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| Course Name | Advanced Operating Systems | | Course Code | 332 COMP-3 | | |
| Credit Hours | 3 | | Contact Hours | Theory | Lab | Total |
| | | | | 2 | 2 | 4 |
| Offered as | <input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Program Requirement | | | | <input checked="" type="checkbox"/> Required <input type="checkbox"/> Elective | |
| Offered in | <input checked="" type="checkbox"/> BS - Computer Science <input type="checkbox"/> BS – Information Systems <input type="checkbox"/> BS - Computer & Network Engineering | | | | | |
| Level | 8 th Level | | Prerequisite | 231-COMP-3 | | |
| Course Description: <p>This course provides the detailed description of distributed system concepts and its applications. It includes synchronization, concurrency and distributed scheduling algorithms. It also covers the fundamental concepts, structure, characteristics, scheduling algorithms of multi-processor & real time operating system and various aspects and mechanisms for operating system security.</p> | | | | | | |
| Course objectives: <ul style="list-style-type: none"> • Describe the fundamentals of distributed system, multiprocessor system, real-time systems and trends in Operating system design. • Demonstrate the application and implementation of various multiprocessor and Real-time scheduling algorithms in solving scheduling problems. • Show the applications and implementation of various mutual exclusion algorithms for distributed systems. • Explain the various aspects of operating system security and mechanisms to reinforce it. | | | | | | |
| Grading | <input checked="" type="checkbox"/> Exam 1 | 10% | <input checked="" type="checkbox"/> Exam 2 | 10% | <input checked="" type="checkbox"/> Assignment(s) | 20% |
| | <input checked="" type="checkbox"/> Final Exam | 40% | <input checked="" type="checkbox"/> Lab | 20% | <input type="checkbox"/> Mini Project | 0% |
| Text Book: 1. Distributed Systems Principles and Paradigms, Andrew Tanenbaum and Maarten van Steen, 2016, Pearson, 2nd edition, ISBN-13: 978-1530281756 2. Principles of Operating Systems, Naresh Chauhan, 2014, Oxford University Press, 1st edition, ISBN-13: 978-0198082873 | | | | | | |
| Reference Book: 1. Operating Systems: Internals and Design Principles, William Stallings, 2014, Pearson, 8th edition, ISBN-13: 9780133805918. 2. Modern Operating Systems, Andrew S. Tanenbaum, 2014, Pearson, 4th edition, ISBN-13: 9780133591620. | | | | | | |

