COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-I-S-25/26Z**	
Unit: **Moduł B: diagnostyka laboratoryjna [moduł]**	
Course title: **Exercise biochemistry with elements of bioenergetics (POZOSTAŁE PRZEDMIOTY / MODUŁY)**	Course code: **US113AIJ2980_33S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 3 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	laboratory	30	0	pg	4
		lecture	15	0	pg	
Total			**45**			**4**

Course / module coordinator	**dr hab. ROBERT NOWAK**
Course instructor	**dr hab. ROBERT NOWAK**
Course / module objectives	**To familiarize students with the basic biochemical methods used in sports laboratory diagnostics to assess the health of athletes and diagnose selected disease states. The student must acquire readiness for teamwork. The student is expected to acquire laboratory work skills.**
Prerequisites	**Basic knowledge of human biochemistry and physiology**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student describes the most common metabolic disorders and post-exercise changes at the level of human biochemistry.**	**K_W02 K_W04**
	2	**EP2**	**The student discusses the bioenergetic aspects of selected changes in laboratory diagnostic markers under constant physical exertion.**	**K_W13**
skills	**1**	**EP3**	**The student correctly recognizes metabolic disorders and post-exercise changes based on the obtained test results.**	**K_U10 K_U14**
	2	**EP4**	**Under the supervision of a scientific supervisor, the student performs biochemical analyses most frequently used in laboratory diagnostics.**	**K_U02**
	3	**EP5**	**The student prepares a well-documented study of experimental research results.**	**K_U05**
social competences	**1**	**EP6**	**The student is ready to cooperate and work in a group**	**K_K05**
	2	**EP7**	**The student is ready to update their knowledge and is aware of its practical importance.**	**K_K01 K_K07**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Exercise biochemistry with elements of bioenergetics**			
Format of instruction: **lecture**			
1. **Introduction. The most important sources of energy during exercise. Carbohydrate metabolism - glycolysis.**	3	1	0

2. **Integration of carbohydrate and lipid metabolism - Krebs cycle, beta-oxidation**	3	2	0
3. **Chemiosmotic energy conversion**	3	2	0
4. **Transport of molecules across membranes. Quantitative approach to bioenergetics**	3	2	0
5. **Chemiosmotic proton turnover**	3	2	0
6. **The respiratory chain as the proper site of ATP synthesis**	3	2	0
7. **ATP synthase and its role in energy production**	3	4	0
Format of instruction: **laboratory**			
1. **Principles for safe work in the laboratory**	3	2	0
2. **Energy carriers and energy stores in the human body**	3	2	0
3. **Assessment of purine nucleotide levels using instrumental methods**	3	10	0
4. **Creatine kinase as a biochemical marker in sports diagnostics**	3	4	0
5. **How to equip a trainer's portable laboratory?**	3	10	0
6. **Final summary of laboratory exercises**	3	2	0

Modes of delivery	**group work, performing laboratory experiments (exercises), audiovisual presentation (lectures)**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP3,EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Assessment of exercises based on the correct completion of tasks. The written exam covers the knowledge from the lectures. Exam grading structure (based on the percentage of points earned):** **60-69% - satisfactory** **70-74% - satisfactory +** **75-84% - good** **85-89% - good +** **90-100% - very good** **Independent completion of both forms of study is required.**	
	Grade calculation principles	
	The final grade is a weighted average of the exercise grade (25%) and the exam grade (75%).	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	biochemia wysiłku fizycznego z elementami bioenergetyki		Ważona	
	3	biochemia wysiłku fizycznego z elementami bioenergetyki [laboratorium]	zaliczenie z oceną		0,25
	3	biochemia wysiłku fizycznego z elementami bioenergetyki [wykład]	zaliczenie z oceną		0,75

Basic reading	Banfi G., Colombini A., Lombardi G., Lubkowska A. (2012): Metabolic markers in sports medicine, Advances in Clinical Chemistry, 56: 1-54
	Hübner-Woźniak E., Lutosławska G. (2000): Podstawy biochemii wysiłku fizycznego, Biblioteka Trenera, Warszawa
	Nicholls D.G., Ferguson S.J. (1995): Bioenergetyka 2, Wydawnictwo Naukowe PWN , Warszawa

Supplementary reading	Chamera T., Spieszny M., Klocek T.Kostrzewa-Nowak D., Nowak R., Lachowicz M., Buryta R., Fice K., Moska W., Eider J., Cięszczyk P. (2015): Post-effort changes in activity of traditional diagnostic enzymatic markers in football players' blood, Journal of Medical Biochemistry, 34(2): 179-190
	Koolman J., Röhm K.-H. (2005): Biochemia. Ilustrowany przewodnik, Wydawnictwo Lekarskie PZWL, Warszawa
	Kostrzewa-Nowak D., Nowak R., Chamera T., Buryta R., Moska W., Cięszczyk P. (2015): Post-effort chances in C-reactive protein level among soccer players at the end of the training season, Journal of Strength and Conditioning Research, 29(5): 1399-1405

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**15**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**20**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-I-S-25/26Z**	
Course title: **pierwsza pomoc (KIERUNKOWE)**	Course code: **KFZ113AIJ3451_13S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 4 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	discussion classes	10	0	pg	1
Total			**10**			**1**

Course / module coordinator	**dr MACIEJ ZAWADZKI**
Course instructor	**dr MACIEJ ZAWADZKI**
Course / module objectives	**Familiarizing students with the theoretical and practical basics of pre-medical first aid. Acquisition of teamwork skills. Acquisition of skills to provide first aid to the injured.**
Prerequisites	**none**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**the student knows the symptoms of basic disorders of the body's functioning.**	**K_W04**
	2	EP2	**the student knows the theoretical basics of first aid**	**K_W09**
skills	1	EP3	**the student is able to identify the problems of a person in a situation threatening his health and life.**	**K_U04**
	2	EP4	**the student is able to take action to save human health and life**	**K_U04**
social competences	1	EP5	**the student is aware of his own limitations and knows when to turn to experts**	**K_K01**
	2	EP6	**the student provides assistance in a way that ensures their own safety and that of the environment.**	**K_K08**
	3	EP7	**The student is convinced of the need to help the injured in accordance with the applicable law.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **pierwsza pomoc**			
Format of instruction: **discussion classes**			
1. **The importance of first aid for human health and life. Legal aspects of first aid.**	4	1	0
2. **Characteristics of basic activities that save the health and life of a child and an adult. Cardiopulmonary resuscitation.**	4	3	0
3. **Principles of first aid in special situations: choking, fainting and fainting, burns, hypothermia, heat stroke, cerebral stroke, electric shock, poisoning, special accidents.**	4	4	0
4. **Accidents in schools and educational institutions.**	4	2	0

