VIROLOGY

1. GENERAL

SCHOOL	AGRICULTURAL SCIENCES		
ACADEMIC UNIT	CROP SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	CRS_907	**SEMESTER OF STUDIES**	9th
COURSE TITLE	Virology		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, 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	3	
Tutorials	1	
TOTAL	4	5
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*	Specialised general knowledge,
PREREQUISITE COURSES:	There are no prerequisite courses.
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek. Teaching may be performed in English in case foreign students attend the course.
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning outcomes

The course learning 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*

After successful completion of the course, students will understand virology as science and field practice. They will be able to manage interactions between viruses, vectors and plants, locate plant virus reserves in the field, identify in the lab viral infections of plants and provide potential solutions. Furthermore the student will be able to:

Know basic principles of virology

Know plant viruses characteristics

Apply front line techniques for virus detection

Manage plant viral diseases in the field based on their epidemiology and appropriate control strategy.

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*
	Showing social, professional and ethical responsibility and sensitivity to

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

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Decision-making
Working independently
Team work
Respect for the natural environment
Criticism and self-criticism

3. SYLLABUS

Introduction in plant virology
Basic principles
Plant viruses structures, and their genome organization.
Plant viruses nomenclature and taxonomy
Viral infection of plant hosts and transport among tissues
Plant viruses replication mechanisms
Plant viruses detection methods (in vitro, electronic microscopy, serological and molecular techniques).
Transmission of plant viruses.
Plant viruses control strategies
Virus free certification in plant propagation.
Viroids, phytoplasmas and other close related plant pathogens.

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face lectures and laboratory exercises.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	• Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching. • Use of ICTs in student communication (learning support through the e-class platform).
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 (3 conduct hours per week x 13 weeks)	39
Tutorial (1 conduct hours per week x 13 weeks)	13
Assignments	10
Private study time of the students for the lab preparation and final examination - Participation in the examinations	63
Course total **(25 work load for each ECTS credit)**	***125 hours (total student workload)***

STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure*	Student performance evaluation will be explained to the students at the beginning of the course/beginning of the semester. Mandatory final written examination for lectures / theoretical part of the course, comprises 60% of the final mark of the student.

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.*	Mandatory final written examination for the transferred laboratory skills of the course, comprises 40% of the final mark of the student. Minimum pass mark: 5 (full scale: 0-10) The above mentioned process will be taking place in Greek and for foreign students (eg ERASMUS students) in English.

5. ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

1. Κατής, ΝΙ. 2000. Ιολογία Φυτών. Εκδόσεις Πήγασος, Θεσσαλονίκη

2. Roger Hull 2013. Plant Virology, 5th Edition, Academic Press