Pomorski Uniwersytet Medyczny w Szczecinie

SYLLABUS of the MODULE (SUBJECT)
General information

Module title: ***Medical informatics and statistics***	
Module type	Obligatory.
Faculty PMU	*Faculty of Medicine and Dentistry*
Major	*Medical and Dentistry*
Specialty	*n.a.*
Level of study	Long-cycle x *first-cycle* □ *second-cycle* □
Mode of study	*full-time/part-time*
Year of studies, semester	*I/I*
ECTS credits (incl. semester breakdown)	*2*
Type/s of training (Number of hours)	*lectures (4 h), laboratory exercises (21 h)*
Form of assessment	*- graded assessment:* x *descriptive* x *test* x *practical* □ *oral* □ *non-graded assessment* *- final examination:* □ *descriptive* □ *test* □ *practical* □ *oral*
Head of the Department /Clinic, Unit	*dr n. techn. inż. Janusz Paweł Kowalski-Stankiewicz*
Tutor responsible for the module	*dr n. techn. inż. Janusz Paweł Kowalski-Stankiewicz 91-48-00-937 janus@pum.edu.pl*
Department's/Clinic's/Unit's website	*https://edu.pum.edu.pl/edu/*
Language	*Polish/English*

Detailed information

Module objectives		*awareness and knowledge of the value of information in the modern world, knowledge of data sources and their interpretation, evaluation and inference based on available data*
Prerequisite /essentialrequirements	Knowledge	*Basics of mathematical analysis, basics of physics*
	Skills	*Use of Internet browsers, knowledge of spreadsheets, use of knowledge bases in the Internet, use of bibliographic sources*
	Competences	*Self-education habit, team work, understanding the inseparability of the rights and duties of an individual, respect for entrusted social property*

Description of the learning outcomes for the subject/module			
No. of learning outcome	**Student, who has passed the (subject) knows /is able to /can:**	**SYMBOL (referring the standards)**	**Method of verification of learning outcomes***
W01	knows and understands imaging techniques of tissues and organs, as well as operating principles of appropriate diagnostic equipment	B.W09.	K, S, W
U01	is able to use and process information using IT tools and accessing modern sources of medical knowledge	D.U13.	K, S, W
U02	is able to critically analyse medical literature, including in english, and draw conclusions	D.U16.	K, S, W
U03	is able to interpret basic epidemic indicators, defines and appraises reliability and relevance of tests used in screening examination	G.U17.	K, S, W
K01	is ready to use reliable sources of information	K.7.	K, S, W
K02	is ready to draw conclusions from own measurements or observations	K.8.	K, S, W

Table presenting LEARNING OUTCOMES in relation to the form of classes										
No. of learning outcome	**Learning outcomes**	**Type of training**								
		Lecture	**Seminar**	**Practical classes**	**Clinical classes**	**Simulations**	**E-learning**	**Other forms**		
1	B.W09.	x								
2	D.U13.			x						
3	D.U16.			x						
4	G.U17.			x						
5	K.7.			x						
6	K.8.			x						

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	**Teaching programme**	**Number of hours**	**References to learning outcomes**
Winter semester			
TK01	Lectures Digital images. Properties of light. Human psychovisual model. Illusion.	4	W01
TK02	Practical classes Population, random sample, distribution series. Position characteristics. Measures of dispersion and moments of statistical distribution	4	U01, U02, U03, K01, K02
TK03	Practical classes Correlation and regression. Coefficient of linear correlation. Linear regression. Spearman's correlation coefficient.	4	U01, U02, U03, K01, K02
TK04	Practical classes Estimation and verification of statistical hypotheses. Parametric tests: U test for the population mean value. Student's t-test, F-test	4	U01, U02, U03, K01, K02
TK05	Practical classes ANOVA	4	U01, U02, U03, K01, K02
TK06	Practical classes Non-parametric tests: chi-square test, sign test and test of maximum test Wilcoxon test (Mann-Whitney U test)	4	U01, U02, U03, K01, K02
TK07	Practical classes: assessment	1	U01, U02, U03, K01

Booklist:	
Obligatory literature:	
1. Mikulski T.: Statystyka medyczna, Pomorska Akademia Medyczna, Dział Wydawnictw, Szczecin, 1994	
2. Informatyka medyczna, Pod red. R. Rudowski, Wydawnictwo Naukowe PWN, 2003	
Supplementary literature:	
1. Dobosz M.: Wspomagana komputerowo statystyczna analiza wyników badań. Akademicka Oficyna Wydawnicza EXIT, Warszawa 2001	
2. Thematic material available on the Internet	
Student's workload	
Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]
	Tutor
Contact hours with the tutor	25
Time spent on preparation to seminars/ practical classes	3
Time spent on reading recommended literature	4
Time spent on writing report/making project	
Time spent on preparing to colloqium/ entry test	6
Time spent on preparing to exam	
Other …..	
Student's workload in total	38
ECTS credits for the module/subject	2
Notes	
The students are obliged to know the Rules and Regulations of the Studio.	

* Selected examples of methods of assessment:
EP – written examination
EU - oral examination
ET – test examination
EPR – practical examination
K – colloqium
R – report
S – practical skills assessment
RZC – practical classes report, incl. discussion on results
O - student's active participation and attitude assessment
SL - lab report
SP – case study
PS - assessment of student's ability to work independently
W – entry test
PM – multimedial presentation
other…