COURSE	Name	: Artificial Intelligence in Power System
	Code	: EE184914
	Credits	: 3
	Semester	: Elective

Description of Course

Artificial Intelligence in Electric Power Systems course discuss various kinds of Artificial Intelligence (AI) which are used as a tool to improve various variables of the Electric Power System.

Learning Outcomes

Knowledge

(P01) Mastering the concepts and principles of science and engineering mathematics, and implementing them in the form of procedures for analysis and design in power systems, control systems, multimedia telecommunications, or electronics.

Specific Skill

(KK01) Able to formulate engineering problems in power systems, control systems, multimedia telecommunications, or electronics.

General Skill

(KU02) Able to demonstrate independent performance, quality, and measurable.

Attitude

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

(S11) Trying his/her best to achieve perfect results.

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

Course Learning Outcomes

Knowledge

Mastering programming for solving power system problems using artificial intelligence (AI).

Specific Skill

Mastering the application of AI to electric power systems, including the feeling of programming languages.

General Skill

Able to demonstrate independent, quality and measurable performance in analyzing the dynamics and stability of the electricity system.

Attitude

Having responsibility inwork, both individually and groups.

Main Subjects

1. Fuzzy Logic (FL)
2. Neural Network (NN)
3. Particle Swarm Optimization (PSO)

4. Genetic Algorithm (GA)

Reference(s)

[1] Imam Robandi, DesainSistem Tenaga Modern, Penerbit Andi, Yogyakarta, 2006
[2] Mohamad A El-Hawary, Anvanced Solutions in Power Systems, Wiley, 2016
[3] Kwang Y Lee and Mohamed A. El Sharkawi, Wiley-Interscience, 2008
[4] WeerakornOngsakul and DienNgoe Vo, Artificial in Power System Optimization, CRE Press, 2013

Prerequisite(s)

EW184002 Basic Programming
EE184402 Introduction to Power System