

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
FZK-3007	Flued Physics	3.00	0.00	0.00	3.00	6.00
Course Detail						
Course Language	: Turkish					
Qualification Degree	: Bachelor					
Course Type	: Optional					
Preconditions	: Not					
Objectives of the Course	: The aim of this course is to give students basic physical properties of fluids, static, dynamic, viscid, inviscid, laminar and turbulent flows are analysed.					
Course Contents	: Basic physical properties of fluids, Static Fluids , Dynamic fluids, Basic (continuity, motion and energy) equations , Applications of basic equations in cartesian, cylindrical and spherical coordinates, Lagrange ,variables , Euler variables, Viscid and inviscid flows, Mid-term exam , Laminar flows, Turbulent flows, Boundary and initial value problems, Hydrodynamic waves, Hydrodynamic shocks, Hydrodynamic shocks, Final exam					
Recommended or Required Reading	: Robert W. Fox, Alan T. McDonald, Philip J. Pritchard , 2003, Introduction to Fluid Mechanics, John Wiley & Sons Yalçın Yüksel , 2008, Akışkanlar Mekaniği ve Hidrolik, Beta Yayınları Habib Umur, 1998, Akışkanlar Mekaniği, Alfa Basım Yayın					
Planned Learning Activities and Teaching Methods	: Midterm (40) final (% 60)					
Recommended Optional Programme Components	: Knowledge of mathematical physics, symbolic computation and office programs are important					
Instructors	: Prof. Dr. Hüseyin Çavuş					
Instructor's Assistants	: Non					
Presentation Of Course	: Face to face					

Course Outcomes

Upon the completion of this course a student :

- 1 1) make comment about basic physical properties of fluids.
- 2 2) identify the static and dynamic fluids.
- 3 3) investigate the fluid conservation laws.
- 4 4) identify the viscid and inviscid fluids.
- 5 5) interpret the laminar and turbulent flows.

Preconditions

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Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods
1.Week	*Basic physical properties of fluids				*Oral lectures,Homeworks,Practise
2.Week	*Static Fluids				*Oral lectures,Homeworks,Practise
3.Week	*Dynamic fluids				*Oral lectures,Homeworks,Practise
4.Week	*Basic (continuity, motion and energy) equations				*Oral lectures,Homeworks,Practise
5.Week	*Applications of basic equations in cartesian, cylindrical and spherical coordinates.				*Oral lectures,Homeworks,Practise
6.Week	*Lagrange variables				*Oral lectures,Homeworks,Practise
7.Week	*Euler variables				*Oral lectures,Homeworks,Practise
8.Week	*Viscid and inviscid flows				*Oral lectures,Homeworks,Practise
9.Week	*Laminar flows				*Oral lectures,Homeworks,Practise
10.Week	*Turbulent flows				*Oral lectures,Homeworks,Practise
11.Week	*Boundary and initial value problems				*Oral lectures,Homeworks,Practise
12.Week	*Hydrodynamic waves.				*Oral lectures,Homeworks,Practise
13.Week	*Hydrodynamic shocks				*Oral lectures,Homeworks,Practise
14.Week	*Hydrodynamic shocks				*Oral lectures,Homeworks,Practise

Assesment Methods %

1 Mz : 40.000

2 Final : 60.000

ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload
Vize	1	2.00	2.00
Final	1	2.00	2.00

