

INFORMATION SHEET OF THE SUBJECT

Code: YOsm021		Name: Statistics in scientific work	
Cover: Department of Nursing			
Type of educational activity: Lecture, Seminar		Number of credits: 4	Recommended semester: ST
Scope of educational activity (in hours): Weekly: 1/2 For term of study: LS 30,60			Study grade: Master
Method of educational activity:			
Recommended semester	Study programme		
1.year ST	Nursing (D2-OŠET-22-K)		
Underlie subjects:			
Conditions for passing the course: Method of evaluation: Completion by taking an examination Continuous evaluation: None. Final evaluation: The final test creates 40% of the final grade and the final practical assignment in the SPSS creates 60% of the total grade In each of the tasks, for a minimum mark of E, it is necessary to reach the threshold of 70% of the total number of possible points. A student will not be awarded credits if he/she she does not achieve a minimum grade of E on the final test or final practical assignment.			
Finished: final test and final practical assignment in the statistical program SPSS			
Learning outcomes: After completing the subject, the student will be competent to independently define the phases of the scientific process, the main goal of the scientific work and secondary goals for its achievement, and to determine the hypotheses of the work. She/he will also be able to plan and implement data collection, their analysis and interpretation in the process of scientific argumentation. Learning outcomes: LO1 Explain the basic terminology of scientific work and scientific argumentation of the background situation of the observed phenomenon. LO 2 Student knows the stages of the scientific process. LO 3 Student knows the designs of scientific studies. LO 4 Student defines the research question and statistical hypotheses of scientific work. LO 5 Student is able to apply data collection tools. LO 6 Student knows o use the basic environment of statistical program SPSS. LO 7 Student knows descriptive statistics of numerical and categorical variables. LO 8 Student knows and can apply statistical tests for testing hypotheses of categorical variables. LO 9 Student knows and can apply statistical tests for testing hypotheses about differences in mean values of numerical variables. LO 10 Student knows and can apply statistical tests for testing hypotheses about the causality of the study phenomenon. LO 11 Student applies the general principles of presentation of scientific works. LO 12 Student can interpret the findings of his/her own scientific study.			
Schedule of subject: 1. Introduction to the subject, basic terminology, basic requirements of scientific work. 2. Designs of scientific studies. 3. Determination of the goals of the scientific work, its hypotheses and the methodology of the scientific work. 4. Qualitative and quantitative data collection tools. 5. Data sources and health information systems. 6. Questionnaire and requirements for working with it. 7. Descriptive procedures of continuous and categorical variables (descriptive measures, frequency tables and creation of graphs) in the SPSS program. 8. Analytical procedures (establishment of hypotheses, verification of hypotheses by chi-square test/fisher test) in the SPSS program. 9. Analytical procedures (hypothesis verification by t.test/wilcox test; anova/kruskal.wallis test) in the SPSS program. 10. Analytical procedures (verification of hypotheses by correlation and regression analysis) in the SPSS program. 11. Interpretation of the result part of the work and graphic elements. 12. Final repetition and individual consultations			
Recommended reading: • Hlavatý, T: Základy klinického výskumu. Grada Publishing. Bratislava: 2016. ISBN: 9788024757131. • Rusnák,M.-Rusnáková,V.- Majdan,M: Bioštatistika pre študentov verejného zdravotníctva. Typi Universitatis Tyrnaviensis. Trnava:2010. ISBN:978-80-8082-332-0. • Venables,WN. - Smith, DN. and the R Core Team. An introduction to R. 2012. Dostupné na: http://cran.r-project.org/doc/manuals/r-release/R-intro.html . • Field, A, Miles, J, Field, Z: Discovering Statistics Using R. London: 2012. ISBN 9781 446200452. • Guráň, P.-Fero, M.-Ritomský, A. 2019. Základy spracovania sociologických dát pomocou SPSS. Typi Universitatis Tyrnaviensis. 2019, 143s. ISBN 978-80-8082-332-0. 978-83-8111-100-3.			

Language requirements: Slovak

Notes:

Conditions-Attendance DAILY students:

- Pursuant to Article 4, paragraph 7 of the Study Regulations:

"The student's participation in the teaching of the subject is determined by the teacher of the given subject. In justified cases, the dean may, at the student's request, decide on the student's optional participation in classes. The dean will assess the reasons for justifying the student's participation in full-time education (health, cultural, sports) and determine the possibility of relief from full-time education."

- Teaching will take place for full-time students only in a face-to-face format at the faculty.

- The pedagogue is responsible for ensuring that the attending student confirms his presence by signing the attendance sheet at each lesson.

- A full-time student who will have MORE THAN TWO ABSENCES per semester (it doesn't matter for what reason) must ask the dean of the faculty in writing (not by email) to excuse his absence from classes and attach the relevant document of his third or more numerous absences.

According to the study regulations, the dean may or may not agree to it.

- The student reports absence from class to the teacher in advance by e-mail.

- It is not possible to make up for an absent lesson.

- In the case of fulfilling other work duties of the teacher (conference, business trip,...), the teacher will inform the students of this fact in advance and assign the students a work assignment in the range of missed hours.

Conditions-Attendance COMBINED students:

- Pursuant to Article 4, paragraph 7 of the Study Regulations:

"The student's participation in the teaching of the subject is determined by the teacher of the given subject. In justified cases, the dean may, at the student's request, decide on the student's optional participation in classes. The dean will assess the reasons for justifying the student's participation in full-time education (health, cultural, sports) and determine the possibility of relief from full-time education."

- Students will only be taught face-to-face at the faculty.

- The pedagogue is responsible for ensuring that the attending student confirms his presence by signing the attendance sheet at each lesson.

- A combined student who will have MORE THAN 25% ABSENCES of the total number of subject hours per semester (it doesn't matter for what reason) must ask the dean of the faculty in writing (not by email) for an excuse for his/her non-participation in classes and attach the relevant document of his/her excessive absence. According to the study regulations, the dean may or may not agree to it.

- The student reports absence from class to the teacher in advance by e-mail.

- It is not possible to make up for an absent lesson.

- In the case of fulfilling other work duties of the teacher (conference, business trip,...), the teacher will inform the students of this fact in advance and assign the students a work assignment in the range of missed hours.

Course evaluation:

Assessed students in total: 176

A	B	C	D	E	FX
26%	20%	14%	6%	10%	24%

Lecturers:

PhDr. Denisa Benedek Jakubcová, PhD., MPH, lecturer, examiner, seminary supervisor

Date of last change: 01.09.2026

Approved by: prof. PhDr. Ivica Gulášová, PhD., MHA