



MEDICINE
– INTEGRATED ACADEMIC STUDIES
SIXTH YEAR

2025/2026

MEDICAL STATISTICS AND INFORMATICS

Course title:

MEDICAL STATISTICS AND INFORMATICS

ECTS: 3

Number of active teaching hours (weekly): 2 (1 lectures teaching class and 1 practical class)

TEACHERS AND ASSOCIATES:

No.	First name and surname	Email	Academic title
1.	Nebojša Zdravković	nzdravkovic@fmn.kg.ac.rs	Full Professor
2.	Vladislava Stojić	vladislavastojic@fmn.kg.ac.rs	Assistant Professor
3.	Jelena Dimitrijević	jelena.nedeljkovic@fmn.kg.ac.rs	Teaching Assistant
4.	Sara Mijailović	sara.mijailovic@fmn.kg.ac.rs	Teaching Assistant
5.	Anđela Gogić	andjela.gogic@fmn.kg.ac.rs	Facilitator
6.	Mateja Zdravković	mzdravkovic@fmn.kg.ac.rs	Teaching Assistant

COURSE STRUCTURE:

Module	Name of the course module	Weeks	Teaching Lectures (weekly)	Practice (weekly)	Teacher – in charge
1.	Informatics	7	1	1	Prof. dr Nebojša Zdravković
2.	Statistics	8	1	1	Prof. dr Nebojša Zdravković
					Σ 15+15=30

Examination Methods:

The student finishes the course in modules. The grade is equivalent to the number of points earned (see tables). Points are earned in two ways:

ACTIVITY DURING THE LESSON: The student can gain up to 30 points, by answering ten written questions from that week's lesson in a special part of the exercise and receiving 0-2 points in accordance with the demonstrated knowledge.

FINAL TESTS BY MODULES: The student can gain up to 70 points according to the attached table.

Determination of final grade		The maximal number of points		
		Activity during the lesson	Final test	Σ
1	Informatics	14	30	44
2	Statistics	16	40	56
Σ		30	70	100

Determination of final grade:

To pass the exam, the student must earn a minimum of 51 total points and pass all modules. To pass the module student must:

1. earn more than 50% points in that module
2. earn more than 50% points for the activity during the lesson in each module
3. pass the module test by having more than 50% correct answers.

Grading system

Final grade	Total number of points Points grade	Description
10	91 – 100	Excellent
9	81 – 90	Exceptionally good
8	71 – 80	Very good
7	61 – 70	Good
6	51 – 60	Passing
5	< 51	Falling

LITERATURE:

Module	The title of the textbook	Authors	Publisher	Library of faculty
1 and 2	Discovering statistics using SPSS.	Field A.	London: Sage, 2009.	
	Inventive biostatistics	Motulsky H.	New York: Oxford University Press, 2010	
	2007 Microsoft Office System Step by Step	Lamber S.	London: Microsoft Press, 2007.	
	Common errors in statistics and how to avoid them.	Good P.	New York: John Wiley & Sons, 2009.	

Program of lectures and practical classes:

THE FIRST MODULE: INFORMATICS

TEACHING UNIT 1 (WEEK 1):

WINDOWS	
Teaching lectures (1 class)	Practical classes (1 class)
Basics of the Windows operating system.	Installing and setting up the Windows operating system.

TEACHING UNIT 2 (WEEK 2):

WINDOWS	
Teaching lectures (1 class)	Practical classes (1 class)
Basics of the Windows operating system.	Working in the Windows operating system

TEACHING UNIT 3 (WEEK 3):

MICROSOFT WORD	
Teaching lectures (1 class)	Practical classes (1 class)
Word processors.	Formatting text, inserting images and tables in Microsoft Word.

TEACHING UNIT 4 (WEEK 4):

MICROSOFT EXCEL	
Teaching lectures (1 class)	Practical classes (1 class)
Spreadsheet program.	Creating and formatting tables, using basic functions in Microsoft Excel.

TEACHING UNIT 5 (WEEK 5):

MICROSOFT POWERPOINT	
Teaching lectures (1 class)	Practical classes (1 class)
Program for creating presentations.	Creating and formatting slides, and inserting images and tables in Microsoft PowerPoint.

TEACHING UNIT 6 (WEEK 6):

INTERNET	
Teaching lectures (1 class)	Practical classes (1 class)
Web. Email and security. Viruses.	Internet browsing, Internet protection, e-mail account opening, Internet communication.

