COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-II-S-25/26Z**	
Unit: **Przedmiot do wyboru w jęz. angielskim [moduł]**	
Course title: **epigenetics (POZOSTAŁE PRZEDMIOTY / MODUŁY)**	Course code: **KFZ113AIIJ3451_15S**
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 polish language**

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

Course / module coordinator	**dr hab. MAREK SAWCZUK**
Course instructor	**dr hab. MAREK SAWCZUK**
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 influence of epigenetic factors on the metabolism of nutrients and maintaining homeostasis in response to environmental factors.**	**K_W08 K_W15**
	2	**EP8**	**The student knows the influence of epigenetic factors on the occurrence of injuries in sports players.**	**K_W09 K_W17**
skills	**1**	**EP4**	**The student Is able to recognize the basic symptoms of epigenetically conditioned metabolic diseases occurring in humans.**	**K_U08 K_U14**
	2	**EP5**	**The student identifies health problems that are based on epigenetic disorders and knows the basic ways to solve them.**	**K_U08 K_U10**
social competences	**1**	**EP6**	**The student is willing to cooperate with other team members to deal with difficulties related to epigenetic issues.**	**K_K03 K_K05 K_K07**
	2	**EP7**	**The student actively promotes and popularizes knowledge of epigenetics in a sports environment.**	**K_K04**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **epigenetics**			
Format of instruction: **lecture**			
1. **DNA methylation mechanisms**	2	2	0

2. **Epigenetic modifications of non-coding RNA**	2	2	0
3. **Molecular mechanisms of histone modification**	2	1	0
Format of instruction: **laboratory**			
1. **DNA methylation analyzes within genes**	2	3	0
2. **Genome-wide analyzes of histone modifications**	2	3	0
3. **Genomic imprinting**	2	3	0
4. **The influence of diet on epigenetic processes**	2	3	0
5. **Epigenetics of memory processes and neurological diseases**	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	epigenetics		Arytmetyczna	
	2	epigenetics [laboratorium]	zaliczenie z oceną		
	2	epigenetics [wykład]	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	**12**	**0**
Private reading and studying	**14**	**0**
Participation in tutorials	**6**	**0**

Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**11**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-I-S-24/25Z**	
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	**getting acquainted with the basic biochemical methods used in sports laboratory diagnostics to assess the athlete's health and identify selected disease states** **gaining readiness for teamwork** **gaining laboratory work skills**
Prerequisites	**basic knowledge of human biochemistry and physiology**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**describes the most common metabolic disorders and post-exercise changes at the level of human biochemistry**	**K_W02 K_W04**
	2	EP2	**discusses the bioenergetic aspects of selected changes in laboratory diagnostic markers under the influence of physical effort**	**K_W13**
skills	1	EP3	**demonstrates the ability to correctly identify metabolic disorders and post-exercise changes on the basis of the obtained test results**	**K_U10 K_U14**
	2	EP4	**under the supervision of a research supervisor performs biochemical analyzes most often used in laboratory diagnostics**	**K_U02**
	3	EP5	**knows how to prepare a well-documented study of the results of experimental research**	**K_U05**
social competences	1	EP6	**is ready to cooperate and work in a group**	**K_K05**
	2	EP7	**updates own knowledge and is aware of its practical importance**	**K_K01**

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 circulation**	3	2	0
6. **The respiratory chain as a proper site for ATP synthesis**	3	2	0
7. **ATP synthase and its role in energy production**	3	4	0
Format of instruction: **laboratory**			
1. **Principles of safe work in the laboratory**	3	2	0
2. **Energy carriers and energy storage in the human body**	3	2	0
3. **The assessment of purine nucleotide levels by instrumental methods**	3	10	0
4. **Creatine kinase as a biochemical marker in sports diagnostics**	3	4	0
5. **How to equip the trainer's handheld laboratory**	3	10	0
6. **Final summary of laboratory exercises**	3	2	0

Modes of delivery	**audiovisual presentation (lectures);** **work in groups (exercises);** **performing laboratory experiments (exercises)**
	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**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**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	**Written test covers the knowledge of the lectures (70% of the final grade).** **Passing the exercises on the basis of the presence and correctness of the experiments performed (30% of the final grade).**
	Grade calculation principles
	Written test covers the knowledge of the lectures (70% of the final grade). **Passing the exercises on the basis of the presence and correctness of the experiments performed (30% of the final grade).**

