E-Learning: NPTEL videos

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| **Sl.No.** | **Semester** | **Course**  | **Topic** | **NPTEL/YouTube Link** |
|  | VII | VLSI Design |  Module1 : NPTEL videos on VLSI Design | <https://youtu.be/ruClwamT-R0> |
|  | VI | Embedded Systems | Module 3 :Introduction to Embedded Systems | <https://www.youtube.com/playlist?list=PLcblZiT62e1gNZ-VWPO3pTpXkHBMZa2n> |

Theory videos

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| 1. 1.
 | III | Analog Electronics | P-N junction Diode | <https://