

PROJECT DESCRIPTION

Course Name	Structures for hydraulic facilities and water storage				
Year of study	1	Semester	2	Final Examination Form (E-exam; Co-Colloquy); P-project	P
Course Category (CC-Core Course/Compulsory; EC-Elective Course; FC-Facultative Course)				EC	Number of ECTS credits (CR)
Contact hours	70	Individual study	42	Total hours per semester	28
Course Code	(AC-Advance Course; SC- Specific Course)				SC
Academic Staff Member in charge	(Full name, Academic position and Department) <i>Assoc. Prof. Anghel CONSTANTINESCU, Hydraulic Engineering Department</i>				

Faculty	Engineering in Foreign Languages	Number of contact hours per semester				
Domain of studies	Civil Engineering	Total	C	S	L	P
Specialisation	Structural engineering	28	28			

Project objectives: Description of main competences	The project trains students in using advanced CAD tools for structural design computation of dams. Main competences: professional knowledge concerning the use of simple & FEM design facilities; how to combine various engineering software packages in order to make engineering decisions; presenting written technical reports and making oral presentations.				
Content description: Course Seminar	Seminar – 28 hours				
	1. Brief presentation of gravity dams and their structural design.				2 hours
	2. Structural computation of a gravity dam in 2 static hypothesis using CADAM software				4 hours
	3. Students' reports presentation and defence				1 hour
	4. Presentation of basic principles of FEM and ANSYS software				1 hour
	4. Modelling a dam and its foundation mass using ANSYS code				3 hours
	4. Assignment of static loads				1 hour
	5. Computation of 1 st hypothesis, interpretation of results				2 hours
	6. Study of seepage under the dam				6 hours
	7. Computation of deformations and stress state under all static loads				4 hours
	8. Finalisation of reports.				2 hours
	9. Students' reports presentation and defence				2 hours

<i>Bibliography</i>	<ul style="list-style-type: none"> - T. Bugnariu, 2015 - Structures for Hydraulic Facilities and Water Storage – Lecture Notes, pdf. - T. Bugnariu, 2007 – Basics of the Finite Element Method Applied in Civil Engineering, Ed. Conspress - CADAM software – user guide, pdf - ANSYS software – user guide, Swanson Analysis Systems, 1995
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Criteria to be considered for the final mark	Weight of each criterion in the final mark (%)
1. Exam defence (final examination)	
2. Appreciation during the entirely semester	
2.1 Seminar attendance	15
2.1 First report	25
2.2 Second report	60
3. Periodical examinations	
3.1 Written / oral examination	
3.2 Home works, reports, essays etc.	
4. Other criteria (to be specified)	
Short description of the final evaluation procedure: Both written reports are defended by a professor-student discussion on the content and results.	

Estimation of the total number of hours per semester requested for the individual study			
Type of individual activity	Number of hours	Type of individual activity	Number of hours
1. Study of the course notes	12	8. Preparation of the final examination	10
2. Study of the compulsory bibliography		9. Advisory class participation	
3. Study of the supplementary bibliography		10. Practical documentation on site	
4. Preparation of specific activities (seminar, laboratory, project etc.)	10	11. Additional documentation on library	
5. Preparation of home works, reports, essays etc.	10	12. INTERNET documentation	
6. Preparation of periodical written examinations		13. Others (to be specified)	
7. Preparation of periodical oral examinations		TOTAL number of hours	42

Done on: 28 September 2017

Academic Staff Member in charge

PhD. Assoc. Prof. Anghel CONSTANTINESCU