CMPS 4310 Class Schedule
Summer 2025

The following is the timeline for your study with pointers to the study materials from the textbook. A timetable is shown below for the class schedule to be followed according to the University calendar schedule. It is suggested and strongly recommended to follow a self-paced study which meets the milestones of this timeline and if possible run ahead of it in order to avoid piling up of the work towards the end. A summer semester is shorter and thus more intensive; you have opted to take up this study in an intensive semester so you should plan your time accordingly.

Regular class schedule according to the University calendar			
Date	**Segment Topic**	**Tests/Quizes**	**Assignments/Projects**
6/04	Go over the Syllabus and validate on Canvas. Make sure that lockdown browser is installed on your computer and runs properly. Introduce yourselves in the introductions forum. Start studying the materials as noted below; the dates shown are the dates by which the corresponding study should be completed.		
Week 1	**Introduction to Networking**		
6/04-06	Study the document posted in the module "networking primer".	Quiz on this segment: Opens 6/7 - closes 6/9	
Week 2	**Introduction; Operating System Structures**		
(6/09)	The main study materials for this week are the posted Powerpoints and recorded lectures. These materials cover the textbook chapters indicated below; the textbook topics indicated below are supplementary reading.		
Week 2	**Introduction:** TextBook Chapter 1 on introductory materials. 1.2 What operating systems do 1.2 Computer-system organization 1.3 Computer-system architecture 1.4 Operating-system Structure 1.4 Operating-system operations 1.6 Process management 1.7 Memory management 1.8 Storage management 1.9 Security and protection 1.10 Distributed systems 1.12 Computing environments 1.13 Free and open-source operating systems **Operating System Structures:** 2.1 Operating-system services 2.2 User and operating-system interface 2.3 System calls 2.4 Types of System calls 2.5 System programs 2.6 Operating-system design and implementation 2.7 Operating-system structure 2.8 Virtual Machines 2.11 System Boot	Quiz on these segments: Opens 6/14 - closes 6/16	Review C language programming
6/20	**Assignment 1**		6/20 Assignment 1 report due on Canvas.
Week 3	**Processes and Threads**		
Week 3 (6/16)	**Processes:** 3.1 Process concept 3.2 Process scheduling 3.3 Operations on processes 3.4 Interprocess communication	Quiz on this segment: Opens 6/21 - closes 6/23	

	3.5 Examples of IPC systems 3.6 Communication in client-server systems		
	Threads: 4.1 Overview 4.2 Multithreading models 4.3 Thread libraries 4.4 Threading issues 4.5 Operating-system examples		
6/24			Reflection 1 due on Canvas
Week 4	**CPU Scheduling;**		
Week 4 (6/23)	**CPU Scheduling:** 5.1 Basic concepts 5.2 Scheduling criteria 5.3 Scheduling algorithms 5.4 Thread scheduling 5.5 Multi-processor scheduling 5.6 Operating-system examples 5.7 Algorithm evaluation	Quiz on this segment: Opens 6/28 - closes 6/30	
Week 5	**Process Synchronization; Synch. Examples**		
Week 5 (6/30)	**Synchronization Tools:** 6.1 Background 6.2 The critical-section problem 6.3 Peterson's solution 6.4 Hardware support for synchronization 6.5 Semaphores X. Mutex locks (extra material provided-not in book) 6.6 Classic problems of synchronization 6.7 Monitors 6.8 Synchronization Examples	Quiz on this segment: Opens 7/05 - closes 7/07	
7/10	**Assignment 2**		7/10 Assignment 2 report due on Canvas.
7/11			Reflection 2 due on Canvas
Week 6	**Deadlocks**		
Week 6 (7/07)	**Deadlocks:** 7.1 System model 7.2 Deadlock characterization 7.3 Methods for handling deadlocks 7.4 Deadlock prevention 7.5 Deadlock avoidance 7.6 Deadlock detection 7.7 Recovery from deadlock	Quiz on this segment: Opens 7/12- closes 7/14	
Week 7	**Main Memory; Virtual Memory; File system**		
	The main study materials for this week are the posted Powerpoints and recorded lectures. These materials cover the textbook chapters indicated below; the textbook topics indicated below are supplementary reading.		

Week 7 (7/14)	**Main Memory:** 8.1 Background 8.2 Swapping 8.3 Contiguous memory allocation 8.4 Paging 8.5 Structure of the page table 8.6 Segmentation **Virtual Memory:** 9.1 Background 9.2 Demand paging 9.3 Copy-on-write 9.4 Page replacement	Quiz on this segment: Opens 7/19- closes 7/21	
	File-System Interface: 10.1 File concept 10.2 Access methods 10.3 Directory structure **File-System Implementation:** 11.1 File-system structure 11.2 File-system implementation 11.3 Directory implementation 11.4 Allocation methods 11.5 Free-space management		
7/10	**Assignment 3**		7/10 Assignment 3 report due on Canvas.
Week 8	**Parallel Computing**		
	The study materials for this week are only those posted on Canvas under this topic. This topic is not in the textbook.		
Week 8 (7/21)	**Parallel computing primer:** • Instruction Level Parallelism vs Task Parallelism • Pipelines • Pipelining Versus no pipelining • Pipelining in instruction execution	Quiz on this segment: Opens 7/26- closes 7/28	
7/29	**Assignment 4**		7/29 Assignment 4 report due on Canvas.
7/30	**Final Test**	Opens 7/30- closes 7/30	