Modes of delivery	**multimedia presentation, seminars, demonstration with explanation, situational method, simulation method**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP6,EP7**
	PROJEKT	**EP1,EP2,EP3,EP4,EP5,EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Grading the course. Determining the final grade on the basis of attendance at the exercises, grades from individual practical exercises**	
	Grade calculation principles	
	Grading the course. Determining the final grade on the basis of attendance at the exercises, grades from individual practical exercises	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	pierwsza pomoc		Ważona	
	4	pierwsza pomoc [ćwiczenia]	zaliczenie z oceną		1,00

Basic reading	Polska Rada Resuscytacji (2016): Wytyczne resuscytacji 2015, Copyright for the Polish edition by Polska Rada., Krako?w
Supplementary reading	

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**10**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**4**	**0**
Private reading and studying	**2**	**0**
Participation in tutorials	**2**	**0**
Preparation of project / essay / etc.	**2**	**0**
Preparation for test / exam	**3**	**0**
TOTAL workload	**25**	
ECTS credits	**1**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-II-S-25/26Z**						
Course title: **Fundamentals of biological regeneration in sport (KIERUNKOWE)**					Course code: **KFZ113AIIJ3451_41S**	
Name of field of study: **diagnostyka sportowa**						
Mode and cycle of study: **second degree, full - time**		Profile of study: **general academic**			Specialty:	
Course / module status **obligatory**			Language of instruction: **semester: 4 - polish language**			
Year	**Semester**	**Form of instruction**	**No. of hours**		**Type of credit**	**ECTS**
				including e-learning		
2	4	discussion classes	30	0	pg	4
		lecture	10	0	e	
Total			**40**			**4**
Course / module coordinator	**dr MONIKA NIEWIADOMSKA**					
Course instructor	**dr KRZYSZTOF WILK**					
Course / module objectives	**Gaining basic knowledge about methods and biological regeneration measures that support the training process, teaching basic relaxation and sports massage techniques, preparing to show empathy towards the patient and paying attention to the safety of the patient and therapist during treatments.**					
Prerequisites	**lack**					

LEARNING OUTCOMES

Category	**No.**	**Code**	**Description**	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Knows the goals and tasks of biological regeneration, characterizes the physical treatments used in biological regeneration.**	**K_W01**
skills	**1**	**EP2**	**Able to select appropriate wellness measures in the training process and perform selected sports massage techniques**	**K_U13**
social competences	**1**	**EP3**	**Understands the principles of ethics in contacts with patients and is ready to take care of the health and safety of the athlete when performing biological regeneration treatments.**	**K_K03 K_K08**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Fundamentals of biological regeneration in sport**			
Format of instruction: **lecture**			
1. **Definition of wellness. Goals and objectives for wellness in sports.**	4	2	0
2. **Massage - definition, types of massage, use in biological regeneration.**	4	2	0
3. **Products used in wellness salons and spa facilities. Wellness salon**	4	2	0
4. **Physical treatments used in biological regeneration: electrotherapy, thermotherapy, laser therapy, magnetic field, ultrasound therapy.**	4	4	0
Format of instruction: **discussion classes**			
1. **Preparation and preparation of the massage room, expansion action, regular, preparation for the procedure**	4	2	0
2. **Classic massage of the upper and lower limbs, shoulder girdle, pelvic girdle, back, and neck using techniques of stroking, rubbing, kneading, tapping, vibration, shaking, and rolling, taking into account various sports disciplines.**	4	24	0

3. **Post-isometric muscle relaxation - concept, goals and tasks, relaxation technique for selected muscle groups**	4	4	0

Modes of delivery	**Multimedia presentation, show.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP3**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP2**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Lectures: Assessment based on a passing grade on the exam (single-choice test). To receive a passing grade, the following percentage of correct answers must be achieved:** **60-69% - satisfactory grade** **70-74% - satisfactory grade** **75-84% - good grade**
	Grade calculation principles
	The final grade for the course is the arithmetic average of the grades from the exam and the tutorials.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	podstawy odnowy biologicznej w sporcie		Arytmetyczna	
	4	podstawy odnowy biologicznej w sporcie [ćwiczenia]	zaliczenie z oceną		
	4	podstawy odnowy biologicznej w sporcie [wykład]	egzamin		

Basic reading	Gieremek K., Dec L. (2002): Zmęczenie i regeneracja sił. Odnowa biologiczna, HM , Katowice
	Magiera L. Walaszek R. (2008): Masaż sportowy z elementami odnowy biologicznej, BIOSPORT, Kraków
	Pawelec R., Szczuka E., Laber W. (2011): Metodyka masażu w odnowie biologicznej, AGIW, Wrocław
Supplementary reading	Barszowski P. (2000): Wspomaganie procesu treningowego, Centralny Ośrodek Sportu, Warszawa
	Mika T. (2008): Fizykoterapia, PZWL, Warszawa

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**40**	**0**
Participation in test / exam	**6**	**0**
Preparation for contact hours	**14**	**0**
Private reading and studying	**11**	**0**
Participation in tutorials	**19**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-II-S-26/27Z**	
Unit: **Przedmiot do wyboru w jęz. angielskim [moduł]**	
Course title: **genetic basis of health (POZOSTAŁE PRZEDMIOTY / MODUŁY)**	Course code: **KFZ113AIIJ3451_14S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **second degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 2 - english language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	2	discussion classes	15	0	pg	3
		lecture	5	0	pg	
Total			**20**			**3**

