SYLLABUS – A COURSE DESCRIPTION

I. General information
1. Course name: **Elements of statistics in R**
2. Course code:
3. Course type (compulsory or optional): **compulsory**
4. Study programme name: **Language, Mind, Technology**
5. Cycle of studies (1st or 2nd cycle of studies or full master's programme): **2nd**
6. Educational profile (general academic profile or practical profile): **general academic**
7. Year of studies (if relevant): **1st**
8. Type of classes and number of contact hours: practical classes: **30 hours**
9. Number of ECTS credits: **6**
10. Name, surname, academic degree/title of the course lecturer/other teaching staff: **Dr. Kamil Kaźmierski**
11. Language of classes: **English**
12. Online learning – yes (partly – online / fully – online) / no: **no**

II. Detailed information
1. Course aim (aims):

The aim of this course is to introduce students to basic concepts in statistical inferencing, and to give them hands-on experience applying them in the R statistical environment.

2. Pre-requisites in terms of knowledge, skills and social competences (if relevant):

Basic arithmetic skills

3. Course learning outcomes (EU) in terms of knowledge, skills and social competences and their reference to study programme learning outcomes (EK):

Course learning outcome symbol (EU)	On successful completion of this course, a student will be able to:	Reference to study programme learning outcomes (EK)
01	Knows basic statistical concepts; can present empirical distribution of a variable under study in tabular and graphical form; knows basic descriptive statistics and can interpret them.	K_W03, K_W12
02	Knows basic concepts of probability theory, applicable to statistics.	K_W03, K_UO16
03	Knows and can apply basic statistical tests used in linguistics: t-test and related, chi-squared test, correlation test, ANOVA, linear regression.	K_W03, K_W06, K_W10, K_UO6, K_UO16
04	Can import, transform and visualize data in R statistical environment.	K_W09, K_W10, K_W12
05	Can write up a conducted statistical procedure, as well as interpret write-ups of statistical procedures conducted by other researchers.	K_W03, K_UO7

4. Learning content with reference to course learning outcomes (EU)

Course learning content:	Course learning outcome symbol (EU)
Basic statistical concepts	01, 02
Basic of the R statistical environment	04
Descriptive statistics	01
Introduction to probability	02
Estimating unknown quantities from samples	01
Hypothesis testing	03, 05
Continuous data analysis	03
Categorical data analysis	03

5. Reading list:
   - Baayen, R. H. 2008. *Analyzing linguistic data*. Cambridge: Cambridge University Press.
   - Navarro, Danielle. 2019. Learning statistics with R: A tutorial for psychology students and other beginners. (Version 0.6.1)
   - Wickham, H. & Grolemund, G. 2016. R for data science. Sebastopol, CA: O'Reilly.

III. Additional information

1. Teaching and learning methods and activities to enable students to achieve the intended course learning outcomes (please indicate the appropriate methods and activities with a tick and/or suggest different methods)

Teaching and learning methods and activities	X
Lecture with a multimedia presentation	x
Interactive lecture	
Problem – based lecture	
Discussions	
Text-based work	X
Case study work	X
Problem-based learning	X
Educational simulation/game	
Task – solving learning (eg. calculation, artistic, practical tasks)	X
Experiential work	
Laboratory work	
Scientific inquiry method	
Workshop method	X
Project work	X
Demonstration and observation	
Sound and/or video demonstration	
Creative methods (eg. brainstorming, SWOT analysis, decision tree method, snowball technique, concept maps)	
Group work	x
Other (please specify) -	
…	

2. Assessment methods to test if learning outcomes have been achieved (please indicate with a tick the appropriate methods for each LO and/or suggest different methods)

Assessment methods	Course learning outcome symbol					
Written exam						
Oral exam						
Open book exam						
Written test						
Oral test						
Multiple choice test	01					
Project	01	02	03	04	05	
Essay						
Report						
Individual presentation						
Practical exam (performance observation)						
Portfolio						
Other (please specify) -						
…						

3. Student workload and ECTS credits

Activity types		Mean number of hours spent on each activity type
Contact hours with the teacher as specified in the study programme		30
Independent study*	Preparation for classes	30
	Reading for classes	30
	Essay / report / presentation / demonstration preparation, etc.	20
	Project preparation	20
	Term paper preparation	
	Exam preparation	20
	Other (please specify) -	
	…	
Total hours		150
Total ECTS credits for the course		6

* please indicate the appropriate activity types and/or suggest different activities

4. Assessment criteria in accordance with AMU in Poznan's grading system:

Very good (bdb; 5,0): student knows and understands the concepts very well, can successfully apply them

Good plus (+db; 4,5): student knows and understands the concepts very well, can successfully apply them, but makes small errors

Good (db; 4,0): student knows and understands the concepts well, can successfully apply them, but makes occasional errors

Satisfactory plus (+dst; 3,5): student knows and understands the concepts on a basic level, can apply them on a satisfactory level, but makes errors

Satisfactory (dst; 3,0): student knows and understands the concepts on a basic level, can apply them on a basic level, but makes errors

Unsatisfactory (ndst; 2,0): student does not know or understand the concepts and cannot apply them without making gross errors