

Discipline	Metrology, Accreditation and Certification, code: 1 winter semester –	
Specialty	Computerized Manufacturing Technologies	
ECTS credits: 5	Form of assessment: Exam	
Lecturer	Assoc. Prof. PhD Eng. / scientific title/ Kiril Kirov /name/ Room 703 M Phone: +359 52 383 555 E-mail: kirov@tu-varna.bg	
Department	Technology of Machine Tools and Manufacturing	
Faculty	Manufacturing Engineering and Technologies	
<p>Learning objectives:</p> <ul style="list-style-type: none"> • Metrology basics • Certification basics: certification of systems, products and personnel • Accreditation basics <p style="text-align: center;">/ANNOTATION/</p> <p>The course "Metrology, Accreditation and Certification" introduces to the students basics of metrology: basic elements of theoretical, legal and applied metrology. It can teach how to design and run measurement calibrations to determine accuracy, precision, reliability, traceability and measurement uncertainty. Attention is paid to the choice of methods and measurement and control tools depending on the characteristics of the measurement object, the nature of the production, processing technologies, and requirements for accuracy, reliability and economy of the measuring process.</p> <p>The course introduces to the students existing certification concepts. The organizational, scientific, technical, law and methodological bases of certification of production, services, processes and management systems are considered. The Bulgarian and international experience in the certification is discussed, as well as the existing legal framework.</p> <p>Accreditation basics such as goal of accreditation, requirement standards for accreditation, competence of calibration and testing laboratories, certification bodies, inspection bodies and providers of proficiency testing are introduced.</p>		

CONTENTS:		
Training Area	Hours lectures	Hours sem. exercises
Metrology basics	8	4
Certification basics	4	2
Systems certification	4	2
Products certification	4	2
Personnel certification	2	1
Accreditation basics: goal of accreditation, requirement standards for accreditation, competence of calibration and testing laboratories, certification bodies, inspection bodies and providers of proficiency testing	8	4
TOTAL: 45 h	30	15