MODULE HANDBOOK DESCRIPTION

Module designation	*Electrical Machines*	
Code	FBA3104	Electric Machine
Semester(s) in which the module is taught	*5/third year*	
Person responsible for the module	*Ida Bagus Fery Citarsa, ST., MT.*	
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 : • 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 SKS (~ 4.8 ECTS)*	
Required and recommended prerequisites for joining the module	*Electrical Power Basics (FBS2126)*	
Module objectives/intended learning outcomes	1. *Students are able to understand the constructions of three-phase synchronous machines, transformers, three-phase asynchronous machines, single-phase asynchronous machines, and DC machines.*	*PLO2*
	2. *Students are able to explain the working principles of three-phase synchronous machines, transformers, three-phase asynchronous machines, single-phase asynchronous machines, and DC machines.*	*PLO3*

	3. *Students are able to analyse the equivalent circuits of three-phase synchronous machines, transformers, three-phase asynchronous machines, single-phase asynchronous machines, and DC machines.*	*PLO4*
Content	*1. Three Phases Synchronous Machines (Generator and Motor)* *2. Transformer (Single Phase and Three Phases)* *3. Three Phases Asynchronous Machines (Motor and Generator)* *4. Single Phase Asynchronous Machines (Motor)* *5. DC Machines (Generator and Motor)*	
Examination forms	- *Written case study* - *Midterm and final test*	
Study and examination requirements	*The final grade in the module is composed of:* *a. Attendance: 10 %* *b. Assignments: 20 %* *c. Midterm assessment: 30%* *d. Final assessment: 40%* *Students must have a final grade of 65% or higher to pass*	
Reading list	*1. Wildi, Theodore, 2013, Electrical Machines, Drives and Power Systems, Sixth Edition, Pearson Education Limited, Edinburgh Gate.* *2. Theraja, B.L, and Theraja, A.K, 2005, A Text Book of Electrical Technology, Volume II, AC & DC Machines, S. Chand & Company Limited, Ram Nagar, New Delhi.* *3. Sahdev, S.K, 2018, Electrical Machines, Cambridge University Press, New Delhi.* *4. Chapman, S.J, 2005, Electric Machinery Fundamentals, Fourth Edition, McGraw Hill Higher Education, New York.*	