

A COURSE SYLLABUS – DOCTORAL SCHOOL
REGARDING THE QUALIFICATION CYCLE FROM 2022 TO 2026 .

GENERAL INFORMATION ABOUT COURSE				
Course title	Diagnostics in sports and health training			
Name of the unit running the course	Doctoral School at the University of Rzeszów			
Type of course (<i>obligatory, optional</i>)	Optional			
Year and semester of studies	II / IV semester			
Discipline	Physical Culture Sciences			
Language of Course	Polish / English			
Name of Course coordinator	Dr hab. Emilian Zadarko, prof. UR			
Name of Course lecturer	Dr hab. Emilian Zadarko, prof. UR			
Prerequisites	Anatomy, Physiology			
BRIEF DESCRIPTION OF COURSE (100-200 words)				
<p>The aim of the Diagnostics in sports and health training course is to acquire basic knowledge, skills and social competences enabling the development of a researcher's work in the of sports and health training diagnostics. The classes are aimed at preparing and acquiring the ability to develop written research tasks supported by literature studies. Ability to diagnose and interpret fitness and physical activity results for people of different ages. Programming training units, safety rules in sports training and health.</p>				
COURSE LEARNING OUTCOMES AND METHODS OF EVALUATING LEARNING OUTCOMES				
Learning outcome	The description of the learning outcome defined for the course	Relation to the degree programme outcomes (symbol)	Learning Format (Lectures, classes,...)	Method of assessment of learning outcomes (e.g. test, oral exam, written exam, project,...)
Knowledge (no.)	(Knows and understands)			
1.	Application of diagnostics in sports and health training in scientific research in the field of medical and health sciences physical culture sciences.	P8S_WG1	Lab.	written exam
2.	The use of modern methods and diagnostic devices in laboratory and field environments. Using modern technologies, including mobile applications to diagnose physical fitness and control sports training.	P8S_WG2	Lab.	written exam
3.	Conceptual grid of the discipline of physical culture science (also in a foreign language leading to it) and related disciplines.	P8S_WG3	Lab.	written exam
4.	The use of health training and diagnosis in the prevention of lifestyle diseases	P8S_WK1	Lab.	written exam
Skills (no.)	(Able to)			

1.	Use knowledge of various anatomy and physiology to creatively identify and innovatively solve complex problems or perform research tasks, in particular: <ul style="list-style-type: none"> • define the purpose and subject of scientific research, formulate a research hypothesis, • develop methods, techniques and research tools and apply them creatively, • draw conclusions based on scientific research. 	P8S_UW1	Lab.	project		
2.	Use scientific literature to identify and solving research and related problems with innovative activities, and also uses the appropriate workshop to create new elements of this achievement.	P8S_UW2	Lab.	project		
3.	Make a critical analysis and assessment of the results of scientific research, expert activity and other creative work and their contribution to the development of knowledge.	P8S_UW3	Lab.	project		
4.	Use a foreign language at the B2 level of the European System Language Education to the extent enabling participation in international scientific and professional environment	P8S_UK6	Lab.	project		
Social competence (no.)	(Ready to)					
1.	Recognizing the importance of knowledge in solving cognitive problems and practical.	P8S_KK3	Lab.	observation during classes		
LEARNING FORMAT – NUMBER OF HOURS						
Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
4	-	-	15	-	-	2
METHODS OF INSTRUCTION						
Conversatorium, project						
COURSE CONTENT						
1) Health Related Fitness H-RF and Motor Fitness Performance M-FP concepts. 2) Basics of laboratory and field diagnostics. 3) Methods of assessing physical activity. 4) Exercise Readiness Questionnaire PAR-Q. Placement test. 5) Criteria for the effectiveness of health training. Health training programming. 6) Diagnostics and evaluation of the effects of the training process. 7) Field activities. Practical conduct and monitoring of health training. 8) Using physiological tests in athlete training.						

- 9) Energy of physical efforts as a basis for their classification.
- 10) Determination of metabolic thresholds.
- 11) Energy transfer systems during physical exercise, measurements - energy costs of physical exercise, calculation of energy consumption
- 12) Selected tests and trials used to assess the coordination and fitness of a player's motor skills in team games and individual sports.
- 13) Laboratory and field tests to assess physical performance.
- 14) Direct and indirect methods of measuring maximum oxygen uptake.
- 15) Selected issues in the diagnosis of disabled athletes

COURSE ASSESSMENT CRITERIA

The points obtained in the written exam and the practical project are converted into percentages corresponding to the grades:

