SYLLABUS

Basic data of the course:	
University/Faculty:	**University of Applied Sciences in Ferizaj/ Faculty of Engineering and Informatics**
Academic unit:	**Faculty of Engineering and Informatics**
Course title:	**Measurement and control**
Level:	**Bachelor**
Course status:	**Elective**
Year of studies:	**II**
Number of hours per week:	**2+2**
Value in credit – ECTS:	**6**
Time / location:	**9.00 – 12.15 / Amphitheater**
Course teacher:	**Mr. sc. Ismet Malsiu**
Contact details:	**Laboratory no.2, tel. 044 225 208, ismetmalsiu_@hotmail.com, ismet.malsiu@uni-pr.edu**
Course description:	*Introduction. Measurement and control accuracy of measurement; Accuracy of measurements and sources of errors; General knowledge and sharing of metrology; Measuring instruments and measuring methods; Separation of measuring methods and measuring instruments; Metrological characteristics of instruments; The way of reading value in measuring instruments; Converters; Measuring equipment; Measuring systems; Errors and causes of measurement errors; Measurement errors and correction of measurement results; Processing of measurement results; Meters and measuring instruments for measuring length; Breakdown of length gauges by constructive characteristics and use; Measuring machines; Fillet measurement and control; Measurement and control of dental parameters; Methods for measuring and controlling the shape and position of the details of the work surfaces; Measurement and control of surface roughness and flatness; Methods of Measuring and Checking Roughness and Flattening of Surfaces; Characteristics and controls of the geometric parameters of the measuring coordinate machines; Angle and slope measurement; Trigonometric methods of angle measurement; Levelers (Booklets); Angle measurement with collimator spectrometer*
Aim of the course:	

	Introduce students to the meaning of measurement and control, measurement accuracy and sources of error. Metrological characteristics of instruments, the way of reading value in measuring instruments. Errors and causes of errors in measurement and correction of measurement results and processing of measurement results. Also students should be familiar with measuring machines; Measurement and control of fillets, dental parameters, methods of measuring and controlling the shape and position of the working surfaces. Measurement of angles and inclines. Trigonometric methods of angle measurement, levelers (Booklets); The angle measurements with the help of the spectrometer with collimators. Characteristics and controls of geometric parameters of measuring coordinate machines, etc
Expected outcomes from learning:	*After completing this course the student will be able to:* *1. Know the meaning of measurement and control, measurement accuracy and sources of error. Metrological characteristics of instruments, the way of reading value in measuring instruments.* *2. Know the errors and causes of measurement errors and correct the measurement results and process the measurement results.* *3. To measure and control fillets, dental parameters, to measure and control the shape and position of the working surfaces.* *4. To perform angle measurement with the help of collimator spectrometer and to know the characteristics and controls of geometric parameters of measuring coordinator machines, etc.*

Student contribution (which should correspond to the student's learning)			
Activity	**Activity**	**Activity**	**Activity**
Lectures	2	15	30
Theoretical / laboratory exercises	2	15	30

Practical work	-	-	-
Contacts with the teacher / consultations	0.5	15	7.5
Field exercises	2	2	4
Tests, seminars	2	2	4
Homework	2	15	30
Student self time study	2	15	30
Final exam preparation	1	15	15
Time spent in evaluation (tests, quizzes, final exam)	1	2	2
Projects, presentations,etc	0.5	2	1
Total			**153.5**

Teaching methodology:	***lectures, seminars, discussions, group work***
Evaluation methods:	*First evaluation by written test:* ***15 %*** *Second evaluation by written test:* ***20 %*** *Homework or other commitments:* ***15 %*** *Regular attendance:* ***5 %*** *Final exam:* ***45 %*** *Total:* ***100 %***
Literature	
Basic literature:	*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"* 3. *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 lesson plan:	
Week	**The lecture 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;*
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:	*Separation of length meters under construction characteristics and use;*
Week ten:	*Measuring machines; Fillet measurement and control;*
Week eleven:	*Measurement and control of dental parameters; Methods for measuring and controlling the shape and position of the details of the work surfaces;*
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;*

Academic policies and rules of conduct
Assign comfort USHAF status of the conduct policy.   *The teacher sets the criteria for regular attendance at lectures and exercises and rules of conduct such as: keeping calm in class, switching off cell phones, entering the room on time, etc.*