Annex to Resolution No. 166 of the Rector
of the Nicolaus Copernicus University
of 21 December 2015

Course description (syllabus) form for higher education, doctoral, postgraduate and skills development programs

A) General course description

FIELD NAME	COMMENTS
Course title	**First aid**
Unit organising the course	**Department of Human Physiology** **Faculty of Medicine** **Collegium Medicum in Bydgoszcz** **Nicolaus Copernicus University in Torun**
Unit for which the course is organised	**Faculty of Medicine, Collegium Medicum NCU** **Field of study: Medicine** **Paid Full-Time Studies in English**
Course ID	**Practical Interpretation of Physiological Tests**
ISCED code	*0912*
ECTS credit allocation	**1**
Form of course completion assessment	*ungraded credit*
Language of instruction	**English**
Indication whether attempts at obtaining course credit can be repeated	**No**
Affiliation of the course to a course group	***Science basics of medicine (Group B)***
Total student workload	1.Workload associated with direct participation of academic teachers: - lectures: **8 h** - tutorials: **15 h** - final test: **2 h** Total workload involving the direct participation of academic teachers: **25 h**, which equals **0,83 of an ECTS point.** 2.Total student workload: - lectures: **8 h** - tutorials: **15 h** - preparation for tutorials *(including reading of the selected literature and written tasks completion)*: **8 h** - preparation for final test and final test: 12 + 2 = **14 h** Total student workload: **45 h**, which equals **1,5 ECTS point.** 3. Workload related to achievement of learning outcomes in medical simulation settings (group C): - tutorials: 13 h Total workload related to achievement of learning outcomes in medical simulation settings: **13 h**, which equals **0,43 ECTS points**. Percentage of classes required to achieve necessary learning outcomes: **56,5 %** 4. Workload associated with achievement of learning outcomes related to medical communication: ***Not applicable***

Learning outcomes: knowledge	W1: Has the extended knowledge of organic, functional and metabolic changes that shape homeostasis in the body based on scientific literature (B.W20, B.W21) W2: Knows and understands the basic concepts and principles of the homeostasis and adaptation process (B.W20, B.W21) W3: Has basic knowledge of organic, functional and metabolic changes after exercise in people with cardiovascular and metabolic disorders (B.W21, BW24) W4. Knows and understands electrophysiology of the heart muscle (B.W21) W5. Analyzes and interprets the results of introduced during tutorials methods associated with physiological and pathophysiological conditions (B.W21, BW24) W6. Knows human auditory electrophysiology (B.W20) W7. Has knowledge about the muscular system including muscle fibre types (B.W20)
Learning outcomes: practical skills	U1: Assures safe conditions for him/herself as well as the victim (D.U9) U2: Safeguards the site of traffic accidents (D.U9) U3: Assesses the health hazards and life-threatening factors in pre-hospital settings (D.U9, E.U3) U4: Recognizes the health hazards and risk factors in pre-hospital settings (C.U7) U5: Correctly performs the algorithm for basic life support (BLS) on individuals of various ages (D.U9, F.U9, F.U11) U6: Applies the rules of first aid in cases of various health hazards of internal origin by utilizing selected medical equipment (D.U9, E.U14) U7: Applies the rules of first aid in cases involving trauma (D.U9, F.U6) U8: Applies the rules of first aid in cases related to environmental emergencies (D.U9, F.U8)
Learning outcomes: social competence	K1: Attempts to resolve moral and ethical dilemmas (K_K04) K2: Takes a proactive approach in order to provide care and assistance in health-related and/or life-threatening circumstances (K_K02)
Teaching methods	**Tutorials:** • demonstrations with added instructions • development and improvement of practical skills • classic problem-solving
Prerequisites	Prior the beginning of "Practical Interpretation of laboratory tests" course Student is required to have the extended knowledge of human anatomy and physiology, in particular autonomic nervous system, cardiovascular system, respiratory system and auditory system.
Brief course description	The Interpretation of physiological tests tutorials are strongly related to Human Physiology course. In the first part of tutorials Student learns and performs basic auditory system testing methods. Next, Student extents the knowledge about respratory system function assessment (body pletyzmography) as well as learns about the evaluation of autonomic nervous system activity. Functional movement screen methods are introduced to Student to evaluate the musculature and the risk of injury.