- 1) below 50% - 2.0
- 2) 51% - 60% - 3.0
- 3) 61% - 70% - 3.5
- 4) 71% - 80% - 4.0
- 5) 81% - 90% - 4,5
- 6) 91% - 100% - 5

The condition for admission to the exam is obtaining a positive grade from the project

TOTAL PhD STUDENT WORKLOAD REQUIRED TO ACHIEVE THE INTENDED LEARNING OUTCOMES – NUMBER OF HOURS AND ECTS CREDITS

Activity	Number of hours
Scheduled course contact hours	15
Other contact hours involving the teacher (consultation hours, examinations)	10
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	25
Total number of hours	50
Total number of ECTS credits	2

INSTRUCTIONAL MATERIALS

Compulsory literature:	<ol style="list-style-type: none"> 1. Górski J.; Fizjologiczne podstawy wysiłku fizycznego, PZWL, Warszawa, 2001. 2. Kuński H.; Trening Zdrowotny osób dorosłych, Poradnik lekarza i trenera, Medsportpress, Warszawa 2003. 3. Fortuna M. Trening zdrowotny w wybranych chorobach kardiologicznych, Wyd. KPSW w Jeleniej Górze, 2012. 4. Bompa Tudor O.; Haff Gregory G.; Periodyzacja teoria i metodyka treningu, Biblioteka trenera, Warszawa 2010. 5. Trzaskoma Z.; Aktualne problemy w procesie zwiększenia siły i mocy sportowców, Instytut Sportu, Warszawa 2016.
------------------------	--

	<ol style="list-style-type: none"> 6. Jastrzębski Z.; Wytrzymałość, szybkość i siła specjalna zawodników zespołowych gier sportowych i sportów indywidualnych na różnych etapach przygotowań; Akademia Wychowania Fizycznego i Sportu, Gdańsk 2014. 7. Kusy K.; Zieliński J. (red.); Diagnostyka w sporcie, podręcznik nowoczesnego trenera; AWF, Poznań 2017. 8. Trzaskoma Z.; Aktualne kierunki badawcze i szkoleniowe w procesie treningowym sportowców, Instytut Sportu, Warszawa 2016.
Complementary literature:	<ol style="list-style-type: none"> 1. Jaskólski A., Jaskólska A.; Podstawy wysiłku fizycznego z zarysem fizjologii człowieka. AWF Wrocław 2006 2. Drabik J.; Aktywność fizyczna w treningu osób dorosłych, Część I, II, AWF Gdańsk 1996. 3. Kuński H., Drygas W. Trening zdrowotny, Medicina Sportiva Kraków 2003 4. Nowak P. Trening zdrowotny kobiet w kontekście współczesnego stylu życia, PWSZ w Raciborzu, 2007. 5. Adamczyk T., Goły M., Matuszkowiak A. Trening zdrowotny z nordick walking, Wyd. RAABE 2009 6. Potocka, N., Penar-Zadarko, B., Skrzypa, M., Braun, M., Zadarko-Domaradzka, M., Ozimek, M., ... & Zadarko, E. (2019). Association of ACTN3 Polymorphism with Body Somatotype and Cardiorespiratory Fitness in Young Healthy Adults. <i>International journal of environmental research and public health</i>, 16(9), 1489. https://doi.org/10.3390/ijerph16091489 7. Iskra J., Grabara M., Trening zdrowotny : podstawy teoretyczne i praktyczne rozwiązania, Akademia Wychowania Fizycznego im. Jerzego Kukuczki w Katowicach, Katowice 2022. 8. Gabryś T.; Szmatlan- Gabryś U.; Ficek K.; Biomedyczne uwarunkowania treningu młodych sportowców, Biblioteka trenera, Warszawa 2004. 9. B. J. Sharkey; S. Gaskill ; Fizjologia sportu dla trenerów, Centralny Ośrodek Sportu, Warszawa 2013 10. Zadarko, E., Przednowek, K. H., Barabasz, Z., Zadarko-Domaradzka, M., Nizioł-Babiarz, E., Hulewicz, T., ... & Przednowek, K. (2023). Prediction of Cardiorespiratory Fitness Level of Young Healthy Women Using Non-Exercise Variables. <i>Applied Sciences</i>, 13(24), 13251. 11. Zadarko, E., Zadarko-Domaradzka, M., Barabasz, Z., & Sobolewski, M. (2022). A Non-Exercise Model for Predicting Cardiovascular Risks among Apparently Healthy Male Office Workers—Cross-Sectional Analysis: A Pilot Study. <i>International Journal of Environmental Research and Public Health</i>, 19(5), 2643.