COURSE	Name	: High Voltage Engineering
	Code	: EE185712
	Credit(s)	: 2
	Semester	: (Elective Course)

Description of Course

The High Voltage Engineering Course is a subject that studies and discusses the generation of high voltage testing, characteristics and process of failure of dielectric materials, lightning phenomena and their safety.

Learning Outcomes

Knowledge

(P02) Mastering engineering concepts and principles to develop the necessary procedures and strategies for systems analysis and design in the areas of power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics.

Specific Skill

(KK02) Being able to compose problem solving in engineering through depth and breadth of knowledge which adapts to changes in science and technology in power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics.

General Skill

(KU05) Being able to take decisions in the context of solving problems of science and technology development that concerns and implements the humanities value based on analytical or experimental studies of information and data.

Attitude

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

(S12) Working together to be able to make the most of his/her potential.

Course Learning Outcomes

Knowledge

Mastering the concept of High Voltage Generation (DC, AC, or impulse), isolation failure (gas, solid, liquid), the occurrence of lightning.

Specific Skill

Able to describe and describe high voltage generation modules both DC, AC, and impulses.

General Skill

Able to make decisions on the selection of high voltage generation module components and lightning protection coordination.

Attitude

Able to be responsible for his/her work, both individually and in groups.

Main Subjects

1. Development of High Voltage
2. DC High Voltage Generation
3. Generating Impulse High Voltage

4. High Voltage AC generation
5. Gas and Vacuum Insulation Failure
6. Liquid and Solid Isolation Failure
7. Lightning Safety

Reference(s)

[1] I Made Yulistya Negara, Teknik Tegangan Tinggi : Teori dan Aplikasi Praktis, Graha Ilmu, 2013.
[2] Kuffel E., Zaengl W.S., Kuffel J., “High Voltage Engineering: Fundamental”, 2nd Edition, Newnes, MA, 2005
[3] Naidu M.S., Kamaraju V., “High Voltage Engineering”, 3rd Edition, Mc Graw Hill international Edition, 2004

Prerequisite(s)

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