Course Description Form

1. Course Name:	
Communications I	
2. Course Code:	
WBM-41-03	
3. Semester / Year:	
First semester/ 2025	
4. Description Preparation Date:	
4-9-2025	
5. Available Attendance Forms:	
presence in the classroom	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 Hours / 3 Units	
7. Course administrator's name (mention all, if more than one name)	
Name: Ahmed Mohammed Merza Email: ahmed.merza@uowa.edu.iq	
8. Course Objectives	
Course Objectives	1-The study and detailed analysis of each theories concerning the designs of telecommunication systems 2- The application of the basic principles through linking theoretical and practical laboratory
9. Teaching and Learning Strategies	
Strategy	**1.Theoretical Lectures:** Instructors provide lectures on fundamental concepts, theories, and principles of communication engineering. This helps students understand the theoretical underpinnings of different communication systems and technologies. **2. Practical Demonstrations:** Instructors demonstrate the practical applications of communication engineering concepts using real-world examples, simulations, and case studies. This helps students visualize how theoretical concepts are applied in practice. **3. Assessments**: Students are assessed through a combination of quizzes, exams, assignments, and practical assessments to evaluate their understanding of communication engineering concepts. Feedback from assessments helps students identify areas for improvement.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	1&2	Introduction to Communications System element	Lectures presented In PDF format	Daily exams + homework assignments + monthly exams
2+3	6	1&2	Signal representation using Fourier Series.	Lectures presented In PDF format	Daily exams + homework assignments + monthly exams
4	3	1&2	Signal Spectrum using Fourier Transform	Lectures presented In PDF format	Daily exams + homework assignments + monthly exams
5+6	6	1&2	Filters: Filtering action, Filters Classification based on (response:" ideal & practical" and mode), characteristics of filters response	Lectures presented In PDF format	Daily exams + homework assignments + monthly exams
7+8+9	9	1&2	Amplitude Modulation	Lectures presented In PDF format	Daily exams + homework assignments + monthly exams
10+11+	9	1&2	Frequency Modulation	Lectures presented In PDF format	Daily exams + homework assignments + monthly exams
13+14	6	1&2	Noise in communication systems	Lectures presented In PDF format	**Daily exams + homework assignments + monthly** exams
15	3	1&2	Sampling Theorem	Lectures presented In PDF format	**Daily exams + homework assignments + monthly** exams

11. Course Evaluation

-Daily exams with practical and scientific questions.
- Participation scores for difficult competition questions among students
- Establishing grades for environmental duties and the reports assigned to them
- Semester exams for the curriculum, in addition to the mid-year exam and final exam

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	-(McGraw) Schaum's Outlines of Signals & Systems. -(Communications Engineering) Michael Fitz-Fundamentals o Communications Systems-McGraw-Hill Professional (2007)
Main references (sources)	Theory and Problems of Analog and Digital Communications_2nd_Ed_Schaum's Outline Series.
Recommended books and references (scientific journals, reports…)	All reputable scientific journals that are related to the br concept of mathematical theories and their results