Course / module coordinator	**dr hab. MAREK SAWCZUK**
Course instructor	**dr inż. JAKUB SKORUPSKI**
Course / module objectives	**Presentation of the basic concepts, regularities and problems regarding the genetic basis of human health. Acquainting with substituted elements of clinical genetics related to metabolic disorders and risk factors for human injuries. Acquiring the ability to recognize the basic symptoms of human genetic disorders.**
Prerequisites	**Basic knowledge of genetics and cell biology.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP3**	**The student understands the contribution of genetic factors in the metabolism of basic nutrients and maintenance of homeostasis and adaptation processes to environmental changes.**	**K_W08 K_W15**
	2	**EP8**	**The student has knowledge about the importance of genetic variants as genetic risk factors for injury in sports players.**	**K_W09 K_W17**
skills	**1**	**EP4**	**Student is able to recognize the basic symptoms of genetically determined metabolic blocks occurring in humans.**	**K_U08 K_U14**
	2	**EP5**	**The student has the ability to identify problems in the field of clinical genetics and knows the basic ways to solve them.**	**K_U08 K_U10**
social competences	**1**	**EP6**	**The student is eager to interact with other team members to solve genetic problems.**	**K_K03 K_K05 K_K07**
	2	**EP7**	**The student actively promotes and popularizes knowledge of clinical genetics in a sports environment.**	**K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **genetic basis of health**			
Format of instruction: **lecture**			

1. **Structure of DNA and RNA**	2	2	0
2. **Mechanisms of genetic expression**	2	3	0
Format of instruction: **discussion classes**			
1. **Introduction to human genetics with elements of clinical genetics**	2	3	0
2. **Scheme of autosomal and sex-linked inheritance in humans**	2	3	0
3. **Principles of multifactorial inheritance in humans**	2	3	0
4. **Genetic basis of carbohydrate and protein metabolism disorders**	2	3	0
5. **Genetic basis of lipid metabolism and metal absorption disorders**	2	3	0

Modes of delivery	**lectures conducted in an informative and conversational form using multimedia presentations, auditorium exercises conducted using the group work method**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP3,EP8**
	SPRAWDZIAN	**EP4,EP5**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP6,EP7**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Completing lectures: final grade from lectures issued on the basis of colloquium grade.** **Completion of classes: final grade from exercises based on the test grade and activity in the classes.**
	Grade calculation principles
	The final grade for the subject is calculated on the basis of the final grade of the exercises and the grade of the exam in a 1: 1 ratio.

	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
Final grade calculation method	2	genetic basis of health		Arytmetyczna	
	2	genetic basis of health [wykład]	zaliczenie z oceną		
	2	genetic basis of health [ćwiczenia]	zaliczenie z oceną		

Basic reading	Brown T.A. (Red.) (2015): Genomy, Wydawnictwo PWN
	Connor M, Ferguson-Smith M. (1998): Podstawy genetyki klinicznej, Wydawnictwo PZWL
	Jorde LB (Red.) (2000): Genetyka medyczna, Wydawnictwo Czelej
Supplementary reading	Węgleński P. (Red.) (2012): Genetyka molekularna, Wydawnictwo PWN

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**20**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**15**	**0**
Private reading and studying	**13**	**0**
Participation in tutorials	**13**	**0**

Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**12**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-I-S-25/26Z**	
Unit: **Moduł A: genetyka w sporcie**	
Course title: **Genetic diagnostics in sport (POZOSTAŁE PRZEDMIOTY / MODUŁY)**	Course code: **KFZ113AIJ3451_1S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic**
Specialty:	
Course / module status **elective**	Language of instruction: **semester: 4 - polish language**

Year	Semester	Form of instruction	No. of hours		Type of credit	ECTS
				including e-learning		
2	4	laboratory	30	0	pg	3
Total			**30**			**3**

Course / module coordinator	**dr hab. MAREK SAWCZUK**
Course instructor	**dr hab. MAREK SAWCZUK**
Course / module objectives	**Acquainting with issues in the field of molecular and genetic diagnostics in sport**
Prerequisites	**None.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student knows what lies at the basis of human genetic variability, knows the impact of molecular differences on the exercise and post-exercise variable adaptation of the human body.**	**K_W02**
	2	**EP2**	**The student knows the conditions for maintaining a dynamic balance of the environment of processes taking place in the body at the molecular level, taking into account the specificity of physical activity**	**K_W04**
	3	**EP3**	**The student has basic knowledge regarding the planning and use of techniques and methods in the field of genetic sports diagnostics**	**K_W13**

skills	**1**	**EP4**	**The student knows how to make basic measurements in the field of sport genetics and their evaluation and the use of techniques and methods of molecular sports diagnostics**	**K_U02**
	2	**EP5**	**The student is able to use the basic methods of numerical data analysis for the initial verification of the results generated during the experiment in the field of sport diagnostics**	**K_U06**
	3	**EP6**	**The student is able to supplement the safety data sheet of an athlete or amateur with the data generated in the genetic experiment and interpret the results obtained**	**K_U10**
	4	**EP7**	**The student knows how to apply the right research methodology in the field of sport genetics for the purpose of conducting a research experiment**	**K_U11**
	5	**EP8**	**The student is able to independently plan and perform laboratory analyses in the field of molecular genetics and is able to prepare appropriate documentation of the experiment**	**K_U12**
social competences	**1**	**EP9**	**The student is aware of the need to critically assess the level of his knowledge and professional competence**	**K_K01**
	2	**EP10**	**The student complies with the rules of honesty in science, while respecting the provisions of law relating to issues related to diagnostics and sport.**	**K_K02**
	3	**EP11**	**The student shows respect and understanding towards people with whom he cooperates during the implementation of research projects and tasks**	**K_K03**
	4	**EP12**	**The student is able to effectively provide information in the field of sports diagnostics**	**K_K06**
	5	**EP13**	**The student is oriented on self-improvement aimed at continuous improvement of knowledge**	**K_K07**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Genetic diagnostics in sport**			
Format of instruction: **laboratory**			
1. **Isolation of nucleic acids from whole blood and buccal epithelial cells**	4	7	0
2. **PCR reaction and quantitative real-time PCR (qPCR)**	4	8	0
3. **Determination of human sex using PCR analysis**	4	6	0
4. **Genotyping of selected genetic sport markers**	4	9	0

