

COURSE	Name	: Power System Protection
	Code	: EE184710
	Credits	: 2
	Semester	: VI

Description of Course

Electric Power System Protection course discuss about the types of protection equipment or relay protection, its settings and applications in the electric power system.

Learning Outcomes

KNOWLEDGE

(P02) Mastering the concepts, procedures and principles of engineering and realizing them in the form of procedures required for system analysis and design in electric power systems, regulatory systems, multimedia telecommunications, or electronics.

(P03) Mastering concepts, procedures and system design principles in electric power systems, regulatory systems, multimedia telecommunications, or electronics

SPECIFIC SKILL

(KK02) Able to describe the resolution of engineering problems in electric power systems, regulatory systems, multimedia telecommunications, or electronics.

(KK03) Able to describe system design for problem solving in electric power systems, regulatory systems, multimedia telecommunications, or electronics by considering technical standards, aspects of performance, reliability, ease of implementation, and guarantee of sustainability.

GENERAL SKILL

(KU12) Able to implement information and communication technology in the context of carrying out their work.

ATTITUDE

(S09) Demonstrate the attitude of being responsible for work in thier area of expertise independently

(S12) Working together to make use of their maximum potential

Course Learning Outcomes

KNOWLEDGE

Mastering the concept of the basic principles of electrical power system disturbances, protection relay requirements, transformer equipment, functions and elements of protection system, various type of protection relays and their security systems.

Able to design protection systems for generators, feeders, buses, transformers and motors.

SPECIFIC SKILL

Able to draw the curve of the electric power system protection relay.

Able to determine the type of electric power system protection that will be used in the electric power system.

Able to determine and calculate protection equipment settings on the electric power system.

GENERAL SKILL

Able to use Power System Analysis software to analyze protection system components and how to determine protection relay settings and can explain and analyze protection coordination.

ATTITUDE

Demonstrate an attitude of responsibility for work in the field

his expertise independently.

Working together to make use of their maximum potential.

Main Subjects

Electrical power system disturbances, protection relay requirements, transformer equipment, protection system functions and elements, various protection relays and their security systems.

Types and working methods of protection equipment in the electric power system.

Design of the Electric Power System protection system

Calculation of protection relay settings and their coordination in the electric power system; grounding systems and their coordination with the protection system.

Reference(s)

- [1] M. Titarenko & I.Noskov, Protective Relaying in Electric Power System,
- [2] Sunil S. Rao, Switchgear and Protection,
- [3] Turan Gonen, Modern Power System Analysis,
- [4] T.S. Hutaaruk, Gelombang Berjalan dan Proteksi Surja
- [5] Pritindra Chowdhuri, Electromagnetic Transient in Power System

Prerequisite(s)

EE184511 Power System Analysis