	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
Final grade calculation method	3	biochemia wysiłku fizycznego z elementami bioenergetyki		Ważona	
	3	biochemia wysiłku fizycznego z elementami bioenergetyki [laboratorium]	zaliczenie z oceną		0,30
	3	biochemia wysiłku fizycznego z elementami bioenergetyki [wykład]	zaliczenie z oceną		0,70

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	**20**	**0**
Private reading and studying	**8**	**0**
Participation in tutorials	**10**	**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-I-S-24/25Z**	
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
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**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	**3**	**0**
Participation in tutorials	**3**	**0**
Preparation of project / essay / etc.	**0**	**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**	
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 polish 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 [ćwiczenia]	zaliczenie z oceną		
	2	genetic basis of health [wykład]	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	**10**	**0**
Private reading and studying	**14**	**0**
Participation in tutorials	**4**	**0**

Preparation of project / essay / etc.	**10**	**0**
Preparation for test / exam	**15**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-I-S-24/25Z**	
Unit: **Moduł A: genetyka w sporcie**	
Course title: **Genetic diagnostics in sport (POZOSTAŁE PRZEDMIOTY / MODUŁY)**	Course code: **US113AIJ2451_36S**
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	e	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	**Zaliczenie przedmiotu "Wybrane zagadnienia z biologii człowieka"** **Zaliczenie przedmiotu "Genetyka człowieka z elementami genetyki klinicznej"**

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. **Izolacja RNA z krwi pełnej**	4	5	0
2. **Reakcja Real-Time PCR w odmianie ilościowej**	4	5	0
3. **Określanie płci człowieka z wykorzystaniem reakcji PCR - analiza genu amelogeniny**	4	5	0
4. **Elektroforeza w żelu poliakrylamidowym**	4	5	0
5. **Analiza sekwencji mini i mikrosatelitarnych -analiza polimorfizmu w regionie LPR genu HTT**	4	5	0
6. **Przeprowadzenie sekwencjonowania wybranego fragmentu regionu**	4	5	0

Modes of delivery	**Ćwiczenia laboratoryjne prowadzone metodą pracy w grupach, Rozwiązywanie problemów związanych z pracą w laboratorium (dobór metody analiz, opracowanie metodyki badań, trudności w interpretacji wyników), Ćwiczenia eksperymentalne połączone z dyskusją**
	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**	
	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]	egzamin		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-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**	**Zna podstawowe programy komputerowe i inne urządzenia techniczne służące do oceny i monitoringu aktywności fizycznej i mające zastosowanie w szkołach i klubach sportowych.**	**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-24/25Z-DiPŻS**	
Course title: **żywienie i suplementacja w wybranych jednostkach chorobowych (SPECJALNOŚCI / SPECJALIZACJE / MODUŁY SPECJALNOŚCIOWE)**	Course code: **KFZ113AIIJ3362_1S**
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: 4 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	discussion classes	20	0	pg	3
		lecture	10	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr MAREK KOLBOWICZ**
Course instructor	**dr inż. MACIEJ BURYTA**
Course / module objectives	**The purpose of the course is to familiarize students with the causes of certain disease entities. To acquire the student's ability to apply rational nutrition and supplementation in selected disease entities. To develop in students an attitude of readiness to take measures to minimize the risk of selected diseases.**
Prerequisites	**Basic knowledge of diet and supplementation**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Understands the essence of human physiological processes and also the statistics of morbidity and mortality associated with selected disease entities, the origin of these diseases and ways of prevention**	**K_W15 K_W18**
skills	**1**	**EP2**	**Can demonstrate the relationship between diet, diet and nutrition and selected disease entities.**	**K_U14**
	2	**EP3**	**He is able to identify errors and negligence in nutrition, and demonstrates the ability to independently find the necessary data in available information sources.**	**K_U07 K_U08 K_U14**
social competences	**1**	**EP4**	**Is aware of the application of knowledge on the prevention of selected disease entities.**	**K_K02**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **żywienie i suplementacja w wybranych jednostkach chorobowych**			
Format of instruction: **lecture**			
1. **Discussion of death and mortality statistics from selected diseases**	4	2	0
2. **Causes of selected disease units**	4	4	0
3. **Diagnostics of selected disease units**	4	4	0
Format of instruction: **discussion classes**			
1. **OFTT - oral fat tolerance test**	4	2	0
2. **Atherogenicity indicators**	4	2	0

