PLATE AND SHELL STRUCTURES

Civil Engineering II Cycle Studies Building and Engineering Constructions

COURSE DETAILS - SUMMER SEMESTER 2012/2013:

	LECTURE (15)		PROJECT (15)
1-	Equations of rectangular flat membra-	1	Classification of shell structures and
2	nes.		basic definitions.
3-	Bending plates.	2-	ROBOT package - introduction, solu-
4		4	tion of a panel (A1).
5	Application of engineering tables for	5	Delivery of assignment A1, short test.
	rectangular plates.		
6	Finite differnce method for rectangular	6	Static analysis of bending plate; engi-
	plates.		neering tables (A2a).
7	Description of geomerty of curved sur-	7	Static analysis of bending plate; finite
	faces		difference method (A2b).
8	General equations of thin shells.	8-	Delivery of assignment A2, short test.
		9	
9-	Membrane State of Shells.	10-	Membrane state of conical shell (A3).
10		11	
11-	Shells in membrane-bending condition.	12-	Membrane-bending state of cylindrical
12		13	shell (A4)
13-	Various Problems in SS Mechanics.	14-	Delivery of assignment A3 and A4,
14		15	short test.
15	Examination Test.		

REQUIREMENTS AND GRADING:

- In order to obtain a positive grade the student is obliged to pass an examination test, gather 50 % of points form short tests and deliver the reports on 4 assignments
- The grade recorded in students index book is computed as: 0.3 * lab grade + 0.2 * short test grade + 0.5 * examination test grade.
- If an assignment report is delivered with a delay, the grade will be lowered.
- Assignments should be delivered by the summer break.

TEACHERS:

Lecture: dr inż. Anna Stankiewicz Project: dr inż. Anna Stankiewicz, dr inż. Adam Wosatko

RECOMMENDED READING

- 1. M. Radwańska, Ustroje powierzchniowe. Podstawy teoretyczne oraz rozwiązania analityczne i numeryczne., Skrypt PK, Kraków 2009.
- 2. J.N. Reddy, Theory and Analysis of Elastic Plates and Shells., 2 edition, 2006.