Course Title: Information Product Design

Course Code: EE3314

Units: 2

Level: B3

Course Aims & Objectives:
The aim of this course is to provide students with a clear understanding of the practical design problems in networking products and information systems. This is a project based course and the project is designed to help students to tie together the computing and networking concepts learned from courses of Information Engineering programme. In addition, the course is also aimed to arouse the student creativity in information system design.

Intended Learning Outcomes:
On completion of this course, the students will be able to:

1. Design and describe specifications of an information system
2. Use embedded Linux system as development platform
3. Analyze and apply open source software to build an information system on an embedded Linux system with web server, database server and software engine to support the general-purpose scripting language (Perl or PHP)
4. Assess information system in terms of testability and reliability

Syllabus:
The course is project based and it is a practical design study. The approach will focus on developing a clear understanding of the general concepts and the many compromises necessary in the process of information system design. The laboratory design work will develop and exercise students’ abilities to work individually and as part of a group.

The laboratory session aims to provide the students with hands on experience in computer, networking or information system design techniques. Students are required to have a thorough involvement in the design of an information system. Each student group, typically 5 students, will be assigned functional specifications for an assigned system.

Each student group will be expected to carry out the planning, design and construction of an information system which meets all the specifications. They will also be required to complete a set of system/data flow diagrams and other necessary documentation. Through the above the students will gain experience in a complete design, prototype development, test and documentation sequence of a typical information system. Systems to be built will be regularly updated and may include:

- Web-based Course Management System
- Medical Report Work Flow System
- Network Security Monitoring System
- Computer Game Development

Dr L M Po/sw
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Laboratory Experiment:
Lab 1: Embedded Linux Network Storage Device Setup for Information System Development
Lab 2: Dynamic Web and Database Service on Embedded Linux Device
Lab 3: Photo Album System

Teaching pattern:
Duration of course: 1 semester
Suggested lecture/tutorial/laboratory mix: Lecture Hour: 0 hour
                     Tutorial Hour: 0 hour
                     Laboratory Hour: 39 hours

Assessment pattern:
Examination duration: No exam at the end of the semester
Percentage of coursework, examination, etc.: 100% CW; 0% Exam

For a student to pass the course, at least 40% of the coursework and a laboratory attendance of at least 75% recorded.

Pre-requisites: (Please quote course code & title)
EE2310 Networking I
or
EE3015 Computer Networks
and
EE2331 Data Structures and Algorithms

Pre-cursor: (Please quote course code & title)
CS3161 Operating System Principles

Exclusive Course: (Please quote course code & title)
Nil

Equivalent Courses: (Please quote course code & title)
Nil

Equivalent to the Old Course Code and Title: (Please quote course code & title)
Nil

Textbook:
Nil

Reference Book:
Nil