

COURSE SYLLABUS

1. **COURSE TITLE**
Systems and Web Development Workshop
2. **COURSE CODE**
COMP1033
3. **PRE-REQUISITE**
COMP1023 Foundation of C Programming
4. **CO-REQUISITE**
Nil
5. **NO. OF UNITS**
3
6. **CONTACT HOURS**
42
7. **OFFERING UNIT**
Computer Science and Technology Programme, Division of Science and Technology
8. **SYLLABUS PREPARED & REVIEWED BY**
Prepared by: Dr. Jefferson FONG
Reviewed by: Mr. Jing HE
9. **AIMS & OBJECTIVES**
The aim of this workshop is to introduce the basic concepts in system programming and web programming. This includes practical hands-on experience on programming in the frontend client side, as well as the backend server side.
10. **COURSE CONTENT**
 - A. Frontend programming
 - a. Basic concepts in client side programming
 - b. Static versus dynamic webpages
 - c. Relevant languages such as HTML, CSS and JavaScript
 - B. Backend programming and systems programming
 - a. Basics of server side programming
 - b. Introduction to Linux
 - c. Relevant languages such as PHP and MySQL
 - d. Web application stack such as LAMP and XAMPP
11. **COURSE INTENDED LEARNING OUTCOMES (CILOS) WITH MATCHING TO PILOS**

Programme Intended Learning Outcomes (PILOs)

Programme Title: Bachelor of Science (Honours) in Computer Science and Technology	
PILO	Upon successful completion of the Programme, students should be able to:
PILO 1	Analyze the basic principles of computer science and technology;
PILO 2	Translate real world problems into IT requirements;
PILO 3	Design and develop complex software;
PILO 4	Apply up-to-date technology to solve general problems in specific areas;
PILO 5	Communicate effectively and collaborate in a team.

CILOs-PILOs Mapping Matrix

Course Code & Title: COMP1033 Systems and Web Development Workshop		
CILO	Upon successful completion of the course, students should be able to:	PILO(s) to be addressed
CILO 1	Elaborate on the basics issues involving frontend and backend web programming and systems programming	PILO 1
CILO 2	Design and develop static and dynamic web pages and applications	PILO 4
CILO 3	Set up and maintain backend server	PILO 4
CILO 4	Collaborate in a team to develop a sizable project and present the work.	PILO 5

12. TEACHING & LEARNING ACTIVITIES (TLAs)

CILO No.	TLAs
CILO 1-3	Lectures and exercises: Teachers introduce the fundamental concepts, and students practice on those concepts.
CILO 1-3	Quizzes, tests and assignments: Students further learn and be assessed on the course material.
CILO 2-4	Project: Students collaborate in a substantial project and present their work.

13. ASSESSMENT METHODS (AMs)

Type of Assessment Methods	Weighting	CILOs to be Addressed	Description of Assessment Tasks
Class exercises	10%	1-3	Students practice on the concepts

Type of Assessment Methods	Weighting	CILOs to be Addressed	Description of Assessment Tasks
			introduced by the teachers.
Assignments	30%	1-3	Take-home assessment on how well students learned the material.
Quizzes and tests	30%	1-3	In-class assessment on how well students learned.
Group project	30%	2-4	Students collaborate to create a substantial program and present their work.

14. **TEXTBOOKS / RECOMMENDED READINGS**

TEXTBOOK:

Nil

RECOMMEND READINGS:

- [1] Richard Blum, Linux Command Line and Shell Scripting Bible, 4th edition, Wiley, 2021
- [2] Brian Ward, How Linux Works: What Every Superuser Should Know, 3rd edition, No Starch Press, 2021
- [3] Christopher Negus, Linux Bible, 10th edition, Wiley, 2020
- [4] William Shott, The Linux Command Line, 2nd edition, No Starch Press, 2019
- [5] Jason Cannon, Linux for Beginners, CreateSpace Independent Publishing, 2014
- [6] Jason Cannon, Command Line Kung Fu: Bash Scripting Tricks, Linux Shell Programming Tips, CreateSpace Independent Publishing, 2014
- [7] Daniel J Barrett, Linux Pocket Guide: Essential Commands, 3rd edition, O'Reilly, 2016
- [8] Eric Freeman and Elisabeth Robson, Head First JavaScript Programming, O'Reilly, 2014
- [9] Michael Morrison, Head First JavaScript, O'Reilly, 2008
- [10] David Flanagan, JavaScript: The Definitive Guide, 7th edition, O'Reilly, 2020

15. **MEDIUM OF INSTRUCTION (MOI)**

English

Revised on: <2022-11-01>