Modes of delivery	**Laboratory exercises conducted using the group work method, Solving problems related to laboratory work (selection of analysis methods, development of research methodology, difficulties in interpreting results), Experimental exercises combined with discussion** The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3,EP4,EP5,EP6,EP7,EP8**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP10,EP11,EP12,EP13,EP4,EP5,EP7,EP8,EP9**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Passing classes: based on the activity during the classes and the results of the test. Percentage grade distribution:** **60-69% - satisfactory (dst)** **70-74% - satisfactory plus (dst+)** **75-84% - good (db)** **85-89% - good plus (db+)** **90-100% - very good (bdb)**
	Grade calculation principles
	The final grade of the subject is issued on the basis of the final grade of the test and evaluation of the activity during the classes

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	diagnostyka genetyczna w sporcie		Ważona	
	4	diagnostyka genetyczna w sporcie [laboratorium]	zaliczenie z oceną		1,00

Basic reading	Cięszczyk P., Maciejewska A., Sawczuk M. (2008): Badania genetyczne w sporcie , Wydawnictwo Qprint , Szczecin
	Cięszczyk P., Red. (2021): Genetyka sportowa, PZWL, Warszawa
	Słomski R. (2011): Analiza DNA. Teoria i praktyka , Wydawnictwo Uniwersytetu Przyrodniczego w Poznaniu , Poznań
Supplementary reading	O'Connell K i wsp. (2013): Collagen gene sequence variants in exercise-related traits , Central European Journal of Sport Sciences and Medicine 1: 3–17
	Posthumus M. Collins M. (2016): Genetics and Sports , Wydawnictwo Karger
	Sawczuk M. i wsp. (2011): The role of genetic research in sport , Science & Sports 26: 251-258
	Wang G. i wsp. (2013): Czy w sporcie miarodajne są testy genetyczne? , Sport Wyczynowy 3-4 (547-548): 68-83 2013

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**18**	**0**
Private reading and studying	**5**	**0**
Participation in tutorials	**10**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-I-S-24/25Z**	
Unit: **Moduł A: medycyna sportowa [moduł]**	
Course title: **zdrowotne aspekty aktywności fizycznej (POZOSTAŁE PRZEDMIOTY / MODUŁY)**	Course code: **US113AIJ2983_57S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **elective**	Language of instruction: **semester: 6 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
3	6	discussion classes	15	0	pg	2
		lecture	15	0	pg	
Total			**30**			**2**

Course / module coordinator	**dr MAŁGORZATA PACZYŃSKA-JĘDRYCKA**
Course instructor	**dr hab. MARTA STĘPIEŃ-SŁODKOWSKA**
Course / module objectives	**Familiarization with the specifics of sports injuries as well as the diagnosis, prevention, and treatment of the most common clinical problems. Development of skills in conducting rehabilitation for athletes depending on the type of injury. Nabycie gotowości do pracy z różnymi grupami społecznymi w myśl zasad i norm etycznych.**
Prerequisites	**Knowledge of the basics of human anatomy and physiology as well as issues in biomechanics and ergonomics. Ability to use functional tests and conduct kinesiotherapy. Teamwork and interpersonal communication skills.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP2**	**Has knowledge in the field of hygiene and health education and their impact on proper preparation of the body for undertaking physical activity.**	**K_W03**
	2	**EP4**	**Has knowledge in the field of prevention of sports injuries and health education.**	**K_W07**
skills	**1**	**EP7**	**Adheres to the basic health education guidelines when working with individuals of different ages.**	**K_U13**
social competences	**1**	**EP9**	**Is prepared to promote and actively foster a healthy lifestyle and encourage healthy behaviors in educational activities and within the local community.**	**K_K06**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **zdrowotne aspekty aktywności fizycznej**			
Format of instruction: **lecture**			
1. **Healthy lifestyle, physical activity ? a holistic approach to health.**	6	5	0
2. **Physical activity as a component of health prevention.**	6	5	0

3. **Preferred forms of physical activity for children and adults.**	6	5	0
Format of instruction: **discussion classes**			
1. **Lifestyle, health behaviors, health risk associated with low physical activity.**	6	4	0
2. **Principles of health training for adults.**	6	4	0
3. **Impact of physical activity on the human body.**	6	7	0

Modes of delivery	**Lecture with a multimedia presentation and discussion.** **Exercises with a multimedia presentation, student?s independent work: preparing and presenting a presentation, working with a textbook, analysis and thematic review of the literature.**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP2,EP4**
	PREZENTACJA	**EP2,EP4,EP7,EP9**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	

Grading criteria	**Exercise credit based on the completion of a presentation.** **Lecture credit based on a passing grade on a colloquium covering the theory presented in the lecture.**
	Grade calculation principles
	The final grade for the course is the arithmetic average of the grades from the exercises and the lecture.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	6	zdrowotne aspekty aktywności fizycznej		Arytmetyczna	
	6	zdrowotne aspekty aktywności fizycznej [ćwiczenia]	zaliczenie z oceną		
	6	zdrowotne aspekty aktywności fizycznej [wykład]	zaliczenie z oceną		

Basic reading	Jager A., Krawczyk J. (2012): Wybrane zagadnienia z medycyny sportowej, PZWL , Warszawa.
	Karski J.B. (2011): Praktyka i teoria promocji zdrowia, CeDeWu.PL, Warszawa
	Kasprzak W., Mańkowska A. (2008): Fizykoterapia medycyna uzdrowiskowa i SPA, PZWL Warszawa
	Woynarowska B. 2008 (2008): Edukacja zdrowotna, PWN Warszawa
Supplementary reading	Donatelli R.A. (2010): Rehabilitacja w sporcie, Elsevier Urban&Partner, Warszawa.

