



MODULE HANDBOOK DESCRIPTION

Module designation	Analog Electronics	
Code	FBB3210	
Semester(s) in which the module is taught	6 / third year	
Person responsible for the module	Paniran, ST., MT.	
Language	Indonesian	
Relation to curriculum	Concentration Elective for Electronics Engineering	
Teaching methods	Lectures, small group discussion, case base method.	
Workload (incl. contact hours, self-study hours)	Contact minutes every week, each week of the 16 weeks/semester: <ul style="list-style-type: none"> • Lectures: 2 x 50 minutes • Exercises and Assignments: 2 x 60 minutes • Private study: 2 x 60 minutes. total study hours = 5 hours 40 minutes/week	
Credit points	2 SKS (~ 3.2 ECTS)	
Required and recommended prerequisites for joining the module	- Electrical circuits 1 (FBS1213) - Basic Electronics (FBS2125)	
Module objectives/intended learning outcomes	1. Students are able to analyse the Operational-Amplifier (Op-Amp), Op-Amp Circuits, Comparator Circuits, Signal Generators, Op-Amp with Diode Circuits, Filter Active designs, Op-Amp Parameters DC Mode, and Op-Amp Parameters AC Mode.	PLO3
	2. Students are able to design the Op-Amp Circuits, Comparator Circuits, Signal Generators, Op-Amp with Diode Circuits, Filter Active.	PLO4
	3. Students are able to experiment the Op-Amp Circuits, Comparator Circuits, Signal Generators, and Filter Active.	PLO5

<p>Conten</p>	<ol style="list-style-type: none"> 1. Operational-Amplifier (Op-Amp) 2. Op-Amp Circuits 3. Comparator Circuits 4. Signal Generators 5. Op-Amp with Diode Circuits 6. Filter Active designs 7. Op-Amp parameters DC Mode 8. Op-Amp parameters AC Mode
<p>Examination forms</p>	<ul style="list-style-type: none"> - Written case study - Midterm and final test
<p>Study and examination requirements</p>	<p>The final grade in the module is composed of:</p> <ol style="list-style-type: none"> 1. Case I assessment: 15% 2. Case II assessment: 15% 3. Midterm assessment: 35% 4. Final assessment: 35% <p>Students must have a final grade of 65% or higher to pass</p>
<p>Reading list</p>	<ol style="list-style-type: none"> 1. Pujianto, 2012, Rangkaian Elektronika Analog, First 1st edition. Graha Ilmu. 2. Hernando Lautaro Fernandez-Canque, 2017, Analog Electronics Applications: FUNDAMENTALS OF DESIGN AND ANALYSIS, CRC Press. 3. D. K. KAUSHIK, 2006, Analog Electronic Circuits, First 1st edition, Shobhit University. 4. Patnaik D.P. & Gouda P, Analog Electronics And Op-Amp [EET 321], Dept Of ETC, UCP ENGG. SCHOOL, Berhampur.