

**Second
standing rule
on the amendment of the
Examination Regulations of the
University of Heidelberg for the
Master of Science course in
Advanced Physical Methods in
Radiotherapy**

of May 21, 2014

Pursuant to § 34 of the Baden-Württemberg State Act on Universities, most recently amended by the Baden-Württemberg Act on the Introduction of Student Representative Bodies and the Enhancement of Advanced Academic Training (Student Representative Bodies Act – VerfStudG) of July 10, 2012 (Law Gazette of July 13, 2012, p. 457 ff.), on May 20, 2014 the Senate of the University of Heidelberg approved the following second standing rule on the amendment of the Examination Regulations for the Master of Science course in Advanced Physical Methods in Radiotherapy of October 1, 2010 (Rector's Bulletin of November 26, 2010, p. 1839 ff.), as amended on February 7, 2013 (Rector's Bulletin of February 28, 2013, p. 37 ff).

The Rector granted his approval on May 21, 2014.

Article 1

1. The following paragraph 3 shall be inserted into § 8:

"(3) If students are unable on grounds other than those specified in paragraph 2 to comply with study commitments and/or to take examinations in the prescribed form or at the prescribed time, the reasons shall be presented in writing to the Examinations Committee. If the Examinations Committee accepts the reasons, paragraph 2 shall apply *mutatis mutandis*."

2. The following sentence 2 shall be inserted into § 9(2): "Oral examinations may be taken online if appropriate."

3. § 10(3) shall henceforth be worded as follows:

"(3) Written examinations shall be taken in the form of written tests, seminar presentations, assignments, work pertinent to the course or work placement reports. Assignments shall be returned as a rule within two to four weeks. Module P examination reports must be drawn up within two months."

4. The following paragraph shall be inserted into § 10 as paragraph 4, and the previous paragraph 4 shall be renumbered as paragraph 5:

"(4) Each student shall ensure when submitting all written work that his or her work - or for group work, his or her designated part of the work – has been completed independently and that no auxiliary materials other than those specified or referred to have been used. The time when the written assignment was submitted shall be officially recorded."

5. The following paragraph 2 shall be inserted into § 11, and the remaining paragraphs shall be renumbered accordingly:

"(2) When determining grades and interim marks, a numerical value

of up to and including 1.5	means 'very good'
above 1.5 up to and including 2.5	means 'good'
above 2.5 up to and including 3.5	means 'satisfactory'
above 3.5 up to and including 4.0	means 'adequate'
of more than 4.0	means 'inadequate'

6. § 13 shall henceforth be worded as follows:

(1) Eligibility to take a masters examination shall be limited to those who:

- hold a general school leavers' certificate, a relevant subject specific school leaving qualification or a certificate recognized as equivalent by law or by the competent national authority;
- have registered with the University of Heidelberg for the masters course in Advanced Physical Methods in Radiotherapy;
- have not lost their entitlement to take an examination in the masters course in Physical Methods in Radiotherapy;
- are able to demonstrate the requisite two-year period of professional experience in Medical Physics pursuant to § 3(4) of the Admission Regulations and the requisite knowledge in Medical Physics pursuant to § 3(3) of the Admission Regulations.

(2) Eligibility for the Masters dissertation shall also be conditional upon certification of successful passes of all courses specified in Annex 1."

7. § 17(1) shall henceforth be worded as follows:

"(1) The Masters dissertation shall be submitted to the Examinations Committee in duplicate and electronically within the prescribed time limit; the submission deadline shall be put on the record."

8 The following sentences 5, 6 and 7 shall be inserted into § 18(1): "If requested in writing by a student to the Examinations Committee, presentation and discussion may occur online. The request may only be approved if it has been established that a person equivalent to a German university teacher is present in the same room as the student in order to prevent any fraud or the use of prohibited auxiliary material. The composition of the examining jury as designated in accordance with § 18(1), sentence 3, shall remain unchanged for online examinations."

9. The Annex to the Examination Regulations shall henceforth be worded as follows:

Annex: Masters courses

Modules	Contents	Training		Total ECTS Credits
		On-Site	Online	
	Introduction to APMR Program Welcome Day	X	X	
Module M 1 Anatomy and Imaging for Radiotherapy	M 1.1 Introduction M 1	X	X	7.5
	M1.2 Anatomy for Physicists and Engineers		X	
	M 1.3 Imaging for Radiotherapy		X	
	M 1.4 Radiological and Virtual Anatomy		X	
	M 1.5 Diagnostic Radiology		X	
	M 1.6 Workshop	X		
	E 1 Exam (written)	X		
Module M 2 Intensity Modulated Radiotherapy (IMRT)	M 2.1 Introduction M 2	X	X	7.5
	M 2.2 Introduction to IMRT		X	
	M 2.3 IMRT in Daily Clinical Work		X	
	M 2.4 Advanced Application Techniques for IMRT		X	
	M 2.5 Workshop	X		
	E 2 Exam (written)	X		
Module M 3 Ion Therapy	M 3.1 Introduction M 3	X	X	7,5
	M 3.2 Fundamentals of Physics		X	
	M 3.3 Beam Generation and Application		X	
	M 3.4 Radiobiology		X	
	M 3.5 Ion Treatment Planning		X	
	M 3.6 Clinical Application		X	
	M 3.7 Seminar	X		
	E 3 Exam (written)	X		

Modules		Contents	Training		Total ECTS Credits
			On-Site	Online	
Module M 4					
Image Guided Raditherapy (IGRT) and Adaptive Radiotherapy (ART)		M 4.1 Introduction Module 4	X	X	7.5
		M 4.2 IGRT Techniques (Physics) Adaptive Radiotherapy (ART)		X	
		M 4.3 Clinical Applications of IGRT (Medicine)		X	
		M 4.4 Moving Targets and Adaptive Radiotherapy (Medicine/Physics)		X	
		M 4.5 Workshop	X		
		E 4 Exam (written)	X		
Module M 5					
Advanced Dosimetry and Quality Assurance		M 5.1 Introduction M 5	X	X	7.5
		M 5.2 Fundamentals of Dosimetry		X	
		M 5.3 Dosimetry for Current Radiotherapy Techniques		X	
		M 5.4 Quality Assurance(QA)		X	
		M 5.5 Workshop	X		
		E 5 Exam (written)	X		
Module M I* Internships	Compulsory	I 1.1 Internship Treatment Planning	X	X	7.5
	Required Elective	I 1.2 Internship IMRT	X	X	
	Compulsory	I 1.3 Internship Ion Therapy	X	X	
	Required Elective	I 1.4 Internship ART	X	X	
	Compulsory	I 1.5 Internship Dosimetry and QA	X	X	
Master's Thesis					30
					Σ 75

* All figures refer to ECTS credits

** In module I all mandatory practical courses and either of the elective mandatory practical courses must be attended, with successful passes in practical courses totaling 7.5 credits.

Article 2

The above amendments shall take effect on the first day of the month following publication in the Rector's Bulletin.

Heidelberg, May 21, 2014

signed Prof. Dr. Bernhard Eitel
 Rector