COURSE	Name	: Electromagnetics
	Code	: EE185731
	Credit(s)	: 2
	Semester	: (Elective Course)

Description of Course

The course discusses the basic theory of electromagnetic fields, Maxwell equations, fields of plane waves, reflections and dispersions of field Waves, waveguides, electromagnetic radiation and propagation.

Learning Outcomes

Knowledge

(P01) Mastering the concepts and principles of science in a comprehensive manner, and to develop procedures and strategies needed for the analysis and design of systems related to the field of power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics as a preparation for further education or professional career.

Specific Skill

(KK01) Being able to formulate engineering problems with new ideas for the development of technology in power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics.

General Skill

(KU11) Being able to implement information and communication technology in the context of execution of his/her work.

Attitude

(S09) Demonstrating attitude of responsibility on work in his/her field of expertise independently.

Course Learning Outcomes

Knowledge

Mastering the concept of static magnetic fields, the concept of dynamic electromagnetic fields, Maxwell's equations and their applications. The concept of field waves, reflections and dispersions, waves and radiation.

Specific Skill

Be able to analyze the problems of static magnetic fields and dynamic electromagnetic fields and be able to analyze plane wave propagation in various mediums, reflections, and wave dispersions.

Main Subjects

1. Maxwell's equation
2. Field of plane waves
3. Reflection and Dispersion of Field Waves
4. Waveguide
5. Electromagnetic Radiation and Antennas

Reference(s)
[1] Elektromagnetika, edisi ke-7, William H. Hayt dan John A. Buck, Penerbit Erlangga, 2006 (Indonesian) [2] Electromagnetics, Joseph A. Edminister, Schaums Outline Series Mc Graw Hill Book Company, 1979 [3] Fundamentals of Applied Electromagnetics, Fawwas T. Ulaby, Prentice Hall International, 2001
Prerequisite(s)
--