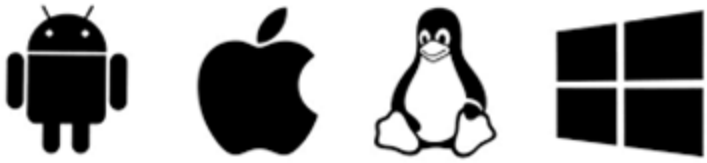
Operating System
COMP301TH



Course Outcomes:

- ***Students will have a deep understanding of the core principles, design and management of operating systems.***
- ***Students will learn how operating systems manage and schedule processes and threads. This knowledge is essential for developing efficient and concurrent software applications.***
- ***Students will be able to develop shell scripts for automation and system management tasks.***

Course Material:

All the course material will be available on Canvas.

In the beginning of the course, all the students will receive an invite on their respective e-mail IDs for joining the course.

I will use e-mail Ids that you have filled in your Admission forms. If some of you will be using any alternate e-mail ID then do update me.

Link to Course Material: Will be updated as the session starts

All the assignments, quizzes and tests will be maintained online on Canvas only. Communication via email is preferable. So, do email me for any queries or information regarding joining the course.

For queries related to course material, the in-built messaging system of canvas is recommended.

Course Schedule

Total Lectures: 28 + Lab Exercises (Shell Scripting)

Class Time: as per time-table approved by the College.

Room No: 129 (1st Floor, Old Building Govt. College Hamirpur)

All the practical classes will be conducted in the Department of Computer Science Lab (Room No: 128) on the 1st floor of the old building of Govt. College Hamirpur.

The schedule of lectures will be in accordance with the approved academic calendar of the college.

Lecture	
	Introduction
Lecture: 1	The Basics What and Why
Lecture: 2	System Software and Resource Abstraction
Lecture: 3	OS Strategies
Lecture: 4	Types of Operating System (Part-I)
Lecture: 5	Types of Operating System (Part-II)
	Unit Test-1
Lecture: 6	Operating System Services and Process Modes
Lecture: 7	System Calls
Lecture: 8	System Programs

Lecture: 9	Process Management (Part-I)
Lecture: 10	Process Management (Part-II)
Lecture: 11	Process Management (Part-III)
Lecture: 12	Process Management (Part-IV)
Lecture: 13	Process Management (Part-V)
Unit Test- 2	
Lecture: 14	Scheduling (Part-I)
Lecture: 15	Scheduling (Part-II)
Lecture: 16	Scheduling (Part-III)
Lecture: 17	Memory Management
Lecture: 18	Address Space
Lecture: 19	Address Binding
Lecture: 20	Memory Allocation Techniques (Part-I)
Lecture: 21	Memory Allocation Techniques (Part-II)
Lecture: 22	Memory Allocation Techniques (Part-III)
Unit Test-3	
Lecture: 23	Virtual Memory
Lecture: 24	Page Replacement Algorithms

Lecture: 25	Shell Introduction
Lecture: 26	Linux Text Editors
Lecture: 27	Shell Scripting
Lecture: 28	Shell Variables and System Calls

Unit Test- 4