



DESCRIPTION OF AMENDMENTS AND MODIFICATIONS TO UNDERGRADUATE, GRADUATE AND INTEGRATED UNDERGRADUATE AND GRADUATE STUDY PROGRAMMES

Table 2A Description of the new course

1. COURSE DESCRIPTION – GENERAL INFORMATION			
1.1. Course teacher	Assoc. Prof Josipa Nakić, PhD	1.6. Year of the study	3., 4., 5.
1.2. Name of the course	Occupational kinesiology	1.7. ECTS credits	2
1.3. Associate teachers		1.8. Type of instruction (number of hours L + S + E + e-learning)	15L+15S
1.4. Study programme (undergraduate, graduate, integrated)	Integrated	1.9. Expected enrolment in the course	20
1.5. Status of the course		1.10. Level of application of e-learning (level 1, 2, 3), percentage of online content instruction (max. 20%)	2 20%
2. COURSE DESCRIPTION			
2.1. Course objectives	The objectives of the course are as follows: 1. Present theoretical and practical knowledge of nonphysiological positions and dysfunctional movements, i.e., on the most common irregular performances of natural movement patterns as forms of physical activity of unconventional motor skills in different workplaces of workers. 2. Present theoretical and practical knowledge of desirable physiological positions and functional movements, that is, proper performance of natural movement patterns as forms of physical activity of unconventional motor skills in different workplaces of workers. 3. Present a possible association between the quality of postural movement habits of natural movement patterns and the prevalence of symptoms of musculoskeletal disorders of workers. 4. Connect theoretical and practical knowledge about the importance of automation of physiological positions and functional movements, i.e. proper performance of natural movement patterns in the workplace of administrative workers with the preservation of working capacity through primary and secondary prevention of the accumulation of micro-trauma on the locomotor apparatus of workers of different professions.		
2.2. Enrolment requirements and/or entry	General knowledge of the course of Basic Kinesiological Transformations 1, Basic Kinesiological Transformation 2, and Functional Anatomy.		



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competencies required for the course	
2.3. Learning outcomes at the level of the programme to which the course contributes	After completing and passing the course, students will acquire the necessary knowledge that will enable them to: 1. Study general principles of human locomotion, manage exercise and training processes and study exercise and training effects on the human organism. 2. Understand anthropometric, functional, motor, cognitive, and conative characteristics of the integral biopsychosocial status of subjects involved in the process of physical training and exercise. 3. Know and apply unconventional and conventional motor skills (knowledge) that are used in basic kinesiological transformations and in areas of applied kinesiology. 4. Apply knowledge on structural and biomechanical characteristics of particular kinesiological activities with the aim of analysing and evaluating the level of adoption of various motor skills (knowledge). 5. Apply the acquired knowledge on non-conventional kinesiological activities and natural movement patterns (basic kinesiological transformations and fitness programmes) in designing and conducting transformational processes in particular areas of applied kinesiology 6. Apply general and specific knowledge on methodology in teaching physical education (pe) classes at all levels of the educational system
2.4. Expected learning outcomes at the level of the course (3-10 learning outcomes)	After completing and passing the course, students will be able to: 1. Analyse the quality of performance of natural movement patterns, that is, the positions and movements in which workers work in different workplaces. 2. Recognize the basic mechanisms of injury and 2) maintain the musculoskeletal system and from the point of view of postural and moving habits. 3. Assess potentially the most common locations of symptoms of musculoskeletal disorders of workers depending on occupations. 4. Link the possible acute and chronic effects of the application of various mechanisms 1) injury and 2) preservation of the musculoskeletal system with the presence or absence of symptoms of musculoskeletal disorders of workers. 5. Raise awareness of the potential consequences of the continuous application of irregular natural movement patterns when working to reduce working capacity due to the possible occurrence of some symptoms of musculoskeletal disorders 6. Recommend an optimal way to adapt the body of workers to various work tasks according to the quantity and quality of work. 7. Select and construct new optimal mechanisms of movement and work for different work tasks of workers with the aim of preserving work ability. 8. Link basic information about the age and gender of workers with the quality of performance of statodynamic efforts. 9. Critically evaluate and solve practical kinesiological problems caused by physical activity and statodynamic efforts in the workplace of an administrative worker. 10. Create plans and programmes of theoretical and practical education of workers for work in a safe way from the point of view of the quality of statodynamic efforts that workers endure when performing various work tasks in different occupations.



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2.5. Course content (syllabus)	Theoretical lectures (L) and seminars (S) 1. Introduction to occupational kinesiology, cumulative trauma and presentation of theoretical and practical knowledge (2L + 2S) • Sitting and getting out of the chair • Body mass distribution when sitting • Positions and movements of the lumbar and thoracic spine when sitting • Positions and movements of the lumbar and thoracic spine when retrieving while sitting • Sitting and standing workplaces 2. History of occupational kinesiology in Croatia and presentation of theoretical and practical knowledge (2L + 2S) • Rotation of the lumbar spine around its axis while sitting • Rotation and avoidance of rotation of the thoracic spine from the sitting position • Rotation and bending of the lumbar spine while sitting • Support for the lower back while sitting 3. Basics of occupational safety, applied ergonomics, and presentation of theoretical and practical knowledge (2L + 2S) • Positions and movements of the cervical spine while sitting • Rotation of the cervical spine • Lateral tilts of the head and cervical spine • Position of the upper arms and body relative to the height of the chair 4. Basics of occupational medicine, respiratory system, discus hernia, and presentation of theoretical and practical knowledge (2L + 2S) • Positions and movements of forearms and fists when working on the keyboard • Positions of the forearm and hand movements when working with the mouse • Positions and movements of the arms and legs when sitting informally • Positions and body movements when using a mobile phone from a sitting position
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	5. Musculoskeletal disorders caused or associated with statodynamic efforts and presentation of theoretical and practical knowledge (2L + 2S) • Body positions and movements when using a mobile phone from a standing position • Positions and movements of the lumbar and thoracic spine when tilting over the table while standing • Squatting and its variants when lifting objects from the floor • Deadlift and its variants when lifting objects from the floor • Manual transport of cargo 6. Natural movement patterns and presentation of theoretical and practical knowledge (2L + 2S) • Rotation of bodies from standing • Rotation and bending of the lumbar part of the spine while standing • Instability of the lumbar and cervical spine when raising the arms above the level of the head • Carrying a bag on the shoulder 7. Static dynamic efforts in workplaces, criteria for rotating work / tasks, exercise with the aim of preserving work ability and educating workers to work safely and showing theoretical and practical knowledge (2L + 2S) • Standing • Walking • Walking in heels • Working from home - Adjusting the height of the kitchen chair and table 8. National curricula and occupational kinesiology and presentation of theoretical and practical knowledge (1P + 1S) • Working from home - The influence of the position of the laptop screen on the position of the body • Working from home - Laptop screen position in a situation where we don't have an additional keyboard and mouse
2.6.	2.7.



