



MODULE HANDBOOK DESCRIPTION

Module designation	Electrical Installation Design	
Code	FBA3213	
Semester(s) in which the module is taught	6/third year	
Person responsible for the module	Sultan , S.T., M.T	
Language	Indonesian	
Relation to curriculum	Elective for electrical power systems engineering	
Teaching methods	Lecture, 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: 3 x 50 minutes • Exercises and Assignments: 3 x 60 minutes • Private study: 3 x 60 minutes. Total study hours = 8 hours 30 minutes/week	
Credit points	3 (~ 4,8 ECTS)	
Required and recommended prerequisites for joining the module	- Electrical Circuit I (FBS1213) - Electrical Circuit II (FBS2122)	
Module objectives/intended learning outcomes	1. <i>Students are able to implement the rules and requirements as well as standardization in planning and implementing safety and economical electrical installation according to General Regulations for Electrical Installation (PUIL)</i>	PLO 3, PLO 4
	2. <i>Students are able to calculate safety capacity, current-carrying strength of a conductor and the load requirements of lighting based on the type of room in a building.</i>	PLO 3
	3. <i>Students are able to assemble an installation system of AC and DC electric motors.</i>	PLO 4, PLO 5
	4. <i>Students are able to design electrical installation for single phase system lighting.</i>	PLO4, PLO5
	5. <i>Students are able to design electrical lighting installations and 3 phase system power).</i>	PLO4, PLO5

	6. <i>Students are able to design electrical installation for industry</i>	PLO4, PLO5
	7. <i>Students are able to design installations for outdoor lighting (parks and roads)</i>	PLO4, PLO5
	8. <i>Students are able to conduct experiment with one-phase and 3-phase lighting installations)</i>	PLO5
	9. <i>Students are able to experiment with electric power installation (Motors)</i>	
	10. <i>Students are able to carry out installation experiment for industry</i>	
Content	<i>In this course students perform step by step in the design of electrical and mechanical systems in the electrical distribution of homes, buildings and industries both in single and three phase. Students learn to calculate and determine the equipment specifications, lighting techniques and protection systems used. In addition, students are also introduced to several standards that are often used in electrical system design.</i>	
Examination forms	<ul style="list-style-type: none"> - Multiple choice examination and Essay, - Presentation case study. 	
Media Shape	- <i>Slide power point</i>	
Study and examination requirements	<p>The final grade in the module is composed of:</p> <ul style="list-style-type: none"> a. Per-meeting score = 5 % x 16 meeting = 80% b. Exercise Report/ Homework/Portofolio = 20% <p>Students must have a final grade of 65% or higher to pass</p>	
Reading list	<ol style="list-style-type: none"> 1. Harten, p, van, . Instalasi Tenaga Listrik arus Kuat, I, II, III, 2. PUIL 2000 3. Irwin Lazar, Electrical System Analysis and Design for Industrial Plants, Mc.Graw-Hill. 4. Schneider Electric Indonesia. (2002). Panduan Aplikasi Teknis. PT. Schneider Indonesia. 5. Sugandi, Imam , dkk. Panduan Instalasi Listrik Untuk Rumah. Yayasan Usaha Penunjang Tenaga Listrik: Jakarta. 6. John Wiley & Sons. (2000). Electrical Installation Handbook. Publicis MCD Verlag: Munich. 7. Robert L. Smith & Stephen L. Herman. (2002). Electrical Wiring Industrial 7th Edition. Delmar. 	