

Study program: Environmental Protection			
Course title: Thermo-energetics			
Professor/assistant: Aleksandra Boričić / Biljana Milutinović			
Type of course: compulsory			
ECTS credits: 6			
Pre-requisites: -			
Aims of the course: Prepare students to: acquire theoretical, technical and practical knowledge and skills in the field of thermodynamics.			
Learning outcomes: Student will be able to: practically apply acquired knowledge in the field of thermodynamics in the production and development of engineering capabilities in forecasting, planning and design of HVAC and appliances.			
Syllabus			
<u>Theoretical part</u> System and the environment, property, state, process and equilibrium, system of units, thermodynamic equation of ideal gas state, a mixture of ideal gases, system energy, internal energy, heat energy and work, specific heat and Mayer equation, the first law of thermodynamics, the second law of thermodynamics, real gases and vapors, heat distribution, heat exchangers, combustion processes in steam engines, cooling plants.			
<u>Practical part</u> Solving arithmetic problems, basic laboratory work, visit to one of the power plants.			
Literature			
1. Bazarov I., Thermodynamics (in Serbian), Moscow, 1961.			
2. Malic, D., Thermodynamics 1 (in Serbian), Thermodynamics, Belgrade, 1980.			
Number of active classes			Other forms of teaching:
Lectures: 2	Practical classes: 2	Research work:	
Teaching methods Combination of interactive approach with practical problem solving.			
Grading system (maximum 100 points), grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.			
Pre-exam obligations	points	Final exam	points
activity during theoretical lectures	10	written exam	-
practical training	10	oral exam	30
colloquium(s)/seminar papers	50		
Sum	70	Sum	30