FI348 Electrical Circuit Analysis

Module name:	Electrical Circuit Analysis	
Module level, if applicable:	Undergraduate	
Code:	FI348	
Sub-heading, if applicable:	-	
Classes, if applicable:	-	
Semester:	4th	
Module coordinator:	Waslaluddin	
Lecturer(s):	Waslaluddin	
Language:	Bahasa Indonesia	
Classification within the curriculum	Elective Courses	
Type of Teaching	Contact hours per week during the semester	Class Size
1. Lecture (conceptual, contextual and problem-solving approaches through expository, discussions and practical methods). 2. Structured activities (assignments based on conceptual, contextual and problem-solving approaches, Presentation) 3. Self-study (practical/project)	1 hour 40 minutes	25
Workload:	The total workload is 91 hours/5440 minutes (3.2 ECTS) per semester, consisting of 25 hour 20 minutes/1400 minutes lectures (0.82 ECTS), 28 hours/1680 minutes structured activities (0.98 ECTS) and 28 hours/1680 minutes self-study (0.98 ECTS) per week for 14 weeks, 11hour 54 minutes/714 minutes for two exams (0.42 ECTS).	
Credit points:	3.2 ECTS	
Pre-requisites course(s):	FI122 Basic Physics II	
Course Learning Outcomes (CLO):	After taking this course the students have ability to: CLO1: Explain the Great 's Power, Variable Signal and Model Signals CLO2: Explain Model tool, Laws of Association, Rule circuit, and Theorem Networks CLO3: Apply Analysis Methods for Applications in EneRgy Proc essing Circuits CLO4: Apply ICT Method of Analysis for Applications In circuit Processing Energy CLO5: Order Circuit Transient Analysis	

	CLO6: Analyse of Transient Series of electrics circuits Order 2 CLO7: Explain Electric Machines Model Introduction Model CLO8: Analyse Circuit in the Phasor Region CLO9: Analyse Circuit in the s Region CLO10: Report the results of making the Electric Circuit Model CLO11: Report the results of making Models of Electrical Machines
Content:	(1) Amount of Electricity and Variables Signals (2) Model Signals (3) Model tool (4) Laws Basic (5) Rules of circuit (6) Theorem of circuit (7) Method of Analysis (8) Applications in the circuit Processing Energy (Flow Unidirectional) (9) Applications on Networks Processing Signal (Diodes & Op-Amp) (10) Analysis of Transient Networks Order-1 (11) Analysis of Transient Networks Order-2 (12) Analysis of Networks in Region Phasor (13) introduction of on Machinery Electric, and (14) Analysis of Networks in Regions. Learning proses using methods Problem Solving, recitation, demonstration, and discussion, with facilities media application presentation-electronics, with application of the computer as a tool to help.
Study/exam achievements:	The final mark will be weight as follow:

No	CLO	Assessment Object	Assessment Techniques	Weight
1	CLO1 – 9 CLO1 – 5 CLO6 – 9 CLO10-11	Subject specific competences: a. Individual assignments b. Exam - Mid exam - Final exam c. Class activity d. Project	Written Written test Written test Performance Report	20 % 25% 25% 10% 20%
Total				100%

Forms of media:	Board, LCD Projector, Laptop/Computer, Demonstration Equipment Package, LMS
Literature:	1. Bakshi, Uday A, Bakshi, Late Ajay V. (2020). *Electrical Circuit Analysis*. First ed. Technical Publications. 2. Sudirham, Sudaryatno (2010). *Electrical Circuit Analysis. Volume-1*. ITB e-book 3. Sudirham, Sudaryatno (2010). *Electrical Circuit Analysis. Volume-2*. ITB e-book 4. Hayt, WH, et al. (2005) *Electrical Circuits sixth edition*. Erlangga Publisher 5. Ozgur Ergul. (2017). *Introduction to Electrical Circuit Analysis*. John Wiley & Sons.

PLO and CLO mapping

	PLO1	PLO 2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CLO1		√										
CLO2		√										
CLO3			√									
CLO4			√									
CLO5			√									

	PLO1	PLO 2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CLO6			√									
CLO7			√									
CLO8			√									
CLO9				√								
CLO10				√								
CLO11				√								
CLO12				√								