Full course description	During "Physiological tests interpretations" tutorials Student learns about and performs basic physiological tests evaluating human body functional state. Particular emphasis is placed on the cardiovascular system, acoustic system as well as musculature. Stress tests (exercise tests) results interpretation allows to determine the effect of different types of exercise on cardiovascular system. To assess the impact of exercise on musculature and screen individuals for risk of injury and / or a dysfunctional or performance-limiting movement pattern Students learns Functional Movement Screen testing. In addition, during the course, the student learns about the methods used to assess the activity of the autonomic nervous system and the respiratory system (bodyplethysmography). Since the assessment of auditory functions is crucial in the differentiation of nervous, auditory and balance system disorders Student is introduced with basic methods of auditory system evaluation methods.
Literature	**Basic literature**: 1. The Textbook of Medical Physiology, . Guyton AC, Hall JE: Elsevier Saunders, 2021, 14th edition. 2. Medical Physiology, Walter F. Boron, Emile L. Boulpaep, Elsevier Health Sciences, 2021.
Assessment methods and criteria	The condition for passing the course is attendance at the classes.
Work placement	*Not applicable*

B) Description of the course within the period of instruction

FIELD NAME	COMMENTS
Period of instruction	**2024/2025 - winter semester**
Form of assessment of course completion in the period of instruction	**ungraded credit**
Form(s) of classes, number of hours and completion assessment methods	Lectures: **8h – Credit** Tutorials: **15h – Credit**
Name of course coordinator in the period of instruction	Prof. dr hab. n. med. Wojciech Kaźmierczak
Names of persons managing student groups for the course	prof. dr hab. n. med. Wojciech Kaźmierczak dr Wieńczysława Adamczyk mgr Monika Bejtka dr Mirosława Cieślicka dr Katarzyna Dmitruk dr Blanka Dwojaczny dr n. med. Łukasz Kluczyński dr n. med. Jerzy Kochan dr Monika Zawadka - Kunikowska dr Piotr Złomańczuk
Course attributes	**Obligatory**

Course groups including description and limit to the number of students within the groups	**Lectures: all 1st year students** **Tutorials: 12 students**
Time and place of classes	**Information provided by Dean's Office of the Faculty of Medicine and Centre for Medical Education in English at NCU Collegium Medicum in Bydgoszcz**
Number of study hours involving distance learning methods	-
Course website	**Not applicable**
Learning outcomes defined for a given form of classes within the course	**Lectures:** W1: Describes the legal implications in regard to providing first aid in cases of health-related and/or life-threatening situations (D.W20, G.W5) W2: Characterizes the possible causes of sudden cardiac arrest (C.W27) W3: Recreates the basic life support (BLS) algorithm in individuals of various ages (F.W9) W4: Discusses safety dangers involving first aid providers (C.W13, D.W20) W5: Identifies the required first aid steps in various health-threatening situations (F.W10, C.W27) W6: Describes the requirements for use of an automated external defibrillator (AED) (B.W8, F.W10) W7: Properly describes the required first aid procedures in cases of traffic accidents (C.W13, C.W27, D.W20, F.W10) U3: Assesses the health hazards and life-threatening factors in pre-hospital settings (D.U9, E.U3) U4: Recognizes the health hazards and risk factors in pre-hospital settings (C.U7) K1: Attempts to resolve moral and ethical dilemmas (K_K04) **Tutorials:** W2: Characterizes the possible causes of sudden cardiac arrest (C.W27) W4: Discusses safety dangers involving first aid providers (C.W13, D.W20) W5: Identifies the required first aid steps in various health-threatening situations (F.W10, C.W27) W6: Describes the requirements for use of an automated external defibrillator (AED) (B.W8, F.W10) W7: Properly describes the required first aid procedures in cases of traffic accidents (C.W13, C.W27, D.W20, F.W10) U1: Assures safe conditions for him/herself as well as the victim (D.U9) U2: Safeguards the site of traffic accidents (D.U9) U3: Assesses the health hazards and life-threatening factors in pre-hospital settings (D.U9, E.U3) U4: Recognizes the health hazards and risk factors in pre-hospital settings (C.U7) U5: Correctly performs the algorithm for basic life support (BLS) on individuals of various ages (D.U9, F.U9, F.U11) U6: Applies the rules of first aid in cases of various health hazards of internal origin by utilizing selected medical equipment (D.U9, E.U14) U7: Applies the rules of first aid in cases involving trauma (D.U9, F.U6) U8: Applies the rules of first aid in cases related to environmental emergencies (D.U9, F.U8) K1: Attempts to resolve moral and ethical dilemmas (K_K04)

	K2: Takes a proactive approach in order to provide care and assistance in health-related and/or life-threatening circumstances (K_K02)
Assessment methods and criteria for a given form of classes within the course	The condition for passing the course is attendance at the classes
Course content	**Tutorials - topics:** 1. Basic life support (BLS) in adults. 2. Basic life support (BLS) in children. 3. Restoring and stabilizing basic vital bodily functions. 4. Protecting and stabilizing the victim of bodily injuries due to various external factors. 5. The use of electrotherapy in cardiac arrest. 6. Head, trunk and limb injuries. 7. First aid for trauma victims. Immobilization of damaged limbs due to trauma. 8. First aid related to superficial wounds. 9. First aid related to external hemorrhaging. 10. First aid procedures in various environmental emergencies. 11. Basics of toxicology. 12. First aid in traffic accidents.
Teaching methods	**Tutorials:** • demonstrations with added instructions • development and improvement of practical skills • analysis of case reports • utilization of medical simulation methods
Literature	The same as in part A.

KIEROWNIK KATEDRY FIZJOLOGII CZŁOWIEKA

prof. dr hab. n. med. Wojciech Kaźmierczak