TEACHING UNIT 7 (WEEK 7):

MEDICAL DATABASES	
Teaching lectures (1 class)	Practical classes (1 class)
Overview of databases. PubMed. Medical journals on the Internet.	Browsing medical databases and medical journals on the Internet. Downloading publications from the Internet.

THE SECOND MODULE: STATISTICS**TEACHING UNIT 8 (WEEK 8):**

FREQUENCY DISTRIBUTIONS	
Teaching lectures (1 class)	Practical classes (1 class)
Types of data. Frequency distributions. Histograms and other frequency charts.	Getting to know the SPSS program. Basic settings. Creating a data file i data entry.

TEACHING UNIT 9 (WEEK 9):

MEASURES OF CENTRAL TENDENCY	
Teaching lectures (1 class)	Practical classes (1 class)
Forms of frequency distribution. Median and quantiles. Mean. Variance, range and range interquartile range. Standard deviation.	Types of variables. Frequency. Median. Mean. Variance. Standard deviation.

TEACHING UNIT 10 (WEEK 10):**PRESENTATION OF DATA**

Teaching lectures (1 class)	Practical classes (1 class)
Rates and proportions. Significant figures. Presentation of table. Charts.	Charts. Histogram. Bar chart. Line diagram. Scatter diagram. Box plot diagram.

TEACHING UNIT 11 (WEEK 11):**NORMAL DISTRIBUTION**

Teaching lectures (1 class)	Practical classes (1 class)
Normal distribution. Variables that follow Normal distribution. Normal chart.	Tables. Finishing tables. Importing tables into Word documents. Diagrams. Finishing the diagram. Import diagrams into Word documents.

TEACHING UNIT 12 (WEEK 12):**PREDICTION**

Teaching lectures (1 class)	Practical classes (1 class)
Sample distributions. Standard error of the mean sample. Confidence intervals.	Normal distribution. Normal diagram distribution. Assessment of normality of distribution. Detection of atypical points.

TEACHING UNIT 13 (WEEK 13):**HYPOTHESIS TESTING**

Teaching lectures (1 class)	Practical classes (1 class)
Hypothesis testing. Sign test. Principles of significance tests. Significance levels and types errors. One-sided and two-sided tests of significance. Comparing means of large samples.	t distribution. Testing the hypothesis about the mean values. Paired samples t-test.

TEACHING UNIT 14 (WEEK 14):**T DISTRIBUTION**

Teaching lectures (1 class)	Practical classes (1 class)
t distribution. t one-sample method. Comparing means of independent samples. Use of transformations.	t distribution. Independent samples t-test.

TEACHING UNIT 15 (WEEK 15):**CORRELATION AND REGRESSION**

Teaching lectures (1 class)	Practical classes (1 class)
Scatter diagrams. Regression. Method of least square. Standard error of the coefficient regression. Correlation. Using the coefficient correlations.	Regression. The method of least squares. Correlation. Correlation coefficients.

LECTURES AND PRACTICAL CLASSES

week	type	Teaching and practice lectures	Teacher
1	L	WINDOWS	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	WINDOWS	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
2	L	WINDOWS	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	WINDOWS	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
3	L	MICROSOFT WORD	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	MICROSOFT WORD	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
4	L	MICROSOFT EXCEL	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	MICROSOFT EXCEL	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
5	L	MICROSOFT POWER POINT	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	MICROSOFT POWER POINT	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
6	L	INTERNET	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić

LECTURES AND PRACTICAL CLASSES

week	type	Teaching and practice lectures	Teacher
	P	INTERNET	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
7	L	MEDICAL DATABASES	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	MEDICAL DATABASES	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
8	L	FREQUENCY DISTRIBUTIONS	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	FREQUENCY DISTRIBUTIONS	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
9	L	MEASURES OF CENTRAL TENDENCY	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	MEASURES OF CENTRAL TENDENCY	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
10	L	PRESENTATION OF DATA	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	PRESENTATION OF DATA	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
11	L	NORMAL DISTRIBUTION	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	NORMAL DISTRIBUTION	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković

LECTURES AND PRACTICAL CLASSES

week	type	Teaching and practice lectures	Teacher
12	L	PREDICTION	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	PREDICTION	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
13	L	HYPOTHESIS TESTING	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	HYPOTHESIS TESTING	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
14	L	T DISTRIBUTION	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	T DISTRIBUTION	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković
15	L	CORRELATION AND REGRESSION	Prof. dr Nebojša Zdravković Asst. Prof Vladislava Stojić
	P	CORRELATION AND REGRESSION	Jelena Dimitrijević Sara Mijailović Anđela Gogić Mateja Zdravković