

COURSE	Name : e-Health
	Code : EE185551
	Credit(s) : 2
	Semester : (Elective Course)

Description of Course

This course is preparing student to understand the basic principle of e-Health system or telemedicine. This course consists of: history of e-health system, basic system of e-health, design of e-health, e-health system for stroke patient, Diabetic e-health monitoring, Tele-imaging technique, introduction to wireless technology, e-Health based on wireless system, Data management in e-Health system, e-Health monitoring system, data warehouse for e-health and data security.

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

(KK01) Being able to formulate engineering problems with new ideas for the development of technology in power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics.

General Skill

(KU11) Being able to implement information and communication technology in the context of execution of his/her work.

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

Students understand the scope and parts of the e-Health system, the basic principles of e-Health implementation, implementation of wireless technology in e-Health applications, Embedded System technology bases, Data warehousing techniques and medical data security.

Specific Skill

Students are able to implement simple e-Health applications such as ECG data monitoring and data analysis and storage techniques.

General Skill

Able to explain the history, scope and basic principles of implementing e-Health systems, important aspects of the e-Health system, Technique for implementing wireless technology for e-Health applications and medical data security techniques

Attitude

Demonstrate honesty in developing research themes, open to suggestions and input and responsible for avoiding plagiarism.

Main Subjects

1. History and coverage of the e-Health system
2. Devices and parts that support e-Health system
3. Basic wireless technology for implementing e-Health systems
4. Short-range radio wave technology
5. Embedded System technology basis and application examples
6. Data ware housing for e-Health application
7. Data security system
8. Medical data encryption techniques (image data)

Reference(s)

- [1] Bernard Fong, A.C.M. Fong, C.K.Li., Telemedicine Technology: Information Technologies in Medicine and Telehealth., Wiley, 2011.
- [2] Data Ware House, Tutorial Point., Simply East Learning., Tutorial Point, 2014.
- [3] Data Communication and Networking., 4th Edition., Behrouz A Forouzan., 2007.

Prerequisite(s)

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