3. **Positive and negative effects of medication therapy**	4	2	0
4. **Cholesterol facts and myths**	4	3	0
5. **Primary prevention of selected diseases**	4	6	0
6. **Secondary prevention of selected diseases**	4	2	0
7. **Recommended nutrition and supplementation in selected disease entities.**	4	3	0

Modes of delivery	**lectures, multimedia presentations, 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**
	PREZENTACJA	**EP1,EP2,EP3,EP4**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP1,EP2,EP3,EP4**
	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 prerequisites for obtaining credit are:** **1. Attendance and active participation in class** **2. A positive evaluation of the presentation** **3. A positive evaluation of the colloquium**
	Grade calculation principles
	The final grade is: **1. Presentation and colloquium from exercises - 50% of the final grade.** **2. Colloquium from lectures - 50% of the final grade**

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	żywienie i suplementacja w wybranych jednostkach chorobowych		Arytmetyczna	
	4	żywienie i suplementacja w wybranych jednostkach chorobowych [ćwiczenia]	zaliczenie z oceną		
	4	żywienie i suplementacja w wybranych jednostkach chorobowych [wykład]	zaliczenie z oceną		

Basic reading	Grzymisławski M., Moszak M. i in. (2022): Żywienie człowieka zdrowego i chorego, Wydawnictwo Naukowe PWN SA, Warszawa
	H. Ciborowa, A. Rudnicka (2019): Dietetyka, żywienie zdrowego i chorego człowieka, Wydawnictwo Lekarskie PZWL, Warszawa
	Waller S. (2018): Dr Heart dbaj o swoje serce: jak zapobiegać zawałowi serca oraz lepiej i bardziej świadomie żyć, Edra Urban & Partner, Wrocław
Supplementary reading	Paprocka-Borowicz M. i in. (2016): 5 minut dla serca, Wydawnictwo SBM, Warszawa

STUDENT WORKLOAD

	No. of hours	
		including e-learning
Contact hours	**30**	**0**
Participation in test / exam	**3**	**0**
Preparation for contact hours	**6**	**0**
Private reading and studying	**5**	**0**
Participation in tutorials	**18**	**0**
Preparation of project / essay / etc.	**6**	**0**
Preparation for test / exam	**7**	**0**

TOTAL workload	**75**
ECTS credits	**3**

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-II-S-24/25Z-DiPŻS**	
Course title: **Probiotics and food allergies in the athlete's practice (SPECJALNOŚCI / SPECJALIZACJE / MODUŁY SPECJALNOŚCIOWE)**	Course code: **KFZ113AIIJ3451_9S**
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: 4 - polish language**

Year	Semester	Form of instruction	No. of hours	including e-learning	Type of credit	ECTS
2	4	discussion classes	20	0	pg	3
		lecture	10	0	pg	
Total			**30**			**3**

Course / module coordinator	**dr inż. ANNA KRAJEWSKA-PĘDZIK**
Course instructor	**dr inż. ANNA KRAJEWSKA-PĘDZIK**
Course / module objectives	**The aim of the course is to familiarize students with allergies, their causes and the importance of probiotics in an athlete's life. The student acquires the ability to classify allergies. Developing students' attitude of readiness to take action to diagnose and minimize the effects of allergies.**
Prerequisites	**Basic knowledge about supplementation and nutrition**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	1	EP1	**Has knowledge in the field of nutrition and supplementation in sports.**	**K_W15 K_W18**
	2	EP2	**He knows what probiotics are and what effect they have on the sports level in various age categories. Knows and understands the phenomenon of food allergies.**	**K_W08 K_W09 K_W15 K_W18**
skills	1	EP3	**Can demonstrate the relationship between eating habits and food allergies. Is able to determine the role and importance of probiotics in highly qualified and amateur sports.**	**K_U07 K_U08 K_U14**
	2	EP4	**He has the ability to convey knowledge about the role of probiotics in our lives.**	**K_U07 K_U12**
social competences	1	EP5	**Is aware of the need to apply knowledge about food allergies and their impact on the level of physical activity and highly qualified sports.**	**K_K07**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Probiotics and food allergies in the athlete's practice**			
Format of instruction: **lecture**			
1. **Microbiota and microbiome. Characteristics of probiotic strains and their role in sports.**	4	4	0

