



Master's Programme in Radiography (Radiotherapy)

120 ECTS

Tartu 2020

1. Documents supporting the programme

The programme has been developed based on the following documents:

European Qualifications Framework for European Higher Education Area –EQF for EHEA, 2005

Kutsestandard, radioloogiatehnik, tase 7 [Professional Standard: Radiographer, level 7] (www.kutsekoda.ee/et/kutseregister/kutsestandardid/10516962)

Kõrgharidusstandard [Standard of Higher Education] (RT I, 23.08.2016, 6)

Rakenduskõrgkooli seadus [Institutions of Professional Higher Education Act] (RT I, 20.12.2016, 3)

Tartu Tervishoiu Kõrgkooli põhimäärus [The Statutes of Tartu Health Care College] (RT I, 21.03.2017, 3)

Ülikooliseadus [Universities Act] (RT I, 20.12.2016, 2)

European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). (2015). Brussels: EURASHE.

European Qualifications Framework (EQF) Level 7 Benchmarking Document: Radiographers, 2017 (www.ehrs.eu)

2. General data of the programme

1. Name of programme in English	Master's Programme in Radiography (specialisation field Radiotherapy)
2. Level of higher education studies	Second cycle studies – Master's level
3. Form of study	Full-time study
4. Coordinating Institution	Tartu Tervishoiu Kõrgkool/Tartu Health Care College
5. Code of educational institution	70005714
6. Workload of programme in ECTS credits	120 ECTS
7. Standard period of study	2 years
8. Study programme group	Healthcare
9. Study field	Radiography
10. Programme code in the Estonian Education Information Systems (EHIS)	205757
11. Language of instruction	English language
12. Initial registration date of curriculum	29.07.2019
13. Approval date of curriculum version in Tartu Health Care College	Approved in 17.06.2020 by Tartu Health Care College's Council
14. Accreditation of programme	
15. Conditions for commencing studies	Bachelor degree or equivalent qualification in Radiography, in Radiation Therapy, Medical Physics, Medicine or a related discipline.

16. Main speciality of programme and its study load (ECTS)	Radiography specialisation in radiotherapy (60 ECTS)
17. Additional specialities, other potential specialisations of programme	
18. Aim of programme	The programme creates conditions for the graduates of basic radiography education and training to obtain profound knowledge, advanced skills and professional conduct in the specialist area as well as the competence of supervised research in order to be employed at different levels of the health care system as well as in education and research institutions. The graduates may continue their studies in the third cycle of higher education (PhD) in medical imaging or (radio) therapy or in an affiliated field.
19. Learning outcomes of programme	On successful completion of the programme the student will: • demonstrate systematic and profound knowledge (and understanding) of the concepts, theories and research methods in radiotherapy, integrating them with the developments of radiotherapy, its function in society and with solving professional problems, demonstrating willingness to actively participate in civil society; • be able to apply his/her profound specialist knowledge, understanding, and problem solving skills in new or unfamiliar situations within broader, multidisciplinary contexts related to radiotherapy; • have the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete or limited information that include reflecting on social and ethical responsibilities related to the implementation of his/her knowledge and judgements in multicultural environment, demonstrating tolerance to the diversity of attitudes and values; • initiate, plan and manage complex working processes and work independently in situations requiring innovative approach and competences, analysing the outcomes; carry responsibility for the strategic performance of teams; • be able to communicate his/her conclusions, and the knowledge and rationale underpinning these conclusions, to specialist and non-specialist audiences clearly and unambiguously; • have the learning skills to allow him/her to continue studies in a manner that may be largely self-directed or autonomous; • be able to competently transfer his/her knowledge in the ways of teaching, supervising and guiding.
20. Title of academic degree awarded on graduation in English	Master's Degree in Radiography (Radiotherapy) (specialisation field identified)

