



UNIVERSITY "ISMAIL QEMALI" VLORE
FACULTY OF TECHNICAL AND NATURAL SCIENCES
DEPARTMENT OF BIOLOGY

BIO 425 COURSE PROGRAM

SUBJECT:	Biostatistics
Head/Teacher of the course:	MSc. Xhuljana Arapaj
Charge:	2 Lectures/ 2 Seminars
Subject typology:	Disciplines of basic training
Academic year/semester when it takes place:	Academic year 2022-2023/Spring 2023
Subject type:	Mandatory
Study program:	Master of Science in Environmental Biology
Credits:	6 credits
Subject code:	BIO 425
E-mail address of Teacher of the course:	xhuljana.arapaj@univlora.edu.al

SUMMARY AND LEARNING OUTCOMES:

In this program we study variables in Biology, arithmetic mean, geometric mean, mode, coefficient of variation, standard deviation, treated. Different distributions: binomial, Poisson, X^2 , t and F. Estimation and hypothesis testing, analysis of variance (ANOVA), regression analysis, correlation analysis.

BASIC CONCEPTS:

- 1 *Descriptive statistics.*
- 2 *Distributions in Biostatistics.*
- 3 *Analysis of variance, regression and correlation analysis.*

COURSE TOPICS:

Topics to be covered in the lectures:

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|-----------------|--|
| Topic 1 | Introduction to Biostatistics. |
| Topic 2 | Variables in Biology, statistical properties, arithmetic mean. |
| Topic 3 | Geometric mean, mode, coefficient of variation, standard deviation. |
| Topic 4 | Probability. |
| Topic 5 | Different distributions: binomial, Poisson, X^2 , t and F. |
| Topic 6 | Evaluation and hypothesis testing. |
| Topic 7 | Analysis of variance. |
| Topic 8 | One-factor analysis (ANOVA). |
| Topic 9 | The first and second analysis of variance models. |
| Topic 10 | The first and second analysis of variance models. |
| Topic 11 | Regression analysis. |
| Topic 12 | Linear regression equation. |
| Topic 13 | Correlation analysis. |
| Topic 14 | Correlation coefficient. Relationships between regression and correlation coefficient. |

Topics to be covered in the seminars:

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|-----------------|---|
| Topic 1 | Introduction to Biostatistics. |
| Topic 2 | Variables in Biology, statistical properties, arithmetic mean. |
| Topic 3 | Geometric mean, mode, coefficient of variation, standard deviation. |
| Topic 4 | Probability. |
| Topic 5 | Different distributions: binomial, Poisson, X^2 , t and F. |
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| Topic 8 | One-factor analysis (ANOVA). |
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| Topic 10 | The first and second analysis of variance models. |
| Topic 11 | Regression analysis. |

Topic 12	Linear regression equation.
Topic 13	Correlation analysis.
Topic 14	Correlation coefficient. Relationships between regression and correlation coefficient.

FORM OF KNOWLEDGE CONTROL

control	Percentage assessment
Annual assessment Seminars and teaching practice	20%
Final check	80%

Grading is based on the conversion of the total grade to %, grade 5-10 progressively 41-100%.

Grading	4	5	6	7	8	9	10
ASSESSMENT	-40	41-50	51-60	61-70	71-80	81-90	91-100

ATTENDANCE AND EVALUATION:

Grading is based on the conversion of the total grade to %, grade 5-10 progressively 41-100%. The final exam will according to the relevant articles of the regulation of the "Ismail Qemali" University of Vlora. The student, who res attendance will not be included in the final exam, will be graded with M. If the student has attended the course, but final exam, it will be graded NP (Did Not Appear).

COURSE FORMAT:

The subject will be evaluated on the basis of assignments and the final exam. Points earned will be cumulative. The repeated, for any reason. If you will miss the exam without any major reason, then you will lose the points for that e not appear.

LITERATURE

a)Mandatory basic literature: o Koni M: 2005: Biostatistics, FSHN, UT, Tirana.

FINAL REMARKS FROM THE SUBJECT TEACHER

The use of mobile phones and smoking in the auditorium is not allowed.

Lecturer

MSc Xhuljana Arapaj

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standard deviation are
ce. One factor analysis

be written or oral
ults with less than 75%
does not appear in the

exams will not be
exam in which you did