

University of Technology
Computer Engineering Department
Academic Year 2023 - 2024

Second Year – First Semester - Information Technology Branch



CE-IT231	Operating System I	2 Hours/Week	2 Units
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Contents of Syllabus	Hours
1-Introduction <ul style="list-style-type: none"> • What Operating Systems Do • Computer-System Organization • Computer-System Architecture • Operating-System Structure • Operating-System Operations • Process Management • Memory Management • Storage Management • Distributed Systems • Special-Purpose Systems • Computing Environments • Open-Source Operating Systems 	6
2-Process Concept <ul style="list-style-type: none"> • Process Concept • Process Scheduling • Operations on Processes • Interprocess Communication • Examples of IPC Systems • Communication in ClientServer Systems 	8
3-Multithreaded Programming <ul style="list-style-type: none"> • Overview • Multithreading Models • Thread Libraries 	2
4-Process Scheduling <ul style="list-style-type: none"> • Basic Concepts • Scheduling Criteria • Scheduling Algorithms • Multiple-Processor Scheduling 	8
5-Synchronization <ul style="list-style-type: none"> • Backgmmmd • The Critical-Section Problem • Peterson's Solution • Synchronization Hardware • Semaphores • Classic Problems of Synchronization 	6

References

- 1- Avi Silberschatz, Peter Baer Galvin, Greg Gagne, "operating system concepts" 8th edition
- 2- Andrew S. Tanenbaum "Operating Systems Design and implementation," Third Edition

اسم التدريسي : Dr. Muna Mohammed Al-Nayar