authors.

The programme has been financially supported by the Swedish Radiation Safety Authority.



UNIVERSITY OF GOTHENBURG



LUND UNIVERSITY

**Mats Isaksson, Prof.**

e-mail: [mats.isaksson@radfys.gu.se](mailto:mats.isaksson@radfys.gu.se)

Phone: +46 31 342 3849

**Christopher Rääf, Assoc. Prof.**

e-mail: [christopher.raaf@med.lu.se](mailto:christopher.raaf@med.lu.se)

Phone: +46 40 331 145

**Christian Bernhardsson, PhD.**

e-mail: [christian.bernhardsson@med.lu.se](mailto:christian.bernhardsson@med.lu.se)

Phone: +46 40 336 731