Date:	Examination No.:	Version:1/9/2022	Start: 13/9/2022
Module Name - Code	Engineering Analysis - 111		
Module Language:	English		
Responsible:	Lecturer: Sazan N. Abdulhamid		
Lecture (s):	Ms. Sazan N. Abdulhamid		
College:	Civil Department-College of Engineering – Salahaddin University		
Duration:	15week – Fall semester		
Course outcomes:	At the end of the semester, students would be able to use mathematics with understanding to solve engineering problems and recognize the increasing importance of mathematical models in engineering practice. The student will get familiar to use Laplace Transform to simplify calculations in system modeling, where a large number of differential equations are used. Also, they will get to know better analyze a signal in another domain rather than in the original domain by using the Fourier series, which allows us to model any arbitrary periodic signal with a combination of sines and cosines.		
Course Content:	Application of Differential Equations; Laplace Transforms; Fourier series and their application; Heat and Wave equation; Z- Transform.		
Literature:	Advanced Engineering Mathematics" by Peter V. O'Neil; Advanced Modern Engineering Mathematics" by Glyn James, 3rd edition.		
Type of Teaching:	3 hrs, Theory per week. 1 hr Tutorial per week.		
Pre-requisites:	109		
Frequency:	Yearly in the fall semester		
Requirements for credit points:	For the award of credit points, it is necessary to pass the module exam. The module exam theoretical contains: [Written 120 min for theoretical] Student attendance is required in all classes.		
Credit point:	5		
Grade Distribution:	For the award of credit points, it is necessary to pass the module exam. The module exam contains: A mid-term exam, classroom activities, quizzes, homework, and a final exam in December. So, the final grade will be based upon the following criteria: (Mid-term exam 25% + Activities and Quizzes 15% + Final exam 60%) = Total 100%		
Work load:	The workload is 120h. It is the result of 60h attendance and 60h self-studies.		