HANDONG UNITWIN FELLOWSHIP

SYLLABUS

Lecturer's Information	
Name	Shavkatov Otabek
University	Andijan Machine Building Institute

Course Information			
Course Name	Maintenance and service system of medical devices	Prerequisite Course	Medical devices management
Course Date	2023-09-04 ~ 2023-12-22	Course Language	Uzbek
Keyword	X-ray, Medical Equipment Installation, magnetic resonance imaging		

Course Description (100 ~200 words)	Maintenance and service system of medical devices courses cover topics such as design, development, validation, and maintenance of medical devices used in healthcare settings. It is also discussed regulatory issues and quality assurance requirements. The courses can be used to gain an understanding of the principles and processes involved in the design, manufacture, and use of medical devices in a safe and effective manner.
Course Goals and Objectives (Approximately 100 words)	The main goals of Maintenance and service system of medical devices courses are to teach students about the design, development, implementation, and deployment of medical devices for patient care and safety. Additionally, students are trained in the principles of medical device regulations and risk management. Additionally, students gain an understanding of the principles of medical device ethics, standards, and product safety. The objectives of Maintenance and service system of medical devices courses include learning about the design, development, and manufacture of medical devices, understanding the regulatory requirements for medical devices, and developing device-related quality management systems.
Textbook	**(The format : Title, Author/Editor, Publisher, Year of Publication)** 1. A.H. Haydarov, B.B. Goibnazarov, K.Y. Berdieva - Organization of service provision for medical equipment - Publisher, Tashkent 2019 2. I.I. Mukimjonov, A.R. Khudoyberganov, T. Usmanov —Teaching, technical service and repair of electronic medical techniques —Ibn Sino, 2014 3. K. Yu. Yuldashev, Yu. A. Koulikov. "Physiotherapy", T., "Ibn Sino", 2018 4. P. R. Ismatullayev, A. N. Maksudov, A. Kh. Abdullayev, B. M. Akhmedov, A. A. Azamov. Metrology standardization and certification. —Uzbekistan Tashkent 2018 5. Leslie Cromwell, Biomedical Instrumentation and measurement, 2nd edition, Prentice hall of India, New Delhi, 2015.
References	1. John G. Webster, Medical Instrumentation Application and Design, 4th edition, Wiley India Pvt Ltd,New Delhi, 2015. 2. Joseph J. Carr and John M. Brown, Introduction to Biomedical Equipment Technology, Pearson Education, 2004. 3. Myer Kutz, Standard Handbook of Biomedical Engineering and Design, McGraw Hill Publisher, 2003. 4. Khandpur R.S, Handbook of Biomedical Instrumentation, 3rd edition, Tata McGraw-Hill New Delhi, 2014
Course Requirements and Grades	Grading System: Homework 15% Course work 15% Mid-term Exams 35% Final Comprehensive Examination 35% Total 100% 5=86-100 4=71-85 3=55-70 X=0-54

Weekly Schedule		
Week	Main Topics	Keywords
1	Measuring control equipment	Measurement, Calibration
2	AC galvanizing and drug electrophoresis devices	Electronics, galvanization
3	Infrared, ultraviolet, light and laser medical devices and their effects on the human body	laser, levels of laser
4	Organization of X-ray computed tomography service	X-ray, service
5	Working with X-ray computed tomography imaging	X-ray, imaging
6	Basic physical meaning of nuclear magnetic resonance imaging	magnetic resonance imaging
7	Safety requirements for installation, repair and maintenance of medical equipment	safety requirements, installation
8	Main functions of Medical Equipment Installation, Adjustment and Repair Enterprise firm	repair, enterprise firm
9	Necessary conditions for the organization of labor protection	labor protection
10	Field management, modern methods of management	management
11	Organization of service in enterprises and companies	service company
12	To the basic technical parameters of electronic medical equipment standard requirements	technical standards
13		
14		
15		
16		