

Course	Name	: Electricity System Planning
	Code	: EE184915
	Credits	: 3
	Semester	: Elective

Description of Course

This course discusses about state policies to meet electricity needs in accordance with the growth of electricity costs and the availability of primary energy. Electricity policy is followed by the planning of an electric power system which includes the planning of the power system, transmission system and distribution system. This plan is expected to meet the reliability standards of generating systems such as LOLE and LOEE, as well as the reliability of distribution systems such as SAIDI, SAIFI and CAIFI.

Learning Outcomes

Knowledge

(P02) Mastering the concepts and principles of engineering, and implementing them in the form of procedures for analysis and design in power systems, control systems, multimedia telecommunications, or electronics.

Specific Skill

(KK02) Able to describe the completion of engineering problems in power systems, control systems, multimedia telecommunications, or electronics.

General Skill

(KU05) Able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis.

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 national electricity policies and mastering the concept of reliability of generating systems and electricity distribution systems.

Specific Skill

Able to plan the development of electric power systems in the next few years for generating systems and distribution systems.

General Skill

Able to apply knowledge in the field of probability-statistics and science in the field of power to plan electric power systems.

Attitude

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

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

Main Subjects

1. Primary energy policy

2. Electricity policy
3. LOLP reliability index
4. EENS reliability index, EIR
5. SAIDI, SAIFI, CAIDI, ASAI, ASUI indexes
6. Historical Data Method
7. Network Reduction Method
8. FMEA Method

Reference(s)

- [1] Marko Cepin, "Assessment of Power System Reliability: Methods and Applications", Springer, 2011
- [2] Roy Billington, Ronald N Allan, "Reliability Evaluation of Engineering Systems", Plenum Press : New York, 1992
- [3] Roy Billington, Ronald N Allan, "Reliability Evaluation of Power System", Plenum Press : New York, 1996
- [4] Rencana Usaha Penyediaan Tenaga Listrik (RUPTL)

Prerequisite(s)

EE184511 Power System Analysis
