COURSE		STRUCTURES II		
LECTURER		Prof. dr Samir Dolarević		
STUDY	STATUS	SEMESTER	NUMBER OF LESSONS L+E	ECTS
B - CE	Compulsory	4	2+2	5

OBJECTIVES

- Explain principles of load transfer through statically indeterminate girders in plane, analysis methods of such girders and basics of analysis of plates and walls. Introduction to modeling using software for structural analysis.

LEARNING OUTCOMES

- Understand relationship between stifness and load transfer through statically indeterminate girders.
- Analysis of through statically indeterminate girders in plane – calculation of displacements, deformations and internal forces – stresses.
- Understand basic cocept of slabs and deep beams.

COURSE CONTENT

- Relationship between elements stifness and internal forces of statically indeterminate girders. Force method: choice of primary system; compatibility equations; calculation of internal forces. Influence of support settlement.
- Basic concepts of displacement method: local and global stiffness matrix, transformation matrix, load vector, assembling. Strong and week equilibrium formulation in displacement method. Applications of method: frames, continuous beams, arches and beam grillage.
- Slabs and deep beams: basic concepts, differential equations and boundary conditions. Basics of 3D analysis.

RECOMMENDED LITERATURE

1. S.Dolarević, *Statika konstrukcija*, Građevinski fakultet Sarajevo, 2011.
2. Đurić, *Statika konstrukcija,* Građevinska knjiga Beograd

Examination:
During the classes the exam is taken in two parts in writing. Each part is scored as follows: homework - 5 points, midterm exam - 45 points, a total of 50 points.
a) If a student realizes 55% of both partial exams, the final mark will be graded according to a scale prescribed by the Law on Higher Education. Students who miss less than 5 points for grades 8, 9 and 10 are allowed to take the final exam orally for a higher grade.
b) Students who pass one part, on the final exam take in writing the part that they did not pass. The mark is formed as in a) except that there is no oral option for a higher grade.
c) Students who do not pass any part during the classes, take writing exam in integral form and marks will be graded in the following form:
    50% of the points awarded during the classes + 50% of points awarded at the final exam.
Cancelling exams: Students, who have passed both parts and are not satisfied with the results achieved in one part, can take that part again on the final exam.