2. **Delayed (IgA/IgG-mediated) and immediate (IgE-mediated) food allergies.**	4	4	0
3. **Probiotic therapy in sports.**	4	2	0
Format of instruction: **discussion classes**			
1. **Overview of delayed allergy tests, characteristics, advantages and disadvantages.**	4	2	0
2. **Probiotic therapy in athlete's practice.**	4	6	0
3. **Food allergies and intolerances. Food allergies in an athlete's practice.**	4	6	0
4. **Nutrition in food allergies at various stages of life. Overview of elimination diets. Creating sample menus.**	4	6	0

Modes of delivery	**lectures, multimedia presentations, discussions, independent 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
	KOLOKWIUM	**EP1,EP2,EP3,EP4,EP5**
	PREZENTACJA	**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 conditions for obtaining a pass are: attendance and active participation in classes, positive assessment of the presentation, positive assessment of the practical test and lecture test.
	Grade calculation principles
	The final grade is the arithmetic mean of the grades from exercises and lecture tests.

Final grade calculation method	Sem.	Course	Type of credit	Grade calc. method	Weight for the average
	4	probiotyki i alergie pokarmowe w praktyce sportowca		Arytmetyczna	
	4	probiotyki i alergie pokarmowe w praktyce sportowca [wykład]	zaliczenie z oceną		
	4	probiotyki i alergie pokarmowe w praktyce sportowca [ćwiczenia]	zaliczenie z oceną		

Basic reading	Emeran A. M. (2021): Twój drugi mózg: komunikacja umysł-jelita: jak zależność mózg-jelita wpływa na nasz nastrój, decyzje i stan zdrowia, Wydawnictwo Feeria Science, Łódź
	Lafay O. (2015): Skuteczne odżywianie w treningu i sporcie, FitActiwe, Łódź
	Panasiuk A., Kowalińska J. (2020): Mikrobiota przewodu pokarmowego , PZWL, Warszawa
	Zydek G., Michalczyk M., Zając A. (2017): Nowe trendy w żywieniu i suplementacji osób aktywnych fizycznie , AWF , Katowice
Supplementary reading	Ciborowska H., Rudnicka A. (2014): Dietetyka żywienie zdrowego i chorego człowieka, PZWL, Warszawa
	Gawęcki J., Hryniewiecki L. (2005): Żywienie człowieka. Podstawy nauki o żywieniu , PWN, Warszawa
	Lasek W. (2014): Immunologia: podstawowe zagadnienia i aktualności, PZWL, Warszawa
	Zschocke A.K. (2018): Mikrobiom - sposób na pokonanie chorób : zdrowe bakterie jako medycyna przyszłości, Vital, Białystok

STUDENT WORKLOAD

	No. of hours	
		including e-learning

Contact hours	**30**	**0**
Participation in test / exam	**2**	**0**
Preparation for contact hours	**7**	**0**
Private reading and studying	**7**	**0**
Participation in tutorials	**14**	**0**
Preparation of project / essay / etc.	**6**	**0**
Preparation for test / exam	**9**	**0**
TOTAL workload	**75**	
ECTS credits	**3**	

COURSE SYLLABUS AND SPECIFICATION

Curriculum title: **USKFZ-DS-O-II-S-24/25Z-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-24/25Z**	
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 hab. TERESA ZWIERKO , dr BEATA FLORKIEWICZ**
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** **- diagnosis of special fitness as well as quantitative and qualitative components of the game in selected sports team.** **Acquire of competences to promote health-promoting behavior and care for one's own physical fitness.**
Prerequisites	**Lack.**

