COURSE IDENTIFICATION FORM

Course Code and Name: IM 5006 FINITE ELEMENT APPLICATIONS IN STRUCTURAL ENGINEERING				**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	**Mail :** **Web :**
Course Assistant	**Mail :** **Web :**
Groups / Classes	
Course Aim	To increase the analysis skills of graduates with developing technology and to increase the analysis of more complex systems with accurate modeling methods.
Course Goals	It is aimed that graduates will be able to use at least one finite element package program at a good level. In this context, it is aimed that they will have the capacity to model any structure they may encounter.
Course Learning Outs and Proficiencies	• The student learns the basic principles of modeling • The student learns to model complex structures • The student learns how to perform linear and nonlinear analysis. • The student learns to interpret analysis results.
Course Basic and Auxiliary Contexts	• Süleyman Adanur , Şevket Ateş, Ahmet Can Altunışık ; SAP 2000 Applications in Civil Engineering, Dynamic Academy, 2018 • Ahmet Can Altunışık , Murat Günaydın , Ali Fuat Genç , Fatih Yesevi Okur, ANSYS Applications in Civil Engineering, Dynamic Academy, 2018
Methods of Give a Lecture	Face to Face

Munzur Üniversitesi Lisansüstü Eğitim Enstitüsü Müdürlüğü Aktuluk Mah. Üniversite Yerleşkesi Merkez / Tunceli Telefon: +90 (428) 213 17 94

FORM - 41
Sayfa-1

		If Available, to Sign (x)	General Average Percentage (%) Rate
Assessment Criteria	**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	Use of software packages in solving engineering structures, points to be considered in using software packages, assumptions used in modeling structural elements.
2	Detailed information about commands and their short applications
3	Simple beam model and its computational comparison according to basic strength laws
4	Reinforced concrete frame modeling
5	Linear elastic analysis
6	Modal analysis, mass participation ratio calculation and interpretation of results
7	Creating a masonry building model
8	Midterm Exam
9	Parameters and their purposes in nonlinear analysis
10	Nonlinear analysis in masonry structures
11	Historical minaret model and analysis
12	Historical bridge model and analysis
13	Historical mosque model and analysis
14	Free modeling and analysis

Munzur Üniversitesi Lisansüstü Eğitim Enstitüsü Müdürlüğü Aktuluk Mah. Üniversite Yerleşkesi Merkez / Tunceli Telefon: +90 (428) 213 17 94

FORM - 41
Sayfa-2