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	**Measurement and control**
Level	**Bachelor**
Course Status	**Elective**
Year of studies	**III, Semester V**
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 equipment for measuring and controlling parameters of various details in engineering.*
Objectives of the course	*The aim of this course is to provide students with the knowledge and skills to apply various measurement methods and measuring instruments.*
Expected learning outcomes	*After successful completion of the course, students will be able to:* • *know the meaning of measurement and control, measurement accuracy and error sources.* • *know the causes of errors and mistakes in the presentation of measurement and correction of the findings of measurement and processing of measurement results.* • *measure and control the fillet, gears parameters, measurement and control shapes and positions of the material surfaces.* • *measure the angle with the help of spectrometer with collimator and know the features and controls of the geometric parameters of coordinates measuring machines, etc.*

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	4	4
Field exercises			

Midterm, seminars and projects.	2	7	14
Homework			
Self-learning time student (at the library or at home)	3	10	30
Final preparation for the exam	2	4	8
Time spent on evaluation (tests, quiz and final exam)	1	2	2
Projects, presentations, etc	0.5	2	1
Total			**104 hours**

Teaching methodology	*This course will introduce students to the equipment for measuring and controlling the parameters of various details in engineering. Leksione dhe ushtrime interaktive të kombinuara me raste studimore dhe diskutime në klasë, vizita studimore dhe ushtrime praktike që do të organizohen në laboratorët e Universitetit tonë, institutet, fabrikat dhe ndërmarrjet industriale që ofrojnë këto kushte.*
Prerequisites	*There are no prerequisites to start learning Hydraulics and Thermodynamics. However, it is recommended that students have basic knowledge of Mathematics, Physics and the Windows operating system.*
Assessment methods	*During the semester, homework is distributed, colloquiums, seminars, statements are organized where students give their contribution individually and in groups. The student passes the exam if you collect 51 points from all assessment criteria, such as:* ▪ *first assessment: 40%* ▪ *second assessment: 40%* ▪ *project: 20%* ***Or through final exam*** ▪ *project: 20%* ▪ *Final exam: 80%* *Totali: 100%* *Rating:* *91-100 points – graded 10 (ten);* *81-90 points – graded 9 (nine);* *71-80 points – grade 8 (eight);* *61-70 points – graded 7 (seven);* *51-60 points - grade 6 (six);* *0-50 points – The student repeats the exam.*
The ratio of theory and practice	*50% Theory, 50% practical teaching with case studies. Assessment seminar where students give their contribution as individuals and in groups, study visit.*

Literature	
Basic Literature	1. *Dr. Avdyl Bunjaku: „TEKNIKAT MATËSE", ligjërata të autorizuara, Prishtinë, 2004*
Additional Literature	1. *Proizvodno – tehničko obrazovanje „MERENJE I KONTROLA U MAŠINSTVU" priručnjk za organizovanu nastavu u samostalno učenje* 2. *Mr. sc. Sreqko Nikoliq „KONTROOLLI TEKNIK I PRODHIMIT"* *Dr. K. Koljozov: MERENJE I KONTROLA, Skopje, 1980.* 4. *Dr. J. Stankov: MERENJE U PROIZVODNJI, Novi Sad, 1984.* 5. *T. Pfeifer: PRODUCTION METROLOGY, Oldenbourg, 2002.*

Designed learning plan	
Week	**Lectures and exercises to be held**
Week one	*Introduction. Measurement and control accuracy of measurement; Accuracy of measurements and sources of errors;*
Week two	*General knowledge and sharing of metrology; Measuring instruments and measuring methods; Separation of measuring methods and measuring instruments;*
Week three	*Metrological characteristics of instruments;*
Week four	*Converters; Measuring equipment; Measuring systems;*
Week five	*Errors and causes of measurement errors; Measurement errors and correction of measurement results; Processing of measurement results;*
Week six	*Processing of measurement results; First assessment*
Week seven	*Meters and measuring instruments for measuring length;*
Week eight	*Types of measuring instruments for measuring lengths and methods of measuring with measuring instruments;*
Week nine	*Study visit. Factory of Tools + Electrical Devices*
Week ten	*Separation of length meters under construction characteristics and use;*
Week eleven	*Measuring machines; Fillet measurement and control;*
Week twelve	*Measurement and control of dental parameters; Methods for measuring and controlling the shape and position of the details of the work surfaces;*
Week thirteen	*Measurement and control of surface roughness and flatness; Methods for measuring and controlling surface roughness and flattening*
Week fourteen	*Measuring angles and slope; trigonometric methods of angle measurement; Levelers (Booklets); Angle measurement with collimator spectrometer;*
Week fifteen	*Characteristics and controls of the geometric parameters of the measuring coordinate machines; Second assessment*
Academic policies and rules of conduct	

Studenti është i detyruar të ndjekë rregullisht ligjëratat dhe të ketë sjellje korrekte ndaj kolegëve dhe stafit të Universitetit, ruajtja e qetësisë dhe angazhimi në mënyrë interaktive gjatë ligjëratave dhe ushtrimeve është i detyrueshëm.