LEARNING OUTCOMES

Category	No.	Code	Description	Ref. to programme benchmarks
knowledge	**1**	**EP1**	**Has elementary knowledge of game theory team as a form of sports activity and recreational. He knows the technique of performing skills specialist in sports games and knows and describes the methodology of shaping and diagnosis in the right way basic elements of movement technique.**	**K_W05**
	2	**EP2**	**Defines the basic systems and rules of the game, lists and explains the rules of sports games. distinguishes specialized terminology used in the process training in sport and recreation.**	**K_W05**

skills	**1**	**EP3**	**Demonstrates specialized motor skills with the scope of basic elements of game technique and tactics teamwork necessary to run the process training in sport and recreation.**	**K_U01**
	2	**EP4**	**Uses basic equipment necessary for implementation of sports and recreational activities in the field of team games in accordance with the safety rules your own and the participants of the classes.**	**K_U04**
	3	**EP5**	**Applies basic methods of assessing the level of fitness special with sports games and game ingredient analysis and is able to interpret the results of research in this area.**	**K_U12**
	4	**EP6**	**Constructs a program of sports and recreational activities with range of sports games for people of all ages with taking into account the appropriate exercise load.**	**K_U13**
social competences	**1**	**EP7**	**He is ready to cooperate in a team and has competences that enable people to engage in work group assuming various roles in it, including the initiator exercises, referee.**	**K_K04**
	2	**EP8**	**Is aware of the need to communicate clearly knowledge of sports games to participants training process in sport and recreation.**	**K_K06**
	3	**EP9**	**He is ready to take responsibility for health and safety of participants in activity programs sports and recreation in the field of sports games.**	**K_K08**
	4	**EP10**	**Performs a correct self-assessment of their own competencesand is aware of the need to maintain the appropriate level of physical fitness necessary for professional work.**	**K_K10**

CONTENT	Semester	No. of hours	including e-learning
Subject title: **Theory and methodology of the team sports**			
Format of instruction: **discussion classes**			
1. **Exercises to familiarize with the balls.**	3	2	0
2. **Games and activities in the teaching of sports games.**	3	4	0
3. **Technique of performance and methodology of teaching the basic technical elements of games sports (handball, basketball).**	3	10	0
4. **Technical and tactical activities (handball, basketball), analysis of game components.**	3	6	0
5. **Organization and conducting sports and recreational activities in sports games.**	3	6	0
6. **Special technical and motor tests .**	3	12	0
7. **Exercises to familiarize with the balls.**	4	2	0

8. **Games and activities in the teaching of sports games .**	4	4	0
9. **Technique of performance and methodology of teaching the basic technical elements of sports games (volleyball, football).**	4	10	0
10. **Technical and tactical activities (volleyball, football), analysis of the game components.**	4	6	0
11. **Organization and conducting sports and recreational activities in sports games.**	4	6	0
12. **Special technical and motor tests .**	4	12	0
Format of instruction: **conversation**			
1. **Sports games as a form of physical activity for people of all ages.**	4	1	0
2. **Rules of the game (basketball, handball, volleyball, soccer) .**	4	4	0
3. **Stages of sports training in team games .**	4	4	0
4. **Determinants of achievements in sports games: morphological, motor and psychological factors .**	4	1	0

Modes of delivery	**- multimedia lecture** **- theoretical and practical methods (recreational and creative)** **- group work** **- simulation games**
	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	**EP6,EP7,EP8,EP9**
	ZAJĘCIA PRAKTYCZNE (WERYFIKACJA POPRZEZ OBSERWACJĘ)	**EP10,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	**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).** **All points from 2-5 the student must receive a minimum pass mark.**
	Grade calculation principles
	The grade is the weighted average of the final grade from exercises 60% and lectures 40%.

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 [konwersatorium]	egzamin		0,40
	4	teoria i metodyka sportów zespołowych [ćwiczenia]	zaliczenie z oceną		0,60

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	**10**	**0**
Preparation for contact hours	**45**	**0**
Private reading and studying	**35**	**0**
Participation in tutorials	**20**	**0**
Preparation of project / essay / etc.	**35**	**0**
Preparation for test / exam	**40**	**0**
TOTAL workload	**275**	
ECTS credits	**11**	