COURSE IDENTIFICATION FORM

Course Code and Name: IM5038 DIFFUSION AND DISPERSION IN WATER ENVIRONMENT				**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	Asst. Prof. Dr.Hilal ARSLANOĞLU IŞIK	**Mail : hilalarslanoglu@munzur.edu.tr** **Web :**
Course Assistant		**Mail :** **Web :**
Groups / Classes	Postgraduate (Master's Degree)	
Course Aim	This in the environment soluble substances Convection And mixture processes chemical And physically aspect environmental in the environment concentration , chemical reaction , diffusion , transport And spread processes And effects of comprehend , pollutant article And Convection in the process important processes introduction , variable beginning And border conditions under basis Convection equations of application , natural in environments Convection your problems solution for analysis And synthesis of their vehicles development ,	
Course Goals	Basis concepts , natural in the environment article transport And diffusion equation of mathematical solutions, turbulent in the environment diffusion , turbulent in the flow continually And Intermittent sources , longitudinal dispersion , dispersion coefficients determination of tidal effect under dispersion mechanisms of to be taught .	
Course Learning Outs and Proficiencies	• Diffusion And dispersion processes knows , • One and two dimensional This quality your problems solves , • Wastewater discharge of environmental effects evaluates .	
Course Basic and Auxiliary Contexts	• Lesson Notes • Orhan USLU, 1997. Environmental Dispersion , Nine September University Faculty of Engineering Publications , Izmir • THOMANN and MUELLER, 1987. Principles of surface water quality modeling and control, • Schnoor , J.L., Environmental Modeling: Fate and Transport of Pollutants in Water, Air, and Soil, Wiley- Interscience , 1996.	
Methods of Give a Lecture	Face to the face	

		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	Entrance And basis concepts
2	Molecular diffusion And Brownian movement
3	One dimensional in space diffusion equation
4	Two dimensional in space diffusion equation
5	Turbulent in the environment diffusion
6	Advection diffusion equation , initial And border conditions
7	Sudden point , linear And areal resources
8	Midterm Exam
9	Continually pointwise , linear And areal resources
10	Dispersion (longitudinal, vertical And lateral dispersion coefficients)
11	Atmospheric Convection processes
12	Tidal effect under dispersion
13	Turbulent jets And clouds
14	Stochastic processes