

**Al-Ayen University / Technical Engineering College / Department
of Medical Instrumentation Technical Engineering**

Template of Course Specification

**Name and Scientific title of the subject instructor: Asst. Lec. Maithem Hassen
Kareem**

Name of Course: Workshops

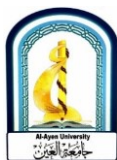
Course Specification

This Program Specification provides a concise summary of the main features of the program and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the program.

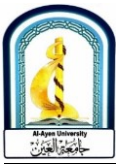
1.	Teaching Institution	Al-Ayen University / Technical Engineering College
2.	University Department / Center	Department of Medical Instrumentation Technical Engineering
3.	Course Title / Code	Workshops
4.	Program(s) to which it contributes	Weekly
5.	Modes of Attendance offered	In-Class
6.	Semester/Year	1st / 2022
7.	Number of hours tuition (total)	120
8.	Date of production/revision of this Specification	17/4/2022
9.	Aims of the Course	
1-	Providing the student with manual experience and scientific proficiency in dealing with tools, devices and electrical equipment	
2-	Learn about the safe handling of devices, equipment and industrial security	
3-	Recognize electronic components.	
4-	Electronic components are used to build and solder simple circuits	
5-	Examines electronic circuits and their components.	
	6- Recognize the methods of cold and work on the lathe.	



	7- It cuts metal with cutting and punching bales. Install some simple structures. -1
10.	Learning Outcomes, Teaching, Learning and Assessment Methods
A.	Knowledge and understanding A1- Familiarize yourself with engineering devices and equipment A2- Learn about electronic components A3- Understand the principles of electrical appliances A4- Learn the methods of welding, cutting and perforating metals and mechanical turning A 5- He learns the techniques of safe handling in the work environment and industrial safety.
B.	Subject-specific skills B1 - Able to install simple structures for medical devices and equipment B2 - Design of simple electrical circuits B3 - Be able to check electronic circuits B4- Safe operation and handling of mechanical equipment
C.	Assessment methods Practical experiments - manufacturing primary structures - workshops laboratories
D.	Thinking Skills D1- The student should pay attention to the professor's explanation D2- That the student knows the impact of science and scientists on life D 3- The student should take care of calm and the order of the class D4- The student should describe the importance of workshops and laboratories in practical life D5 - That the student feels what the victims of racial discrimination suffer
E.	Teaching and learning methods Seminars - meetings - conferences - extra-curricular activities – educational guidance and education
F.	Assessment Methods Evaluation of extra-curricular activities - attending courses, seminars, conferences
G.	General and Transferable Skills (other skills relevant to employability and personal development)

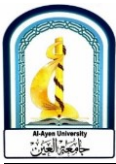


11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Methods	Assessment Methods
1.	4	The student understands the lesson	Lathe workshop: various measuring devices and how to use them	Practical lab workshop	Weekly theory and practical exams
2.	4	The student understands the lesson	How to operate the lathe and use different tools and cutting tools	Practical lab workshop	Weekly theory and practical exams
3.	4	The student understands the lesson	How to install a pole on the lathe, making a straight lathe.	Practical lab workshop	Weekly theory and practical exams
4.	4	The student understands the lesson	Training on the use of the lathe in the work of different forms	Practical lab workshop	Weekly theory and practical exams
5.	4	The student understands the lesson	Barrel workshop: the different types of files, saws, and different measuring equipment and their uses	Practical lab workshop	Weekly theory and practical exams
6.	4	The student understands the lesson	Practicing the plumbing and simple filing.	Practical lab workshop	Weekly theory and practical exams
7.	4	The student understands the lesson	An exercise in cutting with a saw, training in the process of drilling and burring, and a simple exercise on it	Practical lab workshop	Weekly theory and practical exams
8.	4	The student understands the lesson	Welding and gas welding, familiarization with the devices and equipment used	Practical lab workshop	Weekly theory and practical exams
9.	4	The student understands the lesson	Lathe workshop: various measuring devices and how to use them	Practical lab workshop	Weekly theory and practical exams
10.	4	The student understands the lesson	How to operate the lathe and use different tools and cutting tools.	Practical lab workshop	Weekly theory and practical exams
11.	4	The student understands the lesson	How to install a pole on the lathe, making a straight lath	Practical lab workshop	Weekly theory and practical exams
12.	4	The student understands the lesson	Training on the use of the lathe in the work of different forms	Practical lab workshop	Weekly theory and practical exams
13.	4	The student understands the lesson	Training in the use of electric welding in a simple exercise	Practical lab workshop	Weekly theory and practical exams
14.	4	The student understands the lesson	Point welding, familiarization with the devices and equipment	Practical lab workshop	Weekly theory and practical exams



			used and carrying out a simple exercise		
15.	4	The student understands the lesson	Principles of industrial safety inside electrical workshops - protection from electric shocks - identification of the tools used inside the electrical workshop - sources of power - training in the use of the oven, the micrometer t	Practical lab workshop	Weekly theory and practical exams

12.	Infrastructure
Required reading: ·CORE TEXTS ·COURSE MATERIALS · OTHER	Workshop lectures
Special requirements (include for example workshops, periodicals, IT software, websites)	<u>References</u> <ol style="list-style-type: none"> 1. B. L. Theraja, A.K. Theraja, Textbook of Electrical Technology Volume I –, S. Chand & Co. 2. E. Fitzgerald, Arvin Grabel, David E. Higginbotham, Textbook of Basic Electrical Engineering –TMH Publishing Co. 3. A. Patel, Textbook of Elements of Electrical Engineering, Mahajan Publishing House, Ahmedabad.



	<ol style="list-style-type: none"> 4. Nagrath, Basic Electrical Engineering, TMH Publishing Co. Ltd. 5. Vincent Del Toro, Textbook of Principles of Electrical Engg., Prentice Hall of India Pvt. Ltd., New Delhi. 6. S. Samaddar, Textbook of Electric Wiring, New Central Book Agency (P) Ltd., Calcutta. 7. Surjit Singh, Textbook of Electrical Design Estimating and Costing, Dhanpat Rai & Sons. 8. Robert Boylestad, Louis Mashlsky, Electronics Devices and Circuit theory, Peerson 9. Morris Mano, Digital logic and computer Design, PHI
<p>Community-based facilities)include for example, guest Lectures, internship, field studies)</p>	<p>Adler, Jerry, “Another Bright 67 Idea,” <i>Newsweek</i>, June 15, 1992, p.</p> <p>Albean, D. L., “Single Pot Swings Amplifier Gain Positive or Negative,” <i>Electronic Design</i>, January 1997, p. 153.</p> <p>Barnes, R., and Wong, K. T., “Unbalanced and Harmonic Studies for the Channel Tunnel Railway System,” <i>IEE Proceedings</i>, March 1991, pp. 41–50.</p>

الكلية التقنية الهندسية
AL-AYEN UNIVERSITY

13.	Admissions
Pre-requisites	
Minimum number of students	100
Maximum number of students	110