

**Course title :**

<b>Course Basic Information</b>	
<b>Academic Unit:</b>	Faculty of Civil Engineering
<b>Course title:</b>	Water management
<b>Level:</b>	Bachelor
<b>Course Status:</b>	Elective
<b>Year of Study:</b>	Year 2, Semester 3
<b>Number of Classes per Week:</b>	2+1
<b>ECTS Credits:</b>	3
<b>Time /Location:</b>	According to the Timetable
<b>Teacher:</b>	Prof.asoc. Figene Ahmedi
<b>Contact Details:</b>	<a href="mailto:figene.ahmedi@uni-pr.edu">figene.ahmedi@uni-pr.edu</a> +381 38 554 899/103
<b>Course Description:</b>	<p>Course addresses the needs of water quality and the manners how the adequate water quality may be achieved: a) treating the water before serving for drink, and b) treating wastewater before its discharge to the receiving waters. Initially, the subject discusses the basic concepts of wastewater treatment (WWT). The focus lies on the description of some basic pollutants and treatment technologies used for WWT.</p> <p>Topics included (covered):</p> <ol style="list-style-type: none"><li>1. Basic properties and quality characteristics of water</li><li>2. Material balance, reactions and reactors</li><li>3. Application needs of water and wastewater standards</li><li>4. Drinking water treatment technologies</li><li>5. Wastewater treatment Technologies</li><li>6. Factors of concern to water treatment plant design</li></ol>
<b>Course Goals:</b>	Increase in demand for the health and environment in our country, imposes the need for the construction of WWT. Therefore, this course aims to give students the opportunity for gaining the basic knowledge in the field of WWT: by analyzing wastewater treatment processes and their appropriate application.
<b>Expected Learning Outcomes:</b>	Students who attend the course will be able to:

	<ul style="list-style-type: none"> <li>Describe the fundamentals of water quality, and categorize the water quality in relation to required qualities and standards</li> <li>Describe and select the right processes of wastewater treatment</li> <li>Schematize the wastewater treatment systems</li> </ul>
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**Student Workload (should be in compliance with student's Learning Outcomes)**

Activity	Hours	Day/ Week	Total
Lectures	2	15	30
Theory/ Lab Work/Exercises	1	15	15
Practical Work			
Study for intermediate test			
Consultations with the teacher	5	1	5
Field Work			
Test, seminar paper	1	10	10
Homework	1	3	3
Self-study (library or home)	5	1	5
Preparation for final exam	1	5	5
Assessment time (test, quiz, final exam)			
Projects, presentations, etc.	2	1	2
<b>Total</b>			<b>75</b>

<b>Teaching Methods:</b>	The course will be developed through lectures, class-works (exercises) and home-works. In order to encourage students with first impressions on wastewater treatment, the visit/s of wastewater treatment plant/s will be arranged as well.
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<b>Assessment Methods:</b>	The way of students evaluation will be as follow: First midterm: 35 % Second midterm: 35% Home works: 30% Regular attendance – decisive in borderline cases Final exam
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<b>Primary Literature:</b>	1. Ahmedi, F. Teknologjite e Trajtimit te Ujerave, 2010
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<b>Additional Literature:</b>	-Crittenden, J., Montgomery, W. H. Water Treatment Principles and Design. 2nd ed, MWH, Canada, 2005. -Metcalf & Eddy, Inc. Wastewater Engineering: Treatment and Reuse. 4th ed, McGraw Hill, Inc., New York, 2003. -Qasim, S. R. Wastewater Treatment Plants: Planning, Design and Operation. 2nd ed, CRC, Texas, 1999.
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<b>Designed teaching plan</b>	
<b>Week</b>	<b>Title of the Lecture</b>
<b>Week 1:</b>	Introduction in wastewater treatment technologies: why should be treated wastewater

<b>Week 2:</b>	Basic properties and quality characteristics of water
<b>Week 3:</b>	Material balance, reactions, and reactors
<b>Week 4:</b>	Water quality standards: drinking water and wastewater standards
<b>Week 5:</b>	Drinking water treatment
<b>Week 6:</b>	Drinking water treatment (cont.)
<b>Week 7:</b>	Drinking water treatment (cont.)
<b>Week 8:</b>	Study visit to drinking water treatment plant
<b>Week 9:</b>	Wastewater treatment
<b>Week 10:</b>	Wastewater treatment (cont.)
<b>Week 11:</b>	Wastewater treatment (cont.)
<b>Week 12:</b>	Wastewater treatment (cont.)
<b>Week 13:</b>	Study visit to wastewater treatment plant
<b>Week 14:</b>	Factors of concern for the design of water treatment
<b>Week 15:</b>	Factors of concern for the design of water treatment (cont.)

#### Academic Policies and Code of Conduct

- Regular attendance of lectures and exercises
- Being quiet during the sessions
- Shutting down mobile phones
- Being on time

**Note | If a student has more than 3 class assignments evaluated below 50% he/she loses the right on taking the final exam. Evaluation is done from 0-100 %.**