



Меѓународен Универзитет Визион - International Vision University
 Universiteti Ndërkombëtar Vizion - Uluslararası Vizyon Üniversitesi

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SYLLABUS

COURSE NAME	COURSECODE	SEMESTER	COURSE LOAD	ECTS
FLUID MECHANICS	CIV-1008	2	180	6

Prerequisite(s)	None
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Course Language	Macedonian, Turkish, English
Course Type	Required
Course Level	First Cycle
Course Lecturer	
Course Assistants	
Classroom	
Extra-Curricular Office Hours and Location	Meeting: Consultancy:

Course Objectives	To give basic concepts about the properties and behavior of fluids.
Course Learning Outcomes	<ol style="list-style-type: none"> 1- Learns the properties and behavior of fluids. 2- Learns the basic behavior of fluid flow and their basic equations. 3- Will be able to solve fluid mechanics problems and understand their applications in engineering. 4- Learns to make experiments on the behavior of fluids and to interpret the results. 5- Solve complex problems.
Course Contents	Properties of Fluids / Statics of Fluids / Kinematics of Fluids / Dynamics of Fluids; Ideal and Real Fluids, Hydrodynamics of Submerged Bodies / Introduction to Potential Flow Theory / Dimensional Analysis

WEEKLY SUBJECTS AND RELATED PREPARATION STUDIES

Week	Subjects	Related Preparation
1	Properties of Fluids / Introduction, continuum, specific mass, specific gravity, density	Related Chapters of Course Sources
2	Viscosity, surface tension, and vapor pressure Fluid Statics / Pressure, basic principles	Related Chapters of Course Sources
3	Euler equilibrium equations, Plane surfaces	Related Chapters of Course Sources
4	Relative equilibrium, equilibrium of floating bodies	Related Chapters of Course Sources
5	Fluid Kinematics / Analysis methods, basic concepts, motion of fluid element, acceleration concept	Related Chapters of Course Sources
6	Dynamics of Fluids / Dynamics of ideal fluids, continuity equation	Related Chapters of Course Sources
7	Equations of motion, energy equation	Related Chapters of Course Sources
8	MIDTERM EXAM	Related Chapters of Course Sources
9	Impulse-Momentum theorem and angular momentum	Related Chapters of Course Sources
10	Dynamics of real fluids, Navier-Stokes equations	Related Chapters of Course Sources
11	Boundary layer, hydrodynamics of submerged bodies	Related Chapters of Course Sources
12	Introduction to Potential Flow Theory	Related Chapters of Course Sources
13	Potential Current Theory	Related Chapters of Course Sources
14	Dimension Analysis	Related Chapters of Course Sources
15	Final Exam	Related Chapters of Course Sources

ECTS / WORKLOAD TABLE

Presentation / Seminar			
Hours for off-the-classroom study (Pre-study, practice)	14	3	42
Midterm Exam	1	12	12
Final examination	1	14	14
Total Work Load			
ECTS		6	

GENERAL PRINCIPLE RELATED WITH COURSE

Dear students,

In order to be included, learn and achieve full success that you deserve in the courses you need to come well prepared by reading the basic and secondary textbooks. We are expecting from you carefully to obey to the course hours, not to interrupt the lessons unless is very indispensable, to be an active participant on the courses, easily to communicate with the other professor and classmates, and to be interactive by participating to the class discussions. In case of unethical behavior both in courses or on exams, will be acting in framework of the relevant regulations. The attendance of the students will be checked in the beginning, in the middle or at the end of the lessons. Throughout the semester the students who attend to all lectures will be given 15 activity-attendance points in addition to their exam grades.

SOURCES**COMPULSORY LITERATURE**

No	Name of the book	Author's Name, Publishing House, Publication Year
1	Hidrolik Laboratuvar Deneyleri,	3.Baskı, YTÜ Yayınevi
2	Akışkanlar Mekaniği ve Hidrolik	(Beta Yayınevi), Y. Yüksel, 2009,
3		

ADDITIONAL LITERATURE

No	Name of the book	Author's Name, Publishing House, Publication Year
1		
2		
3		

EVALUATION SYSTEM

Underlying the Assessment Studies	NUMBER	PERCENTAGE OF GRADE
Attendance/Participation	15	%10
Project / Event	1	%20
Mid-Term Exam	1	%35
Final Exam	1	%35
TOTAL	17	%100

ETHICAL CODE OF THE UNIVERSITY

In case of the students are cheating or attempt to cheat on exams, and in the case of not to reference the sources used in seminar studies, assignments, projects and presentations, in accordance to the legislations of the Ministry of Education and Science of Republic of Macedonia and International Vision University, will be applied the relevant disciplinary rules. International Vision University students are expected never to attempt to this kind of behavior.