UNIVERSITY OF PATRAS

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PHARMACY

POSTGRADUATE PROGRAM: DRUG DESIGN AND DEVELOPMENT

COURSE TITLE: **STATISTICS AND QUALITY MANAGEMENT IN PHARMACY**

CODE: DPHA_B02

STATISTICS AND QUALITY MANAGEMENT IN PHARMACY
COURSE OUTLINE

1. **GENERAL**

SCHOOL	HEALTH SCIENCES
ACADEMIC UNIT	DEPARTMENT OF PHARMACY
PARTICIPATING INSTITUTIONS	-
TITLE of POSTGRADUATE PROGRAM	DRUG DESIGN AND DEVELOPMENT
LEVEL	POSTGRADUATE

COURSE CODE	DPHA_B02	**SEMESTER**	B'

COURSE TITLE	STATISTICS AND QUALITY MANAGEMENT IN PHARMACY

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHING HOURS**	**CREDITS**
Courses	3	5

COURSE TYPE	General Background
PREREQUISITE COURSES	-
LANGUAGE of INSTRUCTION and EXAMINATIONS	Greek
COURSE OFFERED to ERASMUS STUDENTS	No
COUSRSE (URL)	http://www.pharmacy.upatras.gr/images/DS/DPHA_B02_EN.pdf

2. **LEARNING OUTCOMES**

Learning Outcomes
This course aims to acquire knowledge, skills and abilities related to level 7 of the European Qualifications Framework for Lifelong Learning.   Upon successful completion of the course, the students: • will have the ability to design experiments and perform statistical analysis of data and experimental results   • will have the necessary knowledge about quality management and quality assurance in pharmaceutical industry
General Competences
• Working independently   • Team work   • Working in an interdisciplinary environment   • Adapting to new situations   • Project planning and management

3. SYLLABUS

LECTURES
1. Definitions and introductory concepts
2. Probability, Probability Distributions
3. Statistical Estimation, Hypothesis Testing
4. Sample selection, Sample size, Power of test
5. Linear regression and correlation
6. Analysis of variance I
7. Analysis of variance II
8. Factorial designs
9. Experimental design in clinical trials
10. Non-parametric statistical methods
11. Process validation
12. Quality assurance
13. Total quality management

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Physical presence of students/teachers in a lecture hall (face-to-face)
USE of INFORMATION and COMMUNICATIONS TECHNOLOGY	Use of E-class to share archives and exercises Use of E-class for general communication with students.
TEACHING METHODS	*Activity* *Semester Workload* Lectures from Faculty 39 Self-study 86 *Course Total* **(25 hours of work-load per ECTS credit)** **125**
STUDENT PERFORMANCE EVALUATION	Language of Evaluation: Greek Written exam. During the exam the students have free access to all teaching material of the course.

5. RECOMMENDED BIBLIOGRAPHY

Related Bibliography
- Sanford Bolton, Charles Bon, Pharmaceutical Statistics: Practical and Clinical Applications, 5th Edition, 2009, CRC Press.
- R. Dan Reid, Nada R. Sanders, Operations Management: An Integrated Approach, 7th Edition, 2019, Wiley , Chapter 5 - Total Quality Management.

Related Academic Journals:
Pharmaceutical Statistics
Journal of Pharmaceutical Sciences
 International Journal of Pharmaceutics
European journal of Pharmaceutics and Biopharmaceutics