

Course Description Form

1. Course Name	
Fiber Optic	
2. Course Code	
WBM-31- 07	
3. Semester/Year	
Quarterly	
4. Date of preparation of this description	
23/9/2024	
5. Available attendance forms	
Weekly (theoretical)	
6. Number of credit hours (total) / total number of units	
60 Theoretical Hours / 3 Units	
7. Course Administrator Name	
Name:m.m Ali Mohamed Abdel Sada Email: ali.mohammed@uowa.edu.iq	
8. Course Objectives	
Course Objectives:	The topic of optical fibers aims to introduce the student to the communication system that depends on the optical cable and to identify the methods of manufacturing optical fibers and the materials manufactured from them, in addition to studying light identifying its properties of refraction, reflection and scattering, as well as differentiating between types of communication and studying the losses that occur in light and also identifying the applications of optical cable in biomedicine
9. Teaching and learning strategies	
1- Enable the student to understand optical communication in a simplified manner 2- Introduce the student to the recognition of the optical cable 3- Identify the structure and installation of the cable and its types 4- Application and simulation of optical communication systems with programs	
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1+2+3	6	Optical Cable	Introduction to optical communications and optical fibers, their installation and manufacturing methods	Lectures presented in PDF format	Daily tests + homework + monthly tests
4+5	4	Light	Light characteristics and speed.	Lectures presented in PDF format	Daily tests + homework + monthly tests
6+7	4	Total regression	What is a perfect reflection, how does it happen, and the equations of reflection?	Lectures presented in PDF format	Daily tests + homework + monthly tests
8+9	4	Scattering	Types of scattering, its causes and mathematical equations.	Lectures presented in PDF format	Daily tests + homework + monthly tests
10+11	4	Refraction	How refraction occurs, its causes and examples of refraction	Lectures presented in PDF format	Daily tests + homework + monthly tests
12+13	4	Losses in light	Calculating losses and knowing the types of losses and their mathematical equations and examples	Theoretical + Practical	Daily tests + homework + monthly tests
14+15	4	Medical Optical Cable Applications	Identify and study the most important applications of optical cable in life medicine	Theoretical + Practical	Daily tests + homework + monthly tests

11. Course Evaluation

- 1- Daily exams with practical and scientific questions.
- 2- Participation grades for difficult competition questions among students.
3. Setting grades for environmental duties and reports assigned to them.
- 4- Semester exams for the curriculum in addition to the mid-year exam and the final exam.

12. Teaching and Teaching Resources

Required textbooks	1. Optical fiber communications principles and practice
Main references	<ul style="list-style-type: none">• College library for additional curriculum resources.• View scientific websites to see the latest developments in the subject
Recommended books and references	All sober scientific journals related to optical communications