

Course Syllabus: Hydrotechnical structures

Course Basic Information			
Academic Unit:	Faculty of Civil Engineering		
Course Name:	Hydrotechnical structures		
Level:	Bachelor		
Course Status:	Elective		
Year of Study:	VI		
Number of Hours per Week:	2+1		
ECTS Credits:	3		
Time /Venue:	According to Schedule		
Course Teacher:	Prof. Ass. Dr. Lavdim Osmanaj		
Contact Details:	lavdim.osmanaj@uni-pr.edu , www.fn.uni-pr.edu		
Course Description			
Course Description	Includes, understanding; mechanical, hydraulic and seismic stability calculation of all known material dams, as well as their structures drawing.		
Course Objectives:	Water reservoir formation by dam design		
Learning Outcomes:	Student will: Understand the purposes of hydrotechnical structures Select the proper type, and proper material of dam Calculate mechanical, hydraulic and seismic stability of dam Draw dam with all its unit structures		
Student Workload (Consistent with the Learning Outcomes)			
Activity	Hours	Day/ Week	Total
Lectures	2	15	30
Theory/ Lab Work	1	15	15
Practical Work			
Contact Hours with Teacher /Consultations during Office Hours	1	3	3
Field Work	2	3	6
Colloquium, Seminars	1	4	4
Homework	1	7	7
Self-study Time (in the Library or at Home)	1	5	5
Final Exam Preparation	1	3	3
Evaluations (Tests, Quiz, Final exam)	1	2	2
Projects, Presentations, etc.			
Total			75
Teaching Methodology:			
Teaching Methodology:	<i>(Lectures, exercises during lessons using different materials, group work of 2-3 students in a project (independent work), individual homework).</i>		
Evaluation Methods:			
Evaluation Methods:	<i>(The pass rate of the course is 60%. Student attendance 10%; Individual tasks performed in class 10%; Individual homework 10%; Assessment from tests 20%; Final exam 50%.)</i>		

Basic Literature:	Lectures authorized by the Professor.
Additional Literature:	Dams and appurtenant hydraulic structures, Prof. Lj. Tanchev, CRC Press
Course Plan:	
Week	Title of the Lecture
Week 1:	Introduction General information and types of hydrotechnical structures
Week 2:	Dams - construction purposes elements and Reservoirs Dam history Dam loads - horizontal type of loads
Week 3:	Vertical loads Dam filtration and its calculation methods
Week 4:	Earth dams
Week 5:	Earth dams - its details Waterproof structures at dams Drainage structures at dams
Week 6:	Dam foundation and its contact with ground Rock filled and soil dams
Week 7:	Rock filled plus artificial material dams
Week 8:	Rock filled plus artificial material dams - construction
Week 9:	Type selection of earth dams Earth dams stability analysis
Week 10:	Concrete massive dams (gravity)
Week 11:	Gravity dam design
Week 12:	Gravity RCC dam
Week 13:	Buttress dam (types, conditions)
Week 14:	Arch dam (introduction, types, details, stability)
Week 15:	General repetition

Academic Policies and Rules of Civility:

Rules of conduct:

1. Regular attendance during lectures and exercises is compulsory,
2. Following up general faculty ruling and peace,
3. Turning of mobile phones during classes,
4. Entering in to the classrom on time,
5. The student has no right to be apsent more than 3 class hours during the semester without justification.
6. Prepration and conducting the case studies in line with theortitical knowledge and presentation the findings in class. Students who have prepared and presented during the classes and pass the exam complete the subject duties and will be granted with passing grade.