Module Handbook

Name of Module	Basic Electronics 1
Level of Module	Undergraduate (S-1)
Code	
Subtitle	
Subject of Courses	
Semester/Year	3/2
Coordinator	Drs. Imam Sucahyo, M.Si.
Lecturer	1. Drs. Imam Sucahyo, M.Si. 2. Endah Rahmawati, M.Si 3. Abd. Kholiq, S.Pd., M.T. 4. Dzulkiflih, S.Si. M.T. 5. Meta Yantidewi, M.Si.
Language	Bahasa Indonesia
Classification in Curriculum	Compulsory Course
Learning Format/ duration per week	Per week: 2 hours of lecturing (1 hour = 50 minute)
Workload	2 hours of lecturing, 2 hours of structured task for 15 weeks = total 30 hours of lecturing/semester
Credit System Unit	2
Prerequisite	Basic Physics II
Learning Outcomes	1. Have the ability to think critically and use the right concepts to analyse qualitatively and quantitatively in solving direct electric current problems 2. Having skills in using electric measuring instruments and analysing measurement results 3. Have the ability to think critically and use the right concepts to analyse qualitatively and quantitatively in solving the problem of alternating electric currents 4. 4. Having the ability to think critically and use the right concepts to qualitatively analyse semiconductor working principles and their application
Content	Basic Electronics 1 course covers two main subjects, the first material is the basics of electronics including: direct current, alternating current, passive components and the basic principles of measuring and measuring electricity. The second material deals with active components covering the working principle and application of semiconductors, p-n junctions, diodes, bipolar transistors (BJT).
Attributed soft skill	Ability to think critically about basic electrical concepts 1 Ability to apply basic electrical concepts 1 Ability to solve problems regarding basic electrical concepts 1 Ability to work together in class assignment groups (team work)

<table>
<tr><td>Learning Achievement</td><td>Students are considered competent and pass if they get at least a minimum test score of 68 (SS and S), and structured activities (Assignments / A) and participatory activities (P)
The final grade (FG) is calculated according to the formula:

$FG = \frac{(2xP)+(3xA)+(2xSS)+(3xS)}{10}$
Convert the 0-100 scale value to a 0-4 scale and the letters are arranged as follows.

<table>
<tr><th>Alphabet</th><th>Number</th><th>Interval</th></tr>
<tr><td>A</td><td>4,00</td><td>85 ≤ A < 100</td></tr>
<tr><td>A-</td><td>3,75</td><td>80 ≤ A- < 85</td></tr>
<tr><td>B+</td><td>3,50</td><td>75 ≤ B+ < 80</td></tr>
<tr><td>B</td><td>3,00</td><td>70 ≤ B < 75</td></tr>
<tr><td>B-</td><td>2,75</td><td>65 ≤ B- < 70</td></tr>
<tr><td>C+</td><td>2,50</td><td>60 ≤ C+ < 65</td></tr>
<tr><td>C</td><td>2,00</td><td>55 ≤ C < 60</td></tr>
<tr><td>D</td><td>1,00</td><td>40 ≤ D < 55</td></tr>
<tr><td>E</td><td>0,00</td><td>0 ≤ E < 4</td></tr>
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<tr><td>Media</td><td>1. PPT
2. Simulation of Electronics Application (Electronic workbanch, Circuit)
3. Basic Electronics Prakticum KIT</td></tr>
<tr><td>References</td><td>1. Sutrisno. 1978. Elektronika 1. Teori dan Penerapannya. Penerbit ITB Bandung.
2. Tooley, M. 2006. Electronics Circuit: Fundamnetals and Applications. Third Edition. Elesevier Ltd.
3. Boylestad, R., and Nashelsky, L. Electronics Devices and Circuits: Theory. Seventh Edition. Prentice Hall.
4. Floyd, T. L. 2012. Electronics Devices. Prentice Hall.
5. Tim. 2010. Panduan Praktikum Elektronika Dasar 1.</td></tr>
<tr><td>Note</td><td></td></tr>
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