SCHOOL	FACULTY OF ENVIRONMENT		
ACADEMIC UNIT	FOOD SCIENCE AND TECHNOLOGY		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	**FST101**	**SEMESTER**	1
COURSE TITLE	**MATHEMATICS**		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercise, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	2	
Total	2	3
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *General background, special background, specialised general knowledge, skills development*	General Background
PREREQUISITE COURSES:	
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (in Greek)
COURSE WEBSITE (URL)	

LEARNING OUTCOMES

Learning Outcomes

The course earning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.
Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

Upon successful completion of the course, the student will be able to:

- solve problems, of mathematical content, that he will encounter during his studies
- develop critical thinking to analyze problems and create an algorithm to solve it
- synthesize the data provided by the parameters of the problem and apply their mathematical knowledge to give each case the more appropriate mathematical solution

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
Decision-making	*Respect for the natural environment*
Working independently	*Showing social, professional and ethical responsibility and sensitivity to gender issues*

Team work *Working in an international environment* *Working in an interdisciplinary environment* *Production of new research ideas*	*Criticism and self-criticism* *Production of free, creative and inductive thinking* *.....* *Others...* *.....*

- Adapting to new situations
- Decision-making
- Working independently
- Team work
- Criticism and self-criticism
- Production of free, creative and inductive thinking
- Search for, analysis and synthesis of data and information, with the use of the necessary technology

SYLLABUS

Review of basic mathematical techniques. Applications of analogy relations in a biology laboratory. Description of relationships with equations and graphs. Introduction to descriptive statistics. Biotechnology applications. The theory and practice governing the basic protocols, which are carried out daily in laboratories of molecular biology, biochemistry, biomedicine and biotechnology, are examined in detail. All standard laboratory operations, from solution preparation and pH measurement to specialized reactions such as Bradford and PCR.

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	**Use of information technology on data collection and information, in teaching and communication. Communication with students via web, e-mail, e-class and online folder sharing options etc.**
TEACHING METHODS *The manner and methods of teaching are described in detail.* *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.* *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS*	

Activity	*Semester workload*
Lectures	78
Total contact hours and training	***78***

STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure*	Evaluation procedure performed in Greek. Written Evaluation

Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	

BIBLIOGRAPHY

- Suggested bibliography:

1. *BOOK [59395586]: Μαθηματικά μοντέλα στη Βιολογία 2η έκδοση, Σγαρδέλης Στέφανος*
2. *BOOK [13570]: SCHAUM'S ΔΙΑΦΟΡΙΚΟΣ ΚΑΙ ΟΛΟΚΛΗΡΩΤΙΚΟΣ ΛΟΓΙΣΜΟΣ, FRANK AYRES JR., ELLIOT MENDELSON*
3. *BOOK [68403105]: Εφαρμοσμένη Ανάλυση και Στοιχεία Γραμμικής Αλγεβρας, Φιλιππάκης Μ.*
4. *BOOK [31107]: Απειροστικός λογισμός και πραγματική άλγεβρα, Σακκαλής Παναγιώτης Γ.*

Performance Statistics of the last 2years			
Grade (descending order)	**absolute frequency**	**relative frequency %**	**sum of success rates per class**
MATHEMATICS			
10	50	24%	24%
9	44	21%	46%
8	25	12%	58%
7	22	11%	68%
6	65	32%	100%
	206	100%	