Title (Units): **COMP2008 Applied Information Systems Laboratory I (1,0,3)**

Course Aims: To gain hands-on experience on server administration, server-side and client-side web programming. Emphasis is on the learning of different approaches to learn software.

Prerequisite: COMP2026 Problem Solving Using Object Oriented Programming

Co-requisite: COMP3007 Systems Analysis and Design

Course Intended Learning Outcomes (CILOs):
Upon successful completion of this course, students should be able to:

No.	Course Intended Learning Outcomes (CILOs)
	Knowledge
1	Describe the implementation details of server administration, fundamental elements of web programming for IS development.
	Professional Skill
2	Set up a server and database server
3	Perform client-side web programming
4	Perform server-side web programming
	Attitude
5	Conduct relevant knowledge search for self-learning

Calendar Description: This laboratory provides practical hands-on experience on network and server administration, server-side and client-side web programming.

Teaching and Learning Activities (TLAs):

CILOs	Type of TLA
1	Students will be given the related knowledge of the skills before they practice them.
2, 3, 4	Students will gain the hands-on experience by using software tools and applications. Lab. sheets will be provided.
5	Students will complete some assignments which require self-learning of skills.

Assessment:

No.	Assessment Methods	Weighting	CILOs to be addressed	Description of Assessment Tasks
1	Continuous Assessment	100%	1-5	This course is emphasized on the hands-on experience on using software tools and applications in server administration and web programming. Assignments, projects and/or practical tests are designed in each area to evaluate students' proficiency.

Assessment Rubrics:

	Excellent (A)	Good (B)	Satisfactory (C)	Marginal Pass (D)	Fail (F)
Network and Server Administration	• Excellent mastery of Linux installation and configuration	• Good mastery of Linux installation and configuration	• Acceptable mastery of Linux installation and configuration • Acceptable mastery of	• Some mastery of Linux installation and configuration • Some mastery of Linux network and Apache web	• No mastery of Linux installation and configuration

	Excellent (A)	Good (B)	Satisfactory (C)	Marginal Pass (D)	Fail (F)
	• Excellent mastery of Linux network and Apache web server administration	• Good mastery of Linux network and Apache web server administration	Linux network and Apache web server administration	server administration	• No mastery of Linux network and Apache web server administration
Client-side Web Programming	• Excellent mastery of a computer language to perform client-side web programming	• Good mastery of a computer language to perform client-side web programming	• Acceptable mastery of a computer language to perform client-side web programming	• Some mastery of a computer language to perform client-side web programming	• No mastery of a computer language to perform client-side web programming
Server-side Web Programming	• Excellent mastery of a computer language to perform server-side web programming	• Good mastery of a computer language to perform server-side web programming	• Acceptable mastery of a computer language to perform server-side web programming	• Some mastery of a computer language to perform server-side web programming	• No mastery of a computer language to perform server-side web programming

Course Content and CILOs Mapping:

Content		CILO No.
I	Network and Server Administration	1, 2, 5
II	Client-side Web Programming	1, 3, 5
III	Server-side Web Programming	1, 4, 5

References:

- Nixon, Robin. Learning PHP, MySQL & JavaScript: with jQuery, CSS & HTML5. 4th edition. O'Reilly Media, Inc, 2014.
- Sebesta, Robert W. Programming the World Wide Web. 8th edition, 2015.
- Simon, Mark. Introduction to Ajax Client Server Communications on the Web. Oreilly & Associates Inc, 2016.
- Soyinka, Wale. Linux administration: a beginner's guide. 7th edition, McGraw-Hill Education, 2016.

Course Content:

Topic

I. Network and Server Administration
   A. Installation and configuration of Linux
   B. Basic Linux network administration
   C. Apache Web server administration
   D. Database server administration

II. Client-side Web Programming
   A. HTML and CSS
   B. Data types and operators
   C. Functions
   D. Client-side scripting and Document Object Model

III. Server-side Web Programming
   A. File operations
   B. Database access
   C. Asynchronous JavaScript and XML (Ajax)