



COURSE UNIT DESCRIPTION

Course unit title	Code
Physiotherapy tools and methods II/II	KTPG3115

Annotation

Lecturer(s)	Department, Faculty
Coordinating: R. Venskaitis Other: V. Tiukšienė	Vilnius university, Faculty of medicine, Department of Rehabilitation, physical and sports medicine.

Study cycle	Type of the course unit
1 st cycle	Mandatory

Mode of delivery	Semester or period when it is delivered	Language of instruction
Face-to-face	III semester	Lithuanian

Requisites	
Prerequisites: A student must have completed the following courses: Functional anatomy, Basics of rehabilitation, Kinesiology, Human physiology and biochemistry, Biomechanics of human movement, Physiotherapy assesment.	Co-requisites (if relevant): none

Number of ECTS credits allocated	Student's workload (total)	Contact hours	Individual work
5	135	66	69

Purpose of the course unit: programme competences to be developed		
To master the types of physical exercises and the principles and methods of their selection and performance techniques, taking into account the basic requirements for the physiotherapy procedure and treatment stage. Define general physical modalities characteristics, explain physical modalities effect on the body structures, indication and contraindication for their use, and, according to pacient complains and assessed status apply and perform appropriate physical modality or their combination, using correct methods and techniques..		
Learning outcomes of the course unit	Teaching and learning methods	Assessment methods
Be able to recognise pathological conditions, explain their effect on the body structures, use	Problem based learning, presentations, literature research and analysis, group discussion.	Continues assessment during semester (test).

appropriate methods of intervention knowledge, integrating them into practice.		Written exam at the end of the course.
Be able to gather and interpret information regarding patient condition, and, critically assessing it, to select appropriate physical modalities, correct methods and techniques of their use.	Problem based learning, presentations, literature research and analysis, group discussion.	Continues assessment during semester (test). Written exam at the end of the course.
Be able to gather and interpret information regarding patient condition, and, critically assessing it, to select appropriate therapeutic exercise , correct methods and techniques of their use.	Problem based learning, presentations, literature research and analysis, group discussion.	Continues assessment during semester (test). Written exam at the end of the course.

Contact hours	Individual work: time and assignments						Individual work: time and assignments		
	Lectures	Tutorials	Seminars	Workshops	Laboratory work	Internship/work	Contact hours, total	Individual work	Assignments
Therapeutic exercise									
1. History of physiotherapy. Purpose, principles and objectives of physiotherapy. Precautions and contraindications for physiotherapy. Active and passive physiotherapy. Exercising classification and their purpose Therapeutic exercise: impact on physical function. Therapeutic exercise dosing principles.	2			3			5	6	Literature research and analysis, practical tasks.
2. Safe exercises. Active exercises (elastic resistance).	1			2			3	5	Literature research and analysis, practical tasks.
3. Range of motion exercises, Active and passive stretching of impaired mobility. Contracture and their causes. Muscle length testing.	2			4			6	5	Literature research and analysis, practical tasks.
4. Resistance exercise for impaired muscle performance (isometric, isokinetic exercise). Open-chain and closed-chain exercise.	2			4			6	5	Literature research and analysis, practical tasks.
5. Principles of aerobic exercise, Relaxation exercises, ideomotor exercises, plyometric exercise.	2			3			5	5	Literature research and analysis, practical tasks..
6. Breathing exercises. Sounds gymnastics, bronchial drainage, therapeutic positions.	2			2			4	4	Literature research and analysis, practical tasks.
7. Aquatic exercise. The mechanical properties of the water.	1			2			3	5	Literature research and analysis, practical tasks..

8. Exercises for impaired balance. Core Stabilization in Therapeutic Exercise. Miofascial release.	2			4			6	5	Literature research and analysis, practical tasks.
Total:	14			24				41	
Physical agents									
1. General physical agents characteristics and general usage principles. Physical agents' usage in different pathological conditions. Compatible use of physical agents. Occupational safety at work place. Organisational job specificities working with physical agents.	2			1			3	4	Literature research and analysis, practical tasks.
2. Electrotherapy: usage of direct current, low and medium frequency impulse current. (Tens, electrical muscle stimulation)	2			3			5	6	Literature research and analysis, practical tasks.
3. Electrotherapy: usage of high frequency current and electromagnetic fields.	2			3			5	5	Literature research and analysis, practical tasks.
4. Compression therapy, Aerosol therapy, Hydrotherapy.	2			4			5	5	Literature research and analysis, practical tasks.
5. Phototherapy and laser therapy, ultrasound.	2			3			5	4	Literature research and analysis, practical tasks..
6. Thermal agents: heat and cold.	2			3			4	4	Literature research and analysis, practical tasks.
All:	12			16			26	30	
Total	26			40			66	69	

Assessment strategy	Weight %	Deadline	Assessment criteria
Tests during training	10	During semester	<p>Is able to select appropriate physical modalities and therapeutic exercises, correct methods and techniques of their use, participates in discussions. 100% participated.</p> <p>Is able to select appropriate physical modalities and therapeutic exercises, correct methods and techniques of their use, participates in discussions. Attended more than 33% training.</p> <p>Is not able to select appropriate physical modalities and therapeutic exercises, correct methods and techniques of their use, participates in discussions. Attended less than 66% training.</p>