21. Documents issued on graduation in English	Master Diploma and Diploma Supplement in English
22. Brief description of programme structure	The programme consists of the following modules: Master's thesis (30.0 ECTS) Specialist subjects in radiotherapy (30.0 ECTS) Internship in radiotherapy (30.0 ECTS) Basic subjects (30.0 ECTS, incl. elective subjects 6.0 ECTS)
23. Options to complete the programme	The student passes the modules in the order determined in the programme.
24. Conditions for completing the programme	To complete the programme the student must pass the full amount of the programme, pass all compulsory subjects and defend the Master's thesis.
25. Programme Coordinator	Zinaida Läänelaid MD

3. General structure of the programme

Modules/Subjects	Year I		Year II	
	Semester I	Semester II	Semester III	Semester IV
Module of basic subjects 30.0 ECTS	Development of radiotherapy and the radiographer profession in international cooperation 4.0 ECTS Electives 6.0 ECTS	Management 6.0 ECTS		Pedagogy 6.0 ECTS Pedagogical practice 8.0 ECTS
Module of Master's thesis 30.0 ECTS	Master's thesis I, 10.0 ECTS	Master's thesis II, 4.0 ECTS	Master's thesis III, 4.0 ECTS	Master's thesis IV, 12.0 ECTS
Module of specialist subjects 30.0 ECTS	Introduction to cancer and cancer management 5.0 ECTS Radiotherapy physics and radiobiology 5.0 ECTS	Radiotherapy and the principles and practice of pre-treatment procedures 5.0 ECTS Introduction to radiotherapy treatment planning 5.0 ECTS	Principles and practice of radiotherapy delivery and patient care 10.0 ECTS	
Module of internship 30.0 ECTS		Internship I 10.0 ECTS	Internship II 16.0 ECTS	Internship III 4.0 ECTS

4. Programme modules

Module of Basic subjects		ECTS 30.0
Objectives	To provide conditions for further personal development of the student and willingness to actively participate in civil society, including management, pedagogy, development of radiotherapy and the radiographer profession	
Learning outcomes	On completion of the module the student will • characterize and analyse current problems, theoretical development trends and their application in radiotherapy • assess and plan ways of professional development and participation in civil society • demonstrate purposeful implementation of management, pedagogy and professional development competencies in his/her daily professional practice performance • obtain deeper knowledge, skills and competencies in the fields of management, pedagogy and professional development in radiotherapy • be able to critically evaluate his/her competencies and developmental needs in the fields of management, pedagogy, professional development • be able to identify purposes and steps for further (personal) development in the fields of management, pedagogy, professional development • be able to select appropriate ways and techniques for further (personal) development in the fields of management, pedagogy, professional development	
Assessment:	The achievement of learning outcomes of the module is assessed within each part of the whole module (differentiated A to F).	
Subject code	Subjects	ECTS
RG-MA-001	Development of radiotherapy and the radiographer profession in international cooperation	4.0
	Electives	6.0
RG-MA-002	Management	6.0
RG-MA-003	Pedagogy	6.0
RG-MA-004	Pedagogical practice	8.0
Module of Master's thesis		ECTS 30.0
Objectives	To provide conditions for the student to obtain specific knowledge and skills for the conduct of applied	

