

COURSE OUTLINE

1. GENERAL INFORMATION

FACULTY/SCHOOL	School of Plant Sciences		
DEPARTMENT	Department of Crop Science		
LEVEL OF STUDY	Postgraduate		
COURSE UNIT CODE	120112	Semester:	S-1
COURSE TITLE	Turfgrass Management for Sports and Recreation		
INDEPENDENT TEACHING ACTIVITIES <i>in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits</i>	WEEKLY TEACHING HOURS	ECTS	
Lectures and Field Exercises	2	2	
<i>Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4</i>			
COURSE TYPE <i>Background knowledge, Scientific expertise, General Knowledge, Skills Development</i>	Scientific expertise		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION:	Greek		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)			

2. LEARNING OUTCOMES

<p>Learning Outcomes The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:</p> <p>APPENDIX A</p> <ul style="list-style-type: none"> • Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework. • Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and <p>APPENDIX B</p> <ul style="list-style-type: none"> • Guidelines for writing Learning Outcomes
<p>Upon completion of the course, students will acquire specialized knowledge in the subject of turfgrass culture, both in sports facilities and in open public or private green spaces. Specifically:</p> <ul style="list-style-type: none"> • they will recognize the characteristics of the main warm-season and cool-season turfgrass species, • they will know, compare, and combine criteria for selecting various turfgrass species based on soil-climatic conditions, intensity of use, visual quality, and functionality, • they will identify and select methods for turfgrass installation, • they will know, evaluate, select, and propose methodologies for turfgrass management.

General Competences	
<i>Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?</i>	
<i>Search for, analysis and synthesis of data and information by the use of appropriate technologies,</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for diversity and multiculturalism</i>
<i>Decision-making</i>	<i>Environmental awareness</i>
<i>Individual/Independent work</i>	<i>Social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Group/Team work</i>	<i>Critical thinking</i>
<i>Working in an international environment</i>	<i>Development of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>(Other.....citizenship, spiritual freedom, social awareness, altruism etc.)</i>
<i>Introduction of innovative research</i>	
Search for, analysis and synthesis of data and information by the use of appropriate technologies Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an interdisciplinary environment Introduction of innovative research Project planning and management Respect for diversity and multiculturalism Environmental awareness Critical thinking Development of free, creative and inductive thinking	

3. COURSE CONTENT

<p>Application of turfgrass science in sports facilities and specialized open spaces. Design, installation, and management of turfgrasses in athletic areas within the Greek context, specifically in golf courses, football fields, equestrian arenas, and baseball fields. New technologies in the installation and management of athletic turfgrass. Selection of suitable infrastructure, drainage systems, and irrigation based on the type of sports facility. Methodologies and techniques for turfgrass management depending on the selected grass species and the use of the sports area. Methods and rules for the reinforcement of substrates. Nutrient and water requirements of athletic turfgrass. Use of recycled and desalinated irrigation water. Determination of environmental impacts and management methodologies in sports turfgrass. Integrated management of turfgrass in sports areas. Mechanical equipment for proper management of athletic turfgrass. Auxiliary equipment and specialized constructions within sports facilities. The course includes case study analyses from Greece and abroad, as well as on-site visits to relevant areas of interest.</p>
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4. TEACHING METHODS--ASSESSMENT

<p>MODES OF DELIVERY <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i></p>	<p>The teaching of the coursetakes place in-person, in a well-equipped classroom/studio, complete with the necessary audiovisual equipment for conducting lectures and presentations. Additionally, teaching can also be conducted remotely through video conferencing.</p>
<p>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in teaching, Laboratory Education, Communication with students</i></p>	<p>Slide Presentations in PowerPoint format are used for teaching purposes. Video projection. Communication with students is facilitated through email. The learning process is supported through the digital platform Microsoft Teams. Access to online databases is provided for research purposes.</p>

<p align="center">COURSE DESIGN</p> <p><i>Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc.</i></p> <p align="center"><i>The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.</i></p>	Activity/ Method	Semester workload
	Lectures	14 hours
	Field Exercises	6 hours
	Educational Visit	6 hours
	Independent Study	24 hours
	Total of Course (25 hours of workload per ECTS)	50 hours
<p align="center">STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</p> <p><i>Detailed description of the evaluation procedures:</i></p> <p><i>Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other.....etc.</i></p> <p><i>Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.</i></p>	<p>The evaluation language is Greek (and English if required). The assessment is done through a written exam. The grade is determined by a written exam with short-answer questions after the completion of the lectures.</p>	

5. SUGGESTED BIBLIOGRAPHY:

<p><i>- Suggested Bibliography:</i></p> <p>Νεκτάριος, Π.Ε. (2007). Κηποτεχνικά Έργα, Εργαστηριακές Σημειώσεις, Εργαστήριο Ανθοκομίας και Αρχιτεκτονικής Τοπίου, Γεωπονικό Πανεπιστήμιο Αθηνών.</p> <p>Christians, N. E., Patton, A. J., & Law, Q. D. (2016). Fundamentals of turfgrass management. John Wiley & Sons, New Jersey, USA.</p> <p>Pessaraki, M. (2007). Handbook of turfgrass management and physiology. CRC press, Florida, USA.</p> <p>Turgeon, A. J. (2011). Turfgrass management (No. Ed. 9). Prentice-Hall Inc., New Jersey, USA</p> <p>Bell, G. E. (2011). Turfgrass physiology and ecology: Advanced management principles. Cabi Publishing, UK.</p> <p>Beard, J. B. (1973). Turfgrass Science and Culture. In: Hall, P. and Cliffs, E.,Eds., ASA-CSSA-SSSA, Inc., New Jersey, USA.</p> <p>Fry, J. and Huang, B. 2004. Advanced Turfgrass Science and Physiology. John Wiley & Sons, New Jersey, USA.</p> <p><i>- Related scientific journals:</i></p> <ul style="list-style-type: none"> • International Turfgrass Society Research Journal, ITS • Grasses, MDPI • Grass Research, Maximum Academic Press • Journal of Turfgrass Management, Taylor & Francis • Applied Turfgrass Science, ACSESS • Crop Science, ACSESS • Agronomy Journal, ACSESS • Rasen-Turf-Gazon – European Journal of Turfgrass Science
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