

	Ministry of Higher Education and Scientific Research - Iraq University of Warith Al-Anbiyaa Engineering College Biomedical Engineering Department	
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MODULE DESCRIPTION FORM

Module Information					
Module Title	Engineering analysis			Module Delivery	
Module Type	Basic			☒ Theory ☒ Lecture ☒ Lab ☒ Tutorial ☐ Practical ☐ Seminar	
Module Code	BME-315				
ECTS Credits	2				
SWL (hr/sem)	30				
Module Level		Semester of Delivery			
Administering Department	BME		College	ENG	
Module Leader	Ali mohammed abdulsadaa		e-mail	Ali.mohammed@uowa.edu.iq	
Module Leader's Acad. Title	Assistant lecture		Module Leader's Qualification	Ph.D.	
Module Tutor			e-mail		
Peer Reviewer Name			e-mail		
Scientific Committee Approval Date			Version Number	1.0	

Relation with other Modules			
Prerequisite module	None		Semester
Co-requisites module	None		Semester

Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	The topic of geometric analysis of frequency functions mathematically aims to clarify the practical and philosophical challenges of current geometric analyses that have stimulated this continuous development, as well as to provide the basic concepts of functions and their useful fields for further study of engineering sciences and applied analytical mathematics in the scientific and practical field. This is done starting from reviewing the basic principles, studying the meaning of the function and how to draw it on the attempt, analyzing the integrative in relation to time and frequency, finding the purpose for it, vectors, and finally the polar coordinates, in addition to introducing the principles of integration and calculus, their applications, and some functions in particular, in addition to increasing the opportunity for students to practice sound thinking methods, such as reflective, deductive, and inductive thinking, and increasing their skills in using the problem-solving method to understand what they are studying, and to reveal new relationships.
Module Learning Outcomes	1. An ability to identify, formulate, and solve engineering problems by applying principles of engineering, science, and mathematics. 2. An ability to apply engineering design process to produce solutions that meet specified needs with consideration of public health, safety, and global, cultural, social, environmental, economic, and other factors as appropriate to the discipline. 3. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

Indicative Contents	B. Skills objectives of the course B1- Familiarity with the mathematical analytical relations that represent the types of algebraic functions and their drawing. C2- Familiarity with the laws of finding the derivative using the definition and returning it to the basic function under the influence of the integration properties. C3- Familiarity with finding the field and the corresponding field of a function with one variable and how to draw it in terms of Cartesian coordinates A4- Familiarity with concepts does not achieve the goal, solving immediate equations and performing algebraic operations on them.
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Learning and Teaching Strategies	
Strategies	Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.

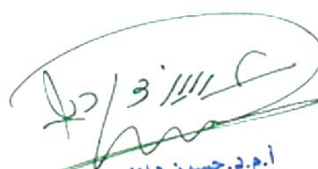
Student Workload (SWL)			
Structured SWL (h/sem)	33	Structured SWL (h/w)	6
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	4
Total SWL (h/sem)	50		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	3 hrs.	10% (10)	7	LO # 1-7
	Final Exam	3 hrs.	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Fourier series
Week 2	Complex Fourier series
Week 3	examples
Week 4	Fourier transform
Week 5	Application of fourier transform
Week 6	examples
Week 7	Midterm exam
Week 8	Laplace transform
Week 9	Invers laplace transform
Week 10	examples
Week 11	The sequence
Week 12	Z transform
Week 13	Application of Z transform
Week 14	examples
Week 15	examples
Week 16	Preparation week before the final exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Signals and systems , Sanjay sharma. 2011	Yes
Recommended Texts	Signals and systems , Sanjay sharma. 2011	No
Websites	https://www.coursera.org/browse/physical-science-and-engineering/electrical-engineering	

Grading Scheme			
Group	Grade	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	90 - 100	Outstanding Performance
	B - Very Good	80 - 89	Above average with some errors
	C - Good	70 - 79	Sound work with notable errors
	D - Satisfactory	60 - 69	Fair but with major shortcomings
	E - Sufficient	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	(45-49)	More work required but credit awarded
	F – Fail	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.			


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 عميد كلية الهندسة
 العميد


 Head of the Department
 Dr. Osama Abdulbari


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 2020