	research	
Learning outcomes	On completion of the module the student will • be able to apply knowledge and understanding of research methods in identifying and formulating research problems in radiotherapy as well as planning, developing and conducting research studies, following the principles of research ethics completing all steps of research in a responsible and consistent way • be able to choose appropriate methodological and analytical tools to analyse and interpret data (using quantitative and qualitative approaches) • apply scientific methods in practice and critically appraise the strategies that enable graduates to manage change, promote quality and ensure patient safety • critically appraise literature sources as the basis for making judgements in order to integrate knowledge in radiotherapy with health care • inform about own research results at national or international level	
Assessment:	The achievement of learning outcomes of the module is assessed within each part of the module. First three parts (I-III) should be passed in order to proceed with Part IV – defence of thesis. Defence of thesis is assessed by the specific matrix (differentiated A to F).	
Subject code	Subjects	ECTS
RG-MA-005	Master's thesis I	10.0
RG-MA-006	Master's thesis II	4.0
RG-MA-007	Master's thesis III	4.0
RG-MA-008	Master's thesis IV	12.0
Module of specialist subjects: Radiotherapy		ECTS 30.0
Objectives	To create conditions for the student to acquire the systematic and profound knowledge incl., development trends and current problems, potential new applications, skills and competencies necessary for practising as the radiotherapy specialist and complete the Master's thesis in the field of radiotherapy	
Learning outcomes	On successful completion of the module the student will • be familiar with development trends and current problems, potential new applications related to the steps of radiotherapy process • demonstrate profound knowledge of safety and accuracy in treatment preparation and delivery • interpret and evaluate a treatment plan and compare it to the treatment prescription • evaluate own knowledge of external beam and interstitial, intracavitary radiotherapy procedures and preparedness for clinical practice • be able continuously monitor and evaluate the physical and psychosocial status of the patient and	

	respond accordingly, based on broad knowledge • understand and justify the principles and functions of radiotherapy team members • appreciate the role of radiotherapy radiographer in the conduct of QA/QC and risk management procedures and be able to carry them out • assess the implementation of the principles of professional ethics, incl. tolerance to diversity of attitudes and values, and make recommendation for improvement of professional conduct • critically evaluate and constantly improve their own knowledge, skills and competencies necessary for practising as the radiotherapy specialist, incl. the selection and use of appropriate technologies and methods when solving the problems • identify problems in radiotherapy practice while implementing profound knowledge and skills and offer solution for the problems in the Master's thesis • apply the principles of teaching/learning (acquired in the module of basic subjects) in patient education and in instructing/supervising students and colleagues	
Assessment:	Final assessment of the module is based on the assessment results of the subjects involved in the module. (differentiated A to F).	
Subject code	Subjects	ECTS
RG-MA-009	Introduction to cancer and cancer management	5.0
RG-MA-010	Radiotherapy physics and radiobiology	5.0
RG-MA-011	Radiotherapy and the principles and practice of pre-treatment procedures	5.0
RG-MA-012	Introduction to radiotherapy treatment planning	5.0
RG-MA-013	Principles and practice of radiotherapy delivery and patient care	10.0
Module of Internship: radiotherapy		ECTS 30
Objectives	To provide conditions for the student to expand his/her specific knowledge, skills and competences acquired on the relevant theoretical courses by linking independently the scientific approaches with the possibilities of its implementation in radiotherapy practice, thereby supporting the completion of Master's thesis	
Learning outcomes	On completion of the module the student will • be able to apply independently the specific profound knowledge and advanced skills acquired within the module of radiotherapy, demonstrating tolerance towards the diversity of attitudes and values and following the principles of professional ethics • be able to apply independently the in-depth knowledge and understanding of patient safety issues	

	relevant to radiotherapy • be able to apply independently the deep knowledge and understanding of quality control/assurance relevant to radiotherapy • promote the education of patients, other staff and students in radiotherapy , demonstrating willingness to actively participate in civil society • apply evidence-based and reflective radiotherapy practice , connecting his/her practical experience with theoretical development trends, current problems and potential applications providing the student an input for Master's thesis • report on findings as appropriate in radiotherapy • evaluate and promote the application of general knowledge and skills of oneself and the team (e.g. teamwork, communication, problem solving, judgement, patient advocacy), carry responsibility for the strategic performance of teams • critically evaluate and constantly improve their own competencies necessary for practising as the radiotherapy specialist and identify the needs for professional development and lifelong learning • work independently in situations requiring innovative approach and competences, initiating, planning and managing complex working processes and, analysing the outcomes	
Assessment:	The internship module is completed by practical exam (differentiated A to F).	
Subject code	Subjects	ECTS
RG-MA-014	1. Internship I	10.0
RG-MA-015	2. Internship II	16.0
RG-MA-016	3. Internship III	4.0