STUDENT WORKLOAD

	No. of hours	including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**0**	**0**
Preparation for contact hours	**5**	**0**
Private reading and studying	**5**	**0**
Participation in tutorials	**5**	**0**
Preparation of project / essay / etc.	**5**	**0**
Preparation for test / exam	**0**	**0**

TOTAL workload	**50**
ECTS credits	**2**

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-II-S-26/27Z**	
Course title: **profilaktyka urazów w sporcie (KIERUNKOWE)**	Course code: **KFZ113AIIJ3451_16S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **second degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 1 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
1	1	conversation	5	0	e	4
		discussion classes	30	0	pg	
Total			**35**			**4**

Course / module coordinator	**dr MONIKA NIEWIADOMSKA**
Course instructor	**dr BEATA BURYTA**
Course / module objectives	**The aim of the course is to provide students with knowledge of the basics of diagnosis, treatment and prevention of sports injuries, to teach them how to perform preventive exercises, and to prepare them to apply ethical principles in their actions towards athletes.**
Prerequisites	**Fundamentals of functional anatomy, physiology and human biomechanics.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**has knowledge of procedures, first aid, and prevention of sports injuries**	**K_W01 K_W06**
skills	**1**	**EP2**	**is able to analyze health-threatening factors, perform exercises based on stretching elements, rolling selected muscle groups and use basic dynamic taping applications.**	**K_U04 K_U13**
social competences	**1**	**EP3**	**is ready to comply with ethical principles in decisions and actions taken towards athletes**	**K_K02 K_K07**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **profilaktyka urazów w sporcie**			
Format of instruction: **discussion classes**			
1. **Functional training in the prevention and treatment of injuries and overload changes in sports.**	1	5	0
2. **Dynamic taping in sports**	1	5	0
3. **Selected elements of biological regeneration in the prevention of sports injuries.**	1	20	0
Format of instruction: **conversation**			
1. **Specification of musculoskeletal injuries in sports, musculoskeletal diagnostic methods. Standards of care for soft tissue injuries (RICE, PRICE).**	1	2	0
2. **Methods, stages of treatment and prevention of selected sports injuries.**	1	3	0

Modes of delivery	**lecture, discussion, talk, group work**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP3**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**The condition for passing the course is obtaining passing grades in the colloquium (90% - very good, 75% - good, 60% - satisfactory) (exam) and in the exercises (practical assessment including the diagnosis of individual injuries and the preparation of a set of preventive exercises).**	
	Grade calculation principles	
	The final grade for the course is the arithmetic average of the grades from the practical test and the exam.	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	1	profilaktyka urazów w sporcie		Arytmetyczna	
	1	profilaktyka urazów w sporcie [ćwiczenia]	zaliczenie z oceną		
	1	profilaktyka urazów w sporcie [konwersatorium]	egzamin		

Basic reading	Dziak A (2012): Urazy sportowe : specyfika uszkodzeń narządu ruchu w sporcie, Medicina Sportiva, Kraków
	Gieremek K., Dec L (2000): Zmęczenie i regeneracja sił. Odnowa biologiczna, HAS-MED, Katowice
	Sygit K., Deskur A (2017): Wypadki i urazy w sporcie : zapobieganie, leczenie, rehabilitacja, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin
Supplementary reading	Zajac A., Zydek G., Michalczyk M., Poprzecki S., Czuba M., Gołas A., Boruta-Gojny B. (2014): Żywienie i suplementacja w sporcie, rekreacji i stanach chorobowych., Wydawnictwo Akademii Wychowania Fizycznego im. Jerzego Kukuczk, Katowice

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**35**	**0**
Participation in test / exam	**5**	**0**
Preparation for contact hours	**20**	**0**
Private reading and studying	**13**	**0**
Participation in tutorials	**12**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**15**	**0**
TOTAL workload	**100**	
ECTS credits	**4**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-II-S-25/26Z-TPM**	
Course title: **monitoring w sporcie (SPECJALNOŚCI / SPECJALIZACJE / MODUŁY SPECJALNOŚCIOWE)**	Course code: **KFZ113AIIJ3451_4S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **second degree, full - time**	Profile of study: **general academic** / Specialty: **trener przygotowania motorycznego**
Course / module status: **obligatory**	Language of instruction: **semester: 3 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	discussion classes	15	0	pg	3
Total			**15**			**3**

Course / module coordinator	**dr RAFAŁ BURYTA**
Course instructor	**dr RAFAŁ BURYTA**
Course / module objectives	**To familiarize students with the possibilities of monitoring the training process. The student will be able to document monitored training or tests taking into account physiological, biomechanical or biochemical parameters and assess the state of motor training and will be ready to take care of safety and health athlete.**
Prerequisites	**The student has knowledge of human motor skills and the theory of sports training.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Knows advanced monitoring terminology in sports training and understands concepts and models motor training**	**K_W02**
	2	**EP2**	**Knows the monitoring methods used during performance assessment motor skills in team games and sports individual.**	**K_W07**
skills	**1**	**EP3**	**The student is able to document and analyze parameters physiological, biomechanical and biochemical characteristics of the athlete, obtained during monitoring of training units.**	**K_U03**
	2	**EP4**	**The student is able to assess the level of preparation motor skills, including monitoring used during a training unit.**	**K_U04**
social competences	**1**	**EP5**	**Is ready to use the proper techniques communication and carrying out the tasks assigned to him in the field of monitoring athletes.**	**K_K05**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **monitoring w sporcie**			
Format of instruction: **discussion classes**			
1. **Measurement and characterization of external and internal measures of training load.**	3	6	0
2. **Characteristics of systems and methods of measuring training loads.**	3	4	0
3. **Technologies supporting monitoring.**	3	3	0
4. **Analysis of data resulting from monitoring.**	3	2	0

