

Cracow, 28.02.2014

PLATE AND SHELL STRUCTURES

Civil Engineering
II Cycle Studies
Building and Engineering Constructions

COURSE DETAILS - SUMMER SEMESTER 2013/2014:

	LECTURE (15)		PROJECT (15)
1	Classification of shell structures and basic definitions.	1-2	ROBOT package - introduction, solution of a panel (A1).
2-3	Equations of rectangular flat membranes.	3-4	Delivery of assignment A1, short test.
4-5	Bending plates.	5-6	Static analysis of bending plate (A2).
6-7	Bending plates - examples.	7-8	Delivery of assignment A2, short test.
8	Description of geomerty of curved surfaces.	9-10	Membrane state of conical shell (A3).
9	General equations of thin shells.	11-12	Membrane-bending state of cylindrical shell (A4).
10-11	Membrane State of Shells.	13-14	Delivery of assignment A3 and A4, short test.
12-13	Shells in membrane-bending condition.	15	Solution of selected problems
14	Various Problems in SS Mechanics.		
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: $0.3 * \text{lab grade} + 0.2 * \text{short test grade} + 0.5 * \text{examination test grade}$.
- 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 Anna Stankiewicz

Project: Dr Anna Stankiewicz, Dr Adam Wosatko

RECOMMENDED READING

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