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2.8.			2.9.						
2.10.			2.11.						
2.12.			2.13.						
2.14.			2.15.						
2.16. Format of instruction:	☒ lectures ☒ seminars and workshops ☐ exercises ☐ online in entirety ☒ partial e-learning ☒ field work	☒ independent assignments ☐ multimedia and the internet ☐ laboratory ☐ work with mentor ☐ (other)	2.17. Comments:						
2.18. Student responsibilities	Students are required to attend lectures and seminars. They are also required to read and prepare for seminar discussions.								
2.19. Monitoring student work	Class attendance	YES 0,5 ECTS	NO	Research	YES	NO	Oral exam	YES	NO
	Experimental work	YES	NO	Report	YES	NO	(other)	YES	NO
	Essay	YES	NO	Seminar paper	YES 0,25 ECTS	NO	(other)	YES	NO
	Preliminary exam	YES 0,25 ECTS	NO	Practical work	YES 0,25 ECTS	NO	(other)	YES	NO
	Project	YES	NO	Written exam	YES 0,75 ECTS	NO	ECTS (total)	2	



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	Title	Dostupnost u knjižnici	Availability via other media
2.20. Required literature	Nakić, J. (2022). Occupational kinesiology: Proper postural-movements habits and exercise with the aim of preserving the health of the musculoskeletal system of administrative workers. Ministry of Labour, Pension System, Family and Social Policy, Directorate for Work and Safety at Work, Zagreb.	YES	https://uznr.mrms.hr/wp-content/uploads/2022/06/Prirucnik-web.pdf
	Muscle & Motion (2019.) All about strength training. Online program available from:: Multifit, Billoo 10, T.A, Israel.		http://www.muscleandmotion.com/multifitHomePage.aspx
	Nakić, J. (2022). Kineziologija rada: Povezanost posturalno-kretnih navika i simptoma mišićno-koštanih poremećaja administrativnih radnika. Ministarstvo rada, mirovinskog sustava, obitelji i socijalne politike, Uprava za rad i zaštitu na radu. Zagreb.	YES	https://uznr.mrms.hr/wp-content/uploads/2022/06/Studija-web.pdf
3. Optional literature (name the title)	1. McGill, S. (2015). Back Mechanic: The secrets to a healthy spine your doctor isn't telling you. Backfitpro Inc., Gravenhurst, Ontario, Canada. 2. McGill, S. (2014). Ultimate back fitness and performance. Wabuno Publishers, Backfitpro Inc., Waterloo, Ontario, Canada. 3. McGill, S. (2007). Low Back Disorders. Human Kinetics, Champaign IL, USA, 2007. 4. Nakić, J. (2022). Occupational Kinesiology: Connection between postural-moving habits and symptoms of musculoskeletal disorders of administrative workers. Ministry of Labour, Pension System, Family and Social Policy, Directorate for Work and Safety at Work. Zagreb. Available at https://uznr.mrms.hr/wp-content/uploads/2022/06/Studija-web.pdf 5. Nakić, J. (2019). Occupational Kinesiology: Basics of Correct Manual Handling in the Printing Industry. Trade Union in Printing and Publishing Industry of Croatia. Available from: https://www.sgim.hr/wp-content/uploads/data/kineziologija-rada-en.pdf 6. Nakić, J. (2018). Correct Posture and Movement habits - with the aim of preventing back pain. Ina d.d., oil company. 7. Nakić, J. (2018). Correct Sitting positions in Offices - with the aim of preventing back pain. Ina d.d., Oil company. 8. Nakić, J. (2018). Exercising at the Office - with the aim of preventing back pain. Ina d.d., Oil company. 9. Nakić, J. (2018). Tehniques for Safe Entering and Exiting a Vehicle Weighing over 2.5 t. - with the aim of preventing back pain. Ina d.d., Oil company.		



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	http://bib.irb.hr/datoteka/996250.TECHNIQUES_FOR_SAFE_ENTERING_AND_EXITING_I_VEHICLE_WEIGHING_OVER_205 t.pdf 10. Nakić, J. (2018). Correct Manual Load handling - with the aim of preventing back pain. Ina d.d., Oil company. http://bib.irb.hr/datoteka/996229.CORRECT_MANUAL_LOAD_HANDLING - with the aim of preventing back pain.pdf 11. Ordinance on occupational safety of workers exposed to statodynamic, psychophysiological and other efforts at work (NN, 71/14, 118/14, 94/18 i 96/18) https://narodne-novine.nn.hr/clanci/sluzbeni/2021_06_73_1375.html
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