Modes of delivery	**-practical** **-lecture with multimedia presentation**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	KOLOKWIUM	**EP1,EP2,EP3,EP4,EP5**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Attendance at exercises and passing the colloquium.**	
	Grade calculation principles	
	30% for attendance, 70% is the grade from the test.	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	monitoring w sporcie		Ważona	
	3	monitoring w sporcie [ćwiczenia]	zaliczenie z oceną		1,00

Basic reading	Kusy K., Zieliński J. (2017): Diagnostyka w sporcie, AWF Poznań, Poznań
	Warchoł W. (2019): Gotowy do gry , Train With Brain, Kraków
Supplementary reading	French D. i wsp. (2022): NSCA's Essentials of Sport Science, Human Kinetics, USA

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**10**	**0**
Preparation for contact hours	**14**	**0**
Private reading and studying	**14**	**0**
Participation in tutorials	**12**	**0**
Preparation of project / essay / etc.	**0**	**0**
Preparation for test / exam	**10**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-II-S-25/26Z**	
Course title: **Multimedia techniques in sport (KIERUNKOWE)**	Course code: **KFZ113AIIJ3451_37S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **second degree, full - time**	Profile of study: **general academic** / Specialty:
Course / module status: **obligatory**	Language of instruction: **semester: 3 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	discussion classes	15	0	pg	2
Total			**15**			**2**

Course / module coordinator	**mgr ROBERT TERCZYŃSKI**
Course instructor	**mgr ROBERT TERCZYŃSKI**
Course / module objectives	**Acquisition of knowledge on editing computer programs intended for creating e-conspects. The student will have the ability to create e-contexts, edit videos and graphics. Will know the legitimacy of using multimedia techniques in the work of trainers.**
Prerequisites	**basic knowledge of computer operation in the Windows and MS Office environment**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**He is familiar with basic computer programs and other technical devices used to assess and monitor physical activity, and is applicable in schools and sports clubs.**	**K_W04 K_W14**
skills	**1**	**EP2**	**He is able to select and use research methods and equipment in the assessment of physical activity, as well as evaluate and interpret the results obtained. Able to use specialized computer and other equipment multimedia apparatus in the field of sports training.**	**K_U03**
social competences	**1**	**EP3**	**He is ready to critically evaluate his own and other people's multimedia projects.**	**K_K03**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Multimedia techniques in sport**			
Format of instruction: **discussion classes**			
1. **Learning how to use available computer programs that take into account the possibilities of multi-directional observation of a selected sports discipline.**	3	8	0
2. **Presentation of e-synopsis.**	3	7	0

Modes of delivery	**Theoretical and practical methods of operation**
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.

Assessment methods		No. of learning outcome from the syllabus
	PREZENTACJA	**EP1,EP2,EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**1. Active participation in classes;** **2. Completed partial projects in the field of Power Point editing, graphic programs and video editors.** **3. Preparation and presentation of an e-content containing graphic and video materials from the supervised training sports**	
	Grade calculation principles	
	The final grade is the grade for the preparation and presentation of the e-concept (100% of the final grade)	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	techniki multimedialne w sporcie		Ważona	
	3	techniki multimedialne w sporcie [ćwiczenia]	zaliczenie z oceną		1,00

Basic reading	Piotr Wróblewski (2018): ABC komputera, Helion, Warszawa
	Rzędowska A. (2003): Mistrzowskie prezentacje : slajdowy poradnik mówcy doskonałego, Helion, Gliwice
	Sedlak K. (1995): Aby osiągnąć cel, czyli Jak pisać listy, jak układać ogłoszenia i reklamy, jak prowadzić zebrania i prezentacje, jak przygotowywać raporty, jak rozmawiać przez telefon, Wydawnictwo Profesjonalnej Szkoły Biznesu, Kraków
Supplementary reading	Kuciński K. (1999): Obsługa komputera : krok po kroku '99. Edition 2000, Kraków
	Wróblewski P. (2018): ABC komputera, Helion, Gliwice

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**15**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**10**	**0**
Private reading and studying	**10**	**0**
Participation in tutorials	**2**	**0**
Preparation of project / essay / etc.	**9**	**0**
Preparation for test / exam	**2**	**0**
TOTAL workload	**50**	
ECTS credits	**2**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-II-S-25/26Z-DiPŻS**	
Course title: **Supplementation in selected sport (SPECJALNOŚCI / SPECJALIZACJE / MODUŁY SPECJALNOŚCIOWE)**	Course code: **KFZ113AIIJ3451_4S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **second degree, full - time**	Profile of study: **general academic**
Specialty: **diagnoza i planowanie żywienia sportowca**	
Course / module status **obligatory**	Language of instruction: **semester: 3 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	discussion classes	30	0	pg	5
		lecture	15	0	e	
Total			**45**			**5**

Course / module coordinator	**dr MAREK KOLBOWICZ**
Course instructor	**dr MAREK KOLBOWICZ**
Course / module objectives	**The aim of the course is to acquire knowledge and skills in the field of forecasting supplementation in selected motor abilities and to focus it on individual sports disciplines.**
Prerequisites	**Basic knowledge about supplementation in professional and amateur sports.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**He has knowledge in the field of nutrition and supplementation in sport.**	**K_W08**
	2	EP2	**He knows what type of supplementation should be used in sports training in selected motor skills.**	**K_W06 K_W08**
skills	1	EP3	**He is able to independently analyze, interpret and choose an appropriate diet for selected sports disciplines.**	**K_U07 K_U08**
	2	EP4	**He has the ability to independently search for the necessary data in the literature related to the supplementation of an athlete.**	**K_U14**
social competences	1	EP5	**He is aware of his role in shaping eating habits and the correct use of supplementation in selected sports.**	**K_K08**
	2	EP6	**He understands the need for further self-education in the field of supplementation in sports.**	**K_K02 K_K06**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Supplementation in selected sport**			
Format of instruction: **lecture**			
1. **Basics of supplementation in sport**	3	3	0
2. **Supplementation helpful in post-workout fatigue**	3	3	0
3. **Supplementation supporting the development of strength**	3	3	0

