
	Daffodil International University Department of Computer Science and Engineering (CSE) Course Outline			
Course Code:	CSE 324			
Course Title:	Operating Systems Lab			
Program:	B.Sc. in CSE			
Faculty:	Faculty of Science and Information Technology (FSIT)			
Semester:	Summer	Year:	2020	
Credit:	1.00	Contact Hour:	3.00	
Course Level:	L3T2	Prerequisite:	CSE 213, CSE 231	
Course Category:	Core Engineering			
Instructor Name:	Most. Hasna Hena			
Designation:	Assistant Professor			
Email:	hena.cse@diu.edu.bd			
Office Address:	Room-405, CSE Building, DIU			
Class Hours:	Section	Class Day	Class Hours	Classroom
Google Classroom Code:				

1. Course Rationale

The course aims to explore the importance of the operating system, its function and different techniques used by the operating system to achieve its goals as resource manager. The course also explores how application interacts with the operating system and how the operating systems interact with the machine. Also, the course shed light on some of the existing operating systems and how the topics taught in the course are applied in these systems. Some topics in the course are implemented by witting the programs to practically know how.

1.1. Course Objective

1. To introduce Basic Linux general purpose Commands
2. To learn network Linux commands.
3. To learn shell script
4. To learn different programming language in Linux editor environment and implement different Operating system algorithm
5. To learn about file management and different types of permission setup.
6. To understand how system processes work and how to manage them
7. To work with system logs and remote connection tools

1.2. Course Outcomes (CO's)

CO1	Experiment with Unix commands and shell programming.
CO2	Able to build shell program for process and file system management with system calls.
CO3	Able to implement and analyse the performance of different algorithm of Operating Systems like CPU scheduling algorithm, page replacement algorithms, deadlock avoidance, detection algorithm and so on.
CO4	Able to design and develop a course project that can have positive impact on environment or society or mankind.

1.3. Program Outcomes (PO's)

Program Outcomes are reported in Appendix-I.

1.4. CO-PO Mapping [attainment level used for COs from 1(weak)-3(strong) correlation]

PO's \ CO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2		3										
CO3		2	3	3								
CO4		2	3	3					1		1	

1.5. CO Assessment Scheme

Assessment Task	CO's				Mark (Total=100)
	CO1	CO2	CO3	CO4	
Attendance	--	--	--	--	10
Report/Project	0	0	0	25	25
Lab Performance	7	10	8	-	25
Lab Final	10	15	15	-	40
Total Mark	17	25	23	25	100

2. Strategies and approaches to learning

2.1. Teaching and Learning Activities (TLA)

TLA1	Demonstrations once a week according to the university policy using multimedia of different topics.
TLA2	Active discussion in class regarding efficient designing and solving of the logical and mathematical problems.
TLA3	Group discussion and presentation regarding diverse problems and corresponding lectures.
TLA4	Evaluation of class performances to reach each student in a class for every topic.

3. Course Schedule and Structure

3.1. Textbook

Unix Shell Programming- Yashavant P. Kanetkar

3.2. Reference Books

Teach Yourself Unix Shell Programming in 14days-Kamran Husain

3.3. Course Plan/Lesson Plan

Lesson/ Labs	Topic	Teaching and Learning Activities (TLAi)	Textbook & Video Reference	Related CO's
1	Introduction to Linux, Linux Installation, Introduction to Shell, Creating user account	TLA1	Yashavant: ch 1	CO1
2	Course Project discussion and group formation – list of projects, team formation, project plan and deliverables with presentation	TLA3		CO4
3	Introduction to Linux tools- Linux files, Directories, Root, File Permissions, Working with files and directories, Disk related commands	TLA1	Yashavant: ch 2	CO1
4	Introduction to Shell Scripts- Shell programming, Shell Variables, Shell Keywords, Write simple Shell program	TLA1 TLA2 TLA4	Yashavant: ch 2, 13	CO1
5	Decision making and Loop control structure	TLA2	Yashavant: ch 10	CO1
6	Review on previous topics and Functions	TLA2 TLA4		CO2
7	Mid Term Week			
8	Shell Administration Adding and removing users, Daily administrative works, file management	TLA2 TLA4	Yashavant: ch 2, ch 15	CO1, CO2
9 ,10	Processes in Linux, Process Scheduler, Deadlock avoidance	TLA2		CO3
11	Disk management, Monitoring system and Ensuring system	TLA2	Yashavant: ch 15	CO2
12	Final Team Project Presentation	TLA1 TLA3		CO4
13	(LAB FINAL)			

4. Assessment Methods

4.1. Grading System

Numerical Grade	Letter Grade	Grade Point
80-100	A+	4.00
75-79	A	3.75
70-74	A-	3.50
65-69	B+	3.25
60-64	B	3.00
55-59	B-	2.75
50-54	C+	2.50
45-49	C	2.25
40-44	D	2.00
Less than 40	F	0.00

5. Additional Support for Students

- Student Portal:
<http://studentportal.diu.edu.bd/>
- Academic Guidelines
<https://daffodilvarsity.edu.bd/article/academic-guidelines>
- Rules and Regulations of DIU
<https://daffodilvarsity.edu.bd/article/rules-and-regulation>
- Career Development Center:
<https://cdc.daffodilvarsity.edu.bd/>
- For general queries:
<http://daffodilvarsity.edu.bd/>