Date:1/9/2022	Examination No.:	Version:2022-2023	Start:1/9/2022
Module Name - Code	Network Analysis II - 2118		
Module Language:	English		
Responsible:	Azad Nasraddin Abdulla (Assistant Lecturer)		
Lecture (s):	None		
College:	College of Engineering – Salahaddin University-Erbil		
Duration:	15 week – 1 semester		
Course outcomes:	At the end of the semester, students would be able to understand the magnetically coupled circuits and how energy is stored. They would also be able to identify with Non-Sinusoidal waves in electrical circuits. In addition, they can understand transients in first-order RL and RC circuits and second-order RLC series and parallel circuits.		
Course Content:	Illustration of Magnetically Coupled Circuits: Self-inductance, Mutual Inductance, Modeling of Coupled Circuits, Series and Parallel Coupling Inductors, Energy in a Coupled Circuits and Coupling Coefficient. Overview of Circuit Analysis with Different Source Frequencies and Harmonics. Response of First-Order RL and RC Circuits and Second-Order RLC Series and Parallel Circuits.		
Literature:	John Bird, "**Electrical Circuit Theory and Technology**", Sixth Edition, Routledge, 2017. Charles K. Alexander, "**Fundamentals of Electrical Circuits**", Sixth Edition, McGraw-Hill Education, 2017. James W. Nilsson and Susan A. Riedel, "**Electric Circuits**", Tenth Edition, Pearson, 2015.		
Type of Teaching:	4 hrs. in lectures		
Pre-requisites:	Network Analysis I		
Preparation Modules:	Characteristics of capacitors and inductors and their use in basic circuits and Magnetic flux.		
Frequency:	Regularly in Spring Semester **(Reopened in Autumn Semester)**		
Requirements for credit points:	For the award of credit points, it is necessary to pass the module exam. It contains: Three examination during the academic semester, Assignments and Final examination. **Student's attendance is required in all classes**.		
Credit point:	6		
Grade Distribution:	The following grade system is used for the evaluation of the module exam: The module exam is based on the summation of two categories of evaluations: **First: (40%)** of the mark is based on the academic semester effort which includes - Three examination during the academic semester = 36%. - Assignments = (4%). **Second: (60%)** of the mark is based on final examination that is comprehensive for the whole of the study materials reviewed during the academic semester.		
Work load:	The workload is 180hrs. It is the result of 60 hrs. attendance and 120 hrs. self-studies (Assignments, preparation for exam and applications).		