

Course title: On-site decentralized wastewater treatment systems

Course basic information			
Academic unit:	Faculty of Civil Engineering		
Course title:	On-site decentralized wastewater treatment systems		
Level:	BSc		
Course status:	Mandatory		
Year of study:	3 rd Year/6th Semester		
Number of classes per week:	2+2		
ECTS Credits:	6 ECTS		
Time/Location:	According to timetable		
Teacher:	Prof.Asoc.Dr. Figene Ahmedi		
Contact details:	Email: figene.ahmedi@uni-pr.edu Tel: +381 38 554 899/103		
Course description			
Course description	Given the fact that complete sewerage is unlikely for many residents, on-site decentralized wastewater management becomes of great importance to the future management of the environment. Topics elaborated in this course are: Constituents in wastewater, wastewater sources and average flowrates; Wastewater pretreatment processes; Alternative wastewater collection systems; Biologic treatment; Intermittent and recirculating filters; Effluent disposal for decentralized systems; Biosolids and septage management; Management of decentralized wastewater systems.		
Course goals:	The course aims to present the importance of on-site decentralized systems for communities where complete sewerage is unlikely; To demonstrate types of on-site decentralized systems; To provide concepts of system management.		
Expected learning outcomes:	Students who attend the course will be able to : <ul style="list-style-type: none"> • Understand and reflect the need for using on-site wastewater treatment systems • Recognize the differences of on-site wastewater treatment systems and • Select and present the management steps of on-site systems 		
Student workload (should be in compliance with student's Learning Outcomes)			
Activity	Hours	Day/Week	Total
Lectures	2	15	30
Theory/Lab work/Exercises	2	15	30

Practical work			
Midterm test preparation	2	15	30
Consultation with the teacher	1	6	6
Field work			
Test, seminar paper	2	2	4
Homework	2	12	24
Self-study time (library or home)			8
Preparation for final exam			10
Assessment time (test, quiz, final exam)			8
Projects, presentations, etc.			
Total			150

Teaching methods:	Through lectures, classroom work in a group of 2-3 students (exercises) and individual homework.
Assessment methods:	Prerequisite: Urban water management Evaluation is done from 0-100 % First midterm: 35 % Second midterm: 35 % Home works: 30 % Regular attendance – decisive in borderline cases Final exam.

Primary literature:	1. Ahmedi, F. Lecture notes
Additional literature:	1. Crites, R., Tchobanoglous, G. Small and Decentralized Wastewater Management Systems, McGraw-Hill, 1998 2. US EPA. Onsite Wastewater Treatment Systems Manual, 2002 3. Metcalf & Eddy, Inc. Wastewater Engineering: Treatment and Reuse. 4th ed, McGraw Hill, Inc., New York, 2003

Design teaching plan:	
Week	Title of the lecture
Week 1:	Constituents in wastewater
Week 2:	Impact of wastewater effluent discharge standards
Week 3:	Wastewater sources, and constituent concentration
Week 4:	Wastewater pretreatment
Week 5:	Alternative wastewater collection systems
Week 6:	Alternative wastewater collection systems (cont.)
Week 7:	Biologic treatment
Week 8:	Biologic treatment (cont.)
Week 9:	Intermittent and recirculating filters

Week 10:	Intermittent and recirculating filters
Week 11:	Effluent disposal for decentralized systems
Week 12:	Effluent disposal for decentralized systems
Week 13:	Study visit to decentralized system
Week 14:	Biosolids and septage management
Week 15:	Management of decentralized wastewater systems

Academic policies and code of conduct

Regular attendance of lectures and exercises. Silence in teaching. Entrance in class within time. Tools used during class must be cleaned and stored away at the end of class. Mobile/smart phones, and other electronic devices must be turned off (or on vibrate) and hidden from view during class time. Laptop and tablet computers are allowed for quiet use only (if required for use in class); other activities such as checking personal e-mail or browsing the Internet are prohibited.