



## RTU Course "Introduction to Medical Engineering"

15D02 Medicīnas fizikas un biomedicīnas inženier.pr.g.

### General data

Code	MEE214
Course title	Introduction to Medical Engineering
Course status in the programme	Compulsory/Courses of Limited Choice; Courses of Free Choice
Course level	Undergraduate Studies
Course type	Professional
Field of study	Medical Engineering
Responsible instructor	Balodis Aldis
Volume of the course: parts and credits points	1 part, 3.0 Credit Points, 4.5 ECTS credits
Language of instruction	LV, EN
Possibility of distance learning	Not planned
Abstract	The study course covers the classification of medical equipment by interaction with human-generated and artificially generated energy. Diagnostic and treatment equipment in medical physics and biomedical engineering. Types of energy-based devices: electrical, magnetic, electromagnetic, mechanical, thermal, and acoustic. Computer applications. Medical equipment development trends.
Goals and objectives of the course in terms of competences and skills	
Structure and tasks of independent studies	
Recommended literature	1. The Biomedical Engineering Handbooks / Editor in chief Joseph D. Bronzino. CRC Press, Inc. 2005. - 2890 p. Zeidlers Ints. Klīniskā fizikālā medicīna, Rīga, Nacionālais apgāds, 2004. – 398 lpp Dehtjars J. Emziņš Dz., Jurkevics A. u.c. Radiācijas drošība radiologu asistentiem. Dehtjara J. redakcijā – Rīga, Rīgas Tehniskā universitāte, 2006., 336 lpp. ISBN 9984-32-203-3
Course prerequisites	

### Course outline

Theme	Hours
	2
	2
	2
	1
	1
	2
	2
	2
	2
	4
	2
	2
	4
	2
	1
	1

### Learning outcomes and assessment

Learning outcomes	Assessment methods

### Study subject structure

Part	CP	ECTS	Hours per Week			Tests			Tests (free choice)		
			Lectures	Practical	Lab.	Test	Exam	Work	Test	Exam	Work
1.	3.0	4.5	2.0	0.0	0.0		*		*		