4. **Supplementation supporting the development of muscle endurance**	3	3	0
5. **Supplementation supporting the reduction of adipose tissue**	3	3	0
Format of instruction: **discussion classes**			
1. **individualization of supplementation depending on the needs of the discipline**	3	5	0
2. **Supplementation to minimize the risk of injury**	3	5	0
3. **Supplementation supporting the athlete's immunity**	3	5	0
4. **Supplementation in team sports**	3	5	0
5. **Supplementation in speed and strength sports**	3	5	0
6. **Supplementation in endurance sports**	3	5	0

Modes of delivery	**lectures, multimedia presentations, discussion, practical classes**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2,EP3,EP4**
	KOLOKWIUM	**EP2,EP3,EP4,EP5**
	PREZENTACJA	**EP1,EP2,EP3,EP4,EP5,EP6**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**The condition for obtaining a credit is:** **1. Presence and active participation in classes** **2. Positive evaluation of the presentation** **3. Positive assessment of the test** **4. Positive exam grade**	
	Grade calculation principles	
	The final grade is the arithmetic mean of: **1. Presentation and test - 50% of the final grade** **2. Exam - 50% of the final grade**	

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	3	suplementacja w wybranych dyscyplinach sportowych		Arytmetyczna	
	3	suplementacja w wybranych dyscyplinach sportowych [ćwiczenia]	zaliczenie z oceną		
	3	suplementacja w wybranych dyscyplinach sportowych [wykład]	egzamin		

Basic reading	Bean A. (2019): Żywienie w sporcie, ZYSK I S-KA, Poznań
	Zydek G., Michalczyk M., Zając A. (2017): Nowe trendy w żywieniu i suplementacji osób aktywnych fizycznie, AWF, Katowice
Supplementary reading	Frączek B., Krzywański J., Krysztofiak H. (2019): Dietetyka sportowa, PZWL, Warszawa
	Zając A., Poprzęcki S., Czuba M., Zydek G.,Gołaś A. (2012): Dieta i suplementacja w sporcie i rekreacji , AWF Katowice, Katowice

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**45**	**0**
Participation in test / exam	**4**	**0**
Preparation for contact hours	**14**	**0**

Private reading and studying	**10**	**0**
Participation in tutorials	**20**	**0**
Preparation of project / essay / etc.	**16**	**0**
Preparation for test / exam	**16**	**0**
TOTAL workload	**125**	
ECTS credits	**5**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-I-S-25/26Z**	
Course title: **Theory and methodology of the team sports (KIERUNKOWE)**	Course code: **KFZ113AIJ3451_4S**
Name of field of study: **diagnostyka sportowa**	
Mode and cycle of study: **first-degree, full - time**	Profile of study: **general academic** Specialty:
Course / module status **obligatory**	Language of instruction: **semester: 3 - polish language, semester: 4 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	3	discussion classes	40	0	pg	5
	4	conversation	10	0	e	6
		discussion classes	40	0	pg	
Total			**90**			**11**

Course / module coordinator	**dr BEATA FLORKIEWICZ**
Course instructor	**dr BEATA FLORKIEWICZ , prof. dr hab. TERESA ZWIERKO**
Course / module objectives	**Acquire of competences by students in the field of:** **- performing and teaching the basics of technique and tactics of selected team sports** **- diagnosing of special fitness as well as quantitative and qualitative components of the game in selected sports team.** **Acquisition of competences necessary for teamwork in research.**
Prerequisites	**Lack.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**The student has knowledge of team game theory as a form of sports activity. The student understands specialist techniques used in sports games and is familiar with the methodology for the proper development and assessment of fundamental elements of movement technique.**	**K_W05**
	2	**EP2**	**Defines the basic game systems, lists and explains the rules of selected sports games, and distinguishes specialised terminology used in the sports training process.**	**K_W05**
skills	**1**	**EP3**	**Demonstrates specialised motor skills in the performance of technical and tactical the basic elements of team sports and applies teamwork skills necessary to conduct the sports training process.**	**K_U01**
	2	**EP4**	**Uses basic measurement equipment to conduct sport-specific technical and motor tests in team games, in accordance with safety regulations for both themselves and class participants.**	**K_U04**
	3	**EP5**	**Applies basic methods for assessing the level of fitness special fitness in team sports and analysing game components, and is able to interpret the results of research in this area.**	**K_U12**

social competences	**1**	**EP7**	**Is prepared to cooperate effectively in a team and reliably carry out tasks assigned within a group project.**	**K_K04**
	2	**EP8**	**Is aware of the need to communicate knowledge of sports games clearly and effectively to participants in the sports training process.**	**K_K06**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Theory and methodology of the team sports**			
Format of instruction: **discussion classes**			
1. **Technique of performance and methodology of teaching the basic technical elements of games sports (handball, basketball).**	3	16	0
2. **Technical and tactical activities (handball, basketball), observation sheets, of game components.**	3	8	0
3. **Special technical and motor tests -(handball, basketball) organization, conducting test measurement, collecting results, safety.**	3	8	0
4. **Analysis of the results of specialist tests (handball, basketball).**	3	8	0
5. **Technique of performance and methodology of teaching the basic technical elements of sports games (volleyball, football).**	4	16	0
6. **Technical and tactical activities (volleyball, football), observation sheets- of the game components.**	4	8	0
7. **Special technical and motor tests -(volleyball, football) organization, conducting test measurement, collecting results, safety.**	4	8	0
8. **Analysis of the results of specialist tests (volleyball, football).**	4	8	0
Format of instruction: **conversation**			
1. **Sports games as a form of physical activity for people of all ages.**	4	2	0
2. **Rules of the game (basketball, handball, volleyball, soccer) . New forms of team games.**	4	4	0
3. **Stages of sports training in team games .**	4	2	0
4. **Determinants of achievements in sports games: morphological, motor and psychological factors .**	4	2	0

