COURSE IDENTIFICATION FORM

Course Code and Name: IM5045 / FRACTURE LINES THEORY				**Department of :** CIVIL ENGINEERING / MASTER PROGRAMME			
Semester	**Theoretic Hour**	**Practice Hour**	**Total Hour**	**Credits**	**ECTS**	**Education Language**	**Type: Compulsory Elective**
Atumn/Spring	3	0	3	3	5	Turkish	Optional
Prerequisite (s)							
Instructor	Assoc. Prof. Dr. Alper POLAT					**Mail : alperpolat@munzur.edu.tr Web :**	
Course Assistant						**Mail : Web :**	
Groups / Classes							
Course Aim	To provide an alternative to the students about slab solution by teaching the solution of plates in different forms and under various loads according to limit states.						
Course Goals	Solution of small deflection plates according to the theory of elasticity. It is aimed to create alternative methods by solving rectangular plates with and without beams, bevel plates, polygonal, triangular and circular plates with the theory of fracture lines.						
Course Learning Outs and Proficiencies	• Students will be able to solve small deflection plates according to the theory of elasticity. • Students will be able to calculate different types of plates under various load effects according to limit states. • Students will be able to calculate various types of plates using fracture line theory.						
Course Basic and Auxiliary Contexts	• Prof. İlhan Berktay, Betonarme Plaklarda Kırılma Çizgileri Teorisi, 1988						
Methods of Give a Lecture	Face to Face						

Assessment Criteria		**If Available, to Sign (x)**	**General Average Percentage (%) Rate**
	Midterm Exam	**X**	**50**
	1. Quiz		
	2. Quiz		
	3. Quiz		
	4. Quiz		
	Oral Examination		
	Practice Examination (Laboratory, Project etc.)		
	Final Exam	**X**	**50**

Semester Course Plan

Week	Subjects
1	Solution of small deflected plates according to the theory of elasticity
2	Introduction to the plastic account
3	Fracture line theory
4	Analysis with the virtuous work method
5	Analysis by static equilibrium method
6	Orthotropic reinforced plates and affinity theorems
7	Corner effects
8	Midterm exam
9	Superposition rule
10	Investigation of different types of plates by fracture line theory
11	Rectangular plates with and without beams
12	Bevel plaques
13	Polygonal, triangular and circular plates
14	Application