SYLLABUS

Basic data of the subject	
University	**University of Applied Sciences in Ferizaj**
Academic unit	**Faculty of Engineering and Informatics**
Program	**Industrial Engineering with Informatics**
Title of the subject	**Heating and ventilation of buildings**
Level	**Bachelor**
Course Status	**Elective**
Year of studies:	**llI, Semester VI**
Number of hours per week	**3**
Value of Credits - ECTS	**4**
Time / location	
Course lecturer	
Contact details	
Course Description	*This course will introduce students to the basics of heating and ventilation, including: the required amount of heat needed for heating; Calculation of heat loss; Instructions for the calculation of the required amount of heat needed for heating; Thermal insulation; Heating devices; Furnaces; Usage of flammable substances; Chimney; Calculation of chimney; Steam heating; Air source heat pumps; Ventilation. The necessary change of air; Ventilation; Ventilation installation process; Ventilation systems; Air cooling and ventilation equipment; Other necessary equipment, etc.* *Each unit that this course includes will be illustrated through discussions and examples from the corresponding field. Students will also be able to practice the things they learn about by visiting institutions, factories and industrial enterprises where such systems are installed. Also, students will have a chance to visit places where the above mentioned equipment is sold.*
Objectives of the course	*The main objective of this course is to provide students with basic knowledge on heating and ventilation, such as the calculation and application of the systems in private and public buildings.*
Expected learning outcomes	*Upon After successful completion of the course, students will be able to:* • *know about heating and heating elements* • *calculate the amount of heat required for heating, heating apparatus* • *understand central heating and heating systems* • *Understand the ventilation of buildings*

Contribution to the student load (which must correspond with learning outcomes)			
Activity	**Hour**	**Day/Week**	**in Total**
Teaching (Lectures and exercises)	3	15	45
Practical work			
Contacts with the teacher/consultations	1	2	2
Field exercises			
Colloquiums, seminars			
Home-work			
Student's independent study time (in the library or at home)	3	15	45
Final preparation for the exam	2	5	10
Time spent in assessment (tests, quizzes, final exam)	2		2
Projects, presentations, etc			
Total			**104 hours**

Teaching methodology	*Lectures and exercises, combined with case studies and class discussions, assignments, projects, engineering experience which includes visiting institutions, factories or industrial economic enterprises where the systems are installed. Also, students will visit places where such equipment is sold.*
Prerequisites	*There are no prerequisites to start the Heating and Ventilation of Buildings course. However, it is recommended that students have a basic knowledge of mathematics, physics and the Windows operating system.*
Assessment methods	*Within the semester period, students are given homework with evaluation. Assignment project, group assessment: it is an activity divided into two parts, in which students apply the acquired knowledge in a concrete project. It is carried out in a group of 2 to 4 students who have the obligation to carry out the activity, document and present it to the students and the professor of the subject. The student passes the exam if he collects 51 points from all evaluation criteria. Evaluation with the final exam, the student will undergo the exam which is held after the end of the lectures of the course, in the defined deadlines. It is designed with questions and tasks which are related to the Project task and the subject module as a whole. The student passes the exam if he collects 51 points from all evaluation criteria such as,* ▪ *Continuity and other activities 10%;* ▪ *Project task 40%;*

	▪ *Final exam* *50%.* *Total* *100%.* *Rating:* *91-100 points – graded 10 (ten);* *81-90 points - graded 9 (nine);* *71-80 points – grade 8 (eight);* *61-70 points – grade 7 (seven);* *51-60 points – grade 6 (six);* *0 - 50 points – The student repeats the exam.*
The ratio of theory and practice	***70****% theory with exercises and* ***30****% practical teaching. Parts of the lectures will be put into practice in the Renewable Energy Laboratory (Room 204 - UASF).*
Literature	
Basic Literature	*1. Prof. dr. sc. FEJZULLAH KRASNIQI; Mr. Sc. REXHEP SELMANAJ; Inxh.i dipl. ISMET MALSIU, INSTALIMET MAKINERIKE*
Additional Literature	*1. Krasniqi, F.: „NGROHJA DHE KLIMATIZIMI – I (Ngrohja)", Universiteti i Prishtinës, Prishtinë 1997* *2. Krasniqi, F.: „NGROHJA DHE KLIMATIZIMI – II (Ventilimi dhe klimatizimi)", Universiteti i Prishtinës, Prishtinë 2000.* *3. Krasniqi, F.; Sahiti, S.: „NGROHJA DHE KLIMATIZIMI (Përmbledhje detyrash- I)", Universiteti i Prishtinës, Prishtinë 1998.* *4. Voshtina , L: NGROHJA, VENTILIMI DHE KLIMATIZIMI I NDËRTESAVE, BT,Tiranë 2002* *5. Recknagel, Śprenger, Henman: GREJANJE I KLIMATIZACIJA, përkthim nga gjermanishtja, GK, Beograd, 1972.* *6. Installations - und Heizungstechnik Fachkunde Grundlagen & Lernfelder 1-15 Bilder interaktiv, 2008* *7. Alfons Gassner, 2003 Der Sanitarinstallateur Tehnologie * Fachstufe Alfons Gassner, Bammberg 2003*

Designed learning plan	
Week	**Lectures and exercises to be held**
Week one	*HEATING. Basic understanding and information.*
Week two	*The required amount of heat for heating*

Week three	*Instructions on the calculation of the amount of heat needed for heating; Thermal insulation*
Week four	*Heating devices*
Week five	*Furnaces*
Week six	*Usage of flammable substances; Chimney*
Week seven	*Revision*
Week eight	*Central heating.*
Week nine	*Steam heating; Air heating*
Week ten	*VENTILATION. The necessary change of air;*
Week eleven	*Classification of ventilation*
Week twelve	*Study visit. It is carried out in residential buildings which are in the phase of installation of heating, ventilation and air conditioning systems. Also, the Heating and Air Conditioning of the UShAF facility will be analyzed.*
Week thirteen	*Air conditioning Air conditioning installation;*
Week fourteen	*Air cooling and ventilation equipment; Other necessary equipment*
Week fifteen	*Review*
Academic policies and rules of conduct	
Regular participation in lectures and exercises is necessary, as well as active participation in the discussion and solving of tasks. Cell phones should be turned off or put on silent mode.	