

# Operating Systems COM301T

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**Faculty - Dr. Sivaselvan B**

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## Schedule

- Monday 2.00 - 2.50 pm
- Tuesday 12.00 - 12.50 pm
- Thursday 11.00 - 11.50 am

## TAs

- Santosh Kumar - coe18d005
- Mercy Faustina - coe19d006

Lecture	Topic	PDF	Video
Session-1 (03/08/2020)	Intro session	<a href="#">Slides</a>	<a href="#">Lecture 1</a>
Session-2 (04/08/2020)	Operating system overview-1	<a href="#">Slides</a>	<a href="#">Lecture 2</a>
Session-3 (06/08/2020)	Operating system overview-2	<a href="#">Slides</a>	<a href="#">Lecture 3</a>
Session-4 (10/08/2020)	Operating system overview-3	<a href="#">Slides</a>	<a href="#">Lecture 4</a>
Session-5 (11/08/2020)	OS features , Process concept 1	<a href="#">Slides</a>	<a href="#">Lecture 5</a>
Session-6 (13/08/2020)	Process concept 2	<a href="#">Slides</a>	<a href="#">Lecture 6</a>
Session-7 (17/08/2020)	Process concept 3	<a href="#">Slides</a>	<a href="#">Lecture 7</a>
Session-8 (18/08/2020)	Linux system calls , Fork intro	<a href="#">Slides</a>	<a href="#">Lecture 8</a>
Session-9 (20/08/2020)	Process state transition	<a href="#">Slides</a>	<a href="#">Lecture 9</a>
Session-10 (24/08/2020)	Process state transition contd , Fork 1	<a href="#">Slides</a>	<a href="#">Lecture 10</a>

Lecture	Topic	PDF	Video
Session-11 (25/08/2020)	Fork 2	<a href="#">Slides</a>	<a href="#">Lecture 11</a>
Session-12 (27/08/2020)	Fork 3	<a href="#">Slides</a>	<a href="#">Lecture 12</a>
Session-13 (31/08/2020)	Fork 4 , Exec 1 , Wait	<a href="#">Slides</a>	<a href="#">Lecture 13</a>
Session-14 (01/09/2020)	Wait	<a href="#">Slides</a>	<a href="#">Lecture 14</a>
Session-15 (03/09/2020)	Exec variants	<a href="#">Slides</a>	<a href="#">Lecture 15</a>
Session-16 (07/09/2020)	Exec variants , Fork output questions	<a href="#">Slides</a>	<a href="#">Lecture 16</a>
Session-17 (08/09/2020)	CPU scheduling algo	<a href="#">Slides</a>	<a href="#">Lecture 17</a>
Session-18 (10/09/2020)	CPU scheduling algo , FCFS trace	<a href="#">Slides</a>	<a href="#">Lecture 18</a>
Session-19 (14/09/2020)	FCFS , SJF	<a href="#">Slides</a>	<a href="#">Lecture 19</a>
Session-20 (15/09/2020)	SRT (SJF PE) , Priority NPE	<a href="#">Slides</a>	<a href="#">Lecture 20</a>
Session-21 (17/09/2020)	Priority PE , Round Robin	<a href="#">Slides</a>	<a href="#">Lecture 21</a>
Session-22 (21/09/2020)	HRRN , Numericals on RR , IO	<a href="#">Slides</a>	<a href="#">Lecture 22</a>
Session-23 (22/09/2020)	IO , Multiprocessor example , IPC 1	<a href="#">Slides</a>	<a href="#">Lecture 23</a>
Session-24 (24/09/2020)	IPC 2	<a href="#">Slides</a>	<a href="#">Lecture 24</a>
Session-25 (28/09/2020)	IPC 3 , Pipes 1	<a href="#">Slides</a>	<a href="#">Lecture 25</a>
Session-26 (29/09/2020)	Pipes 2 , Pipes exercises	<a href="#">Slides</a>	<a href="#">Lecture 26</a>
Session-27 (01/10/2020)	dup and Pipes example LS	<a href="#">Slides</a>	<a href="#">Lecture 27</a>
Session-28 (12/10/2020)	Multithreading intro	<a href="#">Slides</a>	<a href="#">Lecture 28</a>

Lecture	Topic	PDF	Video
Session-29 (13/10/2020)	Multithreading benefits challenges models	<a href="#">Slides</a>	<a href="#">Lecture 29</a>
Session-30 (14/10/2020)	Pthreads example	<a href="#">Slides</a>	<a href="#">Lecture 30</a>
Session-31 (19/10/2020)	Matrix mult	<a href="#">Slides</a>	<a href="#">Lecture 31</a>
Session-32 (20/10/2020)	Matrix mult and Amdahl's law	<a href="#">Slides</a>	<a href="#">Lecture 32</a>
Session-33 (22/10/2020)	Amdahl's law, Thread pool	<a href="#">Slides</a>	<a href="#">Lecture 33</a>
Session-34 (26/10/2020)	Thread level scheduling,Signal handling	<a href="#">Slides</a>	<a href="#">Lecture 34</a>
Session-35 (27/10/2020)	Signal handling	<a href="#">Slides</a>	<a href="#">Lecture 35</a>
Session-36 (29/10/2020)	Sending signals and addnl features	<a href="#">Slides</a>	<a href="#">Lecture 36</a>
Session-37 (02/11/2020)	Synchronization	<a href="#">Slides</a>	<a href="#">Lecture 37</a>
Session-38 (03/11/2020)	Critical Section problem, Peterson's solution	<a href="#">Slides</a>	<a href="#">Lecture 38</a>
Session-39 (05/11/2020)	Lock instruction, Bounded-waiting mutual exclusion	<a href="#">Slides</a>	<a href="#">Lecture 39</a>
Session-40 (09/11/2020)	Mutex locks for CSP,Semaphore limitations,Deadlock & Starvation problems	<a href="#">Slides</a>	<a href="#">Lecture 40</a>
Session-41 (10/11/2020)	Dining philosopher problem	<a href="#">Slides</a>	<a href="#">Lecture 41</a>
Session-42 (12/11/2020)	Dining philosopher,Reader Writer problem	<a href="#">Slides</a>	<a href="#">Lecture 42</a>
Session-43 (16/11/2020)	Reader writer,prod cons,Deadlocks	<a href="#">Slides</a>	<a href="#">Lecture 43</a>
Session-44 (17/11/2020)	handling deadlocks,prevention,avoidance-Bankers algo	<a href="#">Slides</a>	<a href="#">Lecture 44</a>
Session-45 (18/11/2020)	Deadlock detection,Recovery from deadlock	<a href="#">Slides</a>	<a href="#">Lecture 45</a>

## Resources

- Add links to materials you found useful while preparing
- [Refer](#) for full notes
- [Nice intro to Semaphores](#)
- [For semaphore based problems](#) Ch-4 and 5
- For banker's algorithm - [vid\\_1](#) [vid\\_2](#)