

Course Unit Descriptor

Study Programme: Energy and Process Engineering			
Course Unit Title: Fluid Mechanics 1			
Course Unit Code: M212			
Name of Lecturer(s): Maša Bukurov			
Type and Level of Studies: Bachelor level			
Course Status (compulsory/elective): compulsory			
Semester (winter/summer): winter			
Language of instruction: english			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 7			
Prerequisites: none			
Course Aims: Introducing students to available equations in the fluid mechanics necessary for solving power problems, as well as the manners of their application.			
Learning Outcomes: Obtaining knowledge necessary for solving engineering problems in the field of the applied fluid mechanics.			
Syllabus: Fluid kinematics and state of stress. Potential flow. Momentum equation. Flow of a compressed fluid. Dynamics of a viscous fluid. Boundary layer. Drag and lift force. Theory of similarity and dimension analysis.			
Required Reading: Relevant literature in English TBD			
Weekly Contact Hours: 5	Lectures: 3	Practical work: 2	
Teaching Methods: Teaching is held using the contemporary devices (all lectures are in Power Point), but also using the classic method with the chalk and the board. There is a series of films about fluid mechanics which are presented to students, but also provided for students to watch as their homework. Whenever possible, objects related to the course content are brought to lectures (pipe elements, measuring devices). Practice is divided into computing practice (for 10 weeks) and laboratory practice (for 5 weeks). Computing practice supplements the lectures and is used to solve examination problems on the board with gradual derivation of the result. Laboratory practice classes are held as a block teaching for 6 hours, where experiments are performed with the participation of students, and the obtained results are then used to obtain final results and graphics. For homework, students have to complete their exercises, so in the subsequent laboratory practice they can defend their results and obtain confirmation for them.			
Knowledge Assessment (maximum of 100 points): 100			
Pre-exam obligations	points	Final exam	points
Lecture attendance	5	Oral part of the exam	50
Exercise attendance	2		
Laboratory exercise attendance	3		
Test	10		
Test	10		

Test	10		
Test	10		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.