Power poin presentation	40	During semester	<p>Assessed 6 each response fields: 1) the disclosure of the subject (4 points) 2) the volume and form of presentation, (1 point), 3) perception (2 points), 4) using scientific sources (1 point), 5) terminology (1 point), 6) the correctness of language (1 point).</p> <p>Total score of presentation is calculated by adding up all the areas of assessment scores. The resulting scores are averaged to the nearest whole number (mark value) of mathematical averaging rules: 10 (perfect) - when collected from 9.5 to 10 points; 9 (very good) - 8.5 to 9.49 points; 8 (good) - 7.5 to 8.49 points; 7 (on average) - 6.5 to 7.49 points; 6 (satisfactory) - 5.5 to 6.49 points; 5 (poor) - 4.5 to 5.49 points; 4 (unsatisfactory) - 3.5 to 4.49 points; 3 (unsatisfactory) - 2.5 to 3.49 points; 2 (unsatisfactory) - 1.5 to 2.49 points; 1 (unsatisfactory) - less than 1.49 points; 0 (evaluation has not happened) - when a student incorrectly disclose the content, did not submit the presentation or plagiarize.</p>
Examination: test	50	Test period	<p>Student can take examination after completed all task written in course unit (test and presentation)</p> <p>After spending training student must prepare presentation form teacher assigned topic.</p> <p>Examination:</p> <p>The test consists of closed-ended questions. In each issue one right answer (or several answers). Assessed a 10-point system:</p> <p>10 points - excellent knowledge and ability (95-100 percent questions);</p> <p>9 - very good knowledge and ability (85-94 percent questions);</p> <p>8 points - good knowledge and ability (75-84 percent questions);</p> <p>7 points - average knowledge and ability (65-74 percent questions);</p> <p>6 points - satisfactory knowledge and ability (55-64 percent questions);</p> <p>5 points - weak knowledge and ability (45-54 percent questions);</p> <p>4 - very poor (unsatisfactory) knowledge and ability (35-44 percent of the questions);</p> <p>3 points - unsatisfactory knowledge and ability (25-34 percent questions);</p> <p>2 points - unsatisfactory knowledge and ability (15-24 percent questions);</p> <p>1 point - unsatisfactory knowledge and ability (1-14 percent question).</p> <p>0 points - there is no single right answer or stopped testing because of student indiscipline.</p>

			Final course unit result consist of all tests and PowerPoint presentation: examination (K - 0,5), test during training (K - 0,1), power point presentation (K-0,4).
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Author	Publishing year	Title	Author	Publishing year
Required reading				
M. H. Cameron	2013	Physical Agents in Rehabilitation: From Research to Practice. 4 th edition	ISBN: 978-1-4557-2848-0 VU MF: 50866 MF:615.8 Ca-131 VU: 003 07793909 9	Medicinos fakulteto biblioteka Reabilitacijos, fizinės ir sporto medicinos centras
T. Watson	2008	Electrotherapy Evidence-Based Practice	ISBN: 978-0-443-10179-3 VU MF: 50939 VU MF biblioteka MF: 615.8 El-34 VU: 003 07796518 0	Medicinos fakulteto biblioteka Reabilitacijos, fizinės ir sporto medicinos centras
K. Žigienė	2006	Reabilitacijos ir fizioterapijos pagrindai: mokomoji knyga		Medicinos fakulteto biblioteka
G. Gorinienė, A. Gorinaitė	2006	Fizioterapija ir kurortiniai veiksniai.		MKIC saugykla
Carolyn Kisner, Lynn Allen Colby, John Borstad	2017	Therapeutic exercise: Foundations and Techniques, Seventh Edition	ISBN:9780803658509 615.8/Ki213 VU 003 07900966 0	VU MF biblioteka
Michael A. Clark, Scott C. Lucett, Brian G. Sutton	2014	NASM Essentials of Corrective Exercise Training: First Edition Revised	ISBN: 978-1284050257 MF 615.825/Na215 VU 003 07900990 5	VU MF biblioteka
Wolters Kluwer	2017	ACSM's Guidelines for Exercise Testing and Prescription, Tenth Edition	ISBN: 9781496339065 MF 615.8/Am-63 VU 003 07900996 7	VU MF biblioteka
NASM National Academy of Sports Medicine	2019	NASM essentials of Personal fitness training 6th ed.	ISBN: 978-1284160086 MF 796/Na-215 VU 003 07900967 7	VU MF biblioteka
T. Bompa; C. Buzzichelli;	2022	Periodization of Strength Training for sports	ISBN: 978-1-7182-0308-02	Medicinos fakulteto biblioteka Reabilitacijos, fizinės ir sporto medicinos centras
D. Joyce; D. Lewindon;	2022	High-performance Training for Sports.	ISBN: 978-1-4925-9290-7	Medicinos fakulteto biblioteka Reabilitacijos,

				fizinės ir sporto medicinos centras
B. Schoenfeld; R. Snarr;	2022	NSCA's Essentials of Personal Training	ISBN: 978-1- 4925-9672-1	Medicinos fakulteto biblioteka Reabilitacijos, fizinės ir sporto medicinos centras