

COURSE	Name	: Electronic Instrumentation
	Code	: EE184943
	Credits	: 3
	Semester	: Elective

Description of Course

Electronic Instrumentation course discusses the working principle of electronic systems applied to home appliances and automotive. Home appliances topics include radio transmitters and receivers, television transmitters and receivers, Air conditioning (AC) and multimedia devices. In the field of automotive, the topics include Capacitor Discharge Ignition (CDI), Electronic Fuel Injection (EFI) and Electric Car.

Learning Outcomes

Knowledge

(P03) Mastering the concepts and principles of design procedure in power systems, control systems, multimedia telecommunications, or electronics.

Specific Skill

(KK03) Able to describe system design for problem solving in power systems, control systems, multimedia telecommunications, or electronics by concerning technical standards, performance aspect, reliability, ease of application, and assurance of sustainability.

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.

Course Learning Outcomes

Knowledge

Able to explain the basic concepts of electronics systems applied to home appliances and automotive.

Specific Skill

Able to analyze the specifications and problems in electronic systems applied to household devices and automotive.

General Skill

Able to make decisions in the selection of electronic products on home appliances and automotive.

Attitude

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

Main Subjects

1. History of radio technology development.
2. The working principle of radio transmitter.
3. The working principle of the radio receiver.
4. Types of radio.
5. The working principle of television receiver.
6. Types of television
7. The working principle of dvd and audio amplifier.
8. The working principle of air conditioning (ac)
9. Types of AC
10. System of CDI on automotive.
11. EFFI system on automotive
12. Electric car system.

Reference(s)

- [1] Fischer, W. (2008). Digital Video and Audio Broadcasting Technology A Practical Engineering Guide. Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg.

Prerequisite(s)

EE184306 Electronic Circuits