Modes of delivery	**Seminar: conversational lecture, case study, discussion panel.** **Exercises: exercise-practical, based on observation and measurement, group work, discussion**	
	The course teacher shall specify how artificial intelligence should be used as part of implementation of the course according to University of Szczecin best practices and standards. The course teacher shall inform students in their first class about the scope and possibilities of using AI and shall present a catalogue of tools and applications adjusted to relevant learning outcomes and teaching needs and possibilities within a given course.	
Assessment methods		No. of learning outcome from the syllabus
	EGZAMIN PISEMNY	**EP1,EP2**
	PROJEKT	**EP4,EP5,EP7,EP8**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP3**
	Metody i formy weryfikacji efektów uczenia się mogą zostać zmienione dla studentów ze szczególnymi potrzebami na warunkach i zasadach określonych w Regulaminie Studiów Uniwersytetu Szczecińskiego.	
Grading criteria	**Completion of exercises:** **1. Presence and active participation in all exercises.** **2. Practical credit for the basic elements of technique in sports games.** **3. Completion of the group project in the scope of conducting a special proficiency test or quantitative analysis i qualitative components of the game in a selected team game (subject to evaluation: the accuracy of the method selected, organization measurement tests, report on the development of test results).** **4. Completion of the group project: organizing and running a recreational and sports activity program from games sports (the evaluation covers the presentation, substantive preparation, safety and organization of classes for selected age group, the attitude of the lecturer). Credit for the konwersatorium.** **5. Written exam covering theoretical knowledge (questions requiring a longer written statement containing terminology and nomenclature in the field of technique and methodology, teaching the basic elements of the game, knowledge of the subject diagnosis of special fitness).**	
	Grade calculation principles	

	Final grade: **Semester 3** **1. The mark for passing handball is -50% of the final mark** **2. The grade for passing basketball constitutes -50% of the final grade** **Semester 4** **1. Passing with a grade from the 4th semester (volleyball, football) constitutes -50% of the final grade.** **2.The written exam constitutes -50% of the final grade.**

Final grade calculation method

Sem.	Course	Type of credit	Grade calc. method	Weight for the average
3	teoria i metodyka sportów zespołowych		Ważona	
3	teoria i metodyka sportów zespołowych [ćwiczenia]	zaliczenie z oceną		1,00
4	teoria i metodyka sportów zespołowych		Ważona	
4	teoria i metodyka sportów zespołowych [ćwiczenia]	zaliczenie z oceną		0,50
4	teoria i metodyka sportów zespołowych [konwersatorium]	egzamin		0,50

Basic reading

(red. M. Dorna) (2016): Narodowy Model Gry, PZPN, Warszawa
Czerwinski J., Cieslikowski J., Eliasz J., Norkowski H., Nowinski W., Wrzesniewski S. (2018): Nazewnictwo i zbiór testów, ZPRP, Warszawa
Huciński T., Wilejto-Lekner I. (2008): Koszykówka. Podręcznik dla trenerów, nauczycieli i studentów, BK Wydawnictwo i Księgarnie, Wrocław
Kasza W.,Krzyzanowski Z. (2011): Piłka siatkowa dla najmłodszych, PZPS,ASP, Warszawa
Klocek T., Szczepaniak M (2003): Siatkówka na lekcji wychowania fizycznego. Podrecznik dla nauczycieli i instruktorów, COS, Warszawa
Naglak Z. (2001): Teoria zespołowej gry sportowej. Kształcenie gracza, AWF , Wrocław
Nowiński. W (2018): Umiejętności indywidualne i współdziałanie w piłce recznej, ZPR w Polsce, Warszawa
Spieszny M. (2011): Analiza rozwoju cech somatycznych, motoryczności i umiejętności techniczno-taktycznych młodych sportowców uprawiających grę w piłkę ręczną , AWF, Kraków
Stępiński M., Paluszek K. (2011): Trening pozycyjny w piłce nożnej, Wydawnictwo MWW, Wrocław
Zatyracz Z., Piasecki L. (2001): Piłka siatkowa, ZWPiW Plewnia
(2022): Program szkolenia PZPN u 6-U13,, PZPN, Warszawa

Supplementary reading

Kasza W., Swiderek A., Krzyzanowski Z.,Felczak K., Kielak D., Grzadziel G., Bałuszynski R (2012): Program szkolenia siatkarza- młodzik-kadet-junior, ASP, PZPS, Warszawa
Kasza W., Zdebska H (2007): Piłka siatkowa. Obrona pola w ujeciu taktycznym. Biblioteka trenera, COS, Warszawa
Oficjalne przepisy gry w koszykówkę, piłkę nożną, piłkę siatkową, pikę ręczną :
Paluszek K., Stępiński M. (2009): Taktyka atakowania i bronienia w systemie 1-4-4-2., "Fundacja Widzew Łódź – „Akademia Futbolu", Łódź
Piasecki L. Florkiewicz B., Krzepota J., Steciuk H., Zwierko T. (2015): System FitLight TrainerTM — nowoczesna technologia w kontroli procesu treningu sportowego w piłce siatkowej. W: Sport, turystyka i rekreacja wobec wyzwań współczesności,, 11, 41-48
red. Teresa Zwierko (2016): Percepcja wzrokowa w grach sportowych: podstawy teoretyczne i implikacje praktyczne, Wydawnictwo Naukowe Uniwersytet Szczecinski, Szczecin
Stępiński M, Dorna M. (2011): Gra 1x1 we współczesnej piłce nożnej., Trener 16-25, Czasopismo fachowe PZPN
Włodarczyk J. (2014): ABC lekkoatletycznych cwiczen motorycznych dla zespołów gier sportowych: koszykówka, S.I.
Zwierko T., Florkiewicz B., Fogtman S., Kszak-Krzyżanowska A. (2014): The ability to maintain attention during visuomotor task performance in handball players and non-athletes, Centr Eur J Sport Sci Med, 7 (3): 99–106.
(2020): Podrecznik trenera piłki noznej dzieci,, PZPN, Warszawa

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**90**	**0**
Participation in test / exam	**2**	**0**

Preparation for contact hours	**40**	**0**
Private reading and studying	**40**	**0**
Participation in tutorials	**28**	**0**
Preparation of project / essay / etc.	**60**	**0**
Preparation for test / exam	**15**	**0**
TOTAL workload	**275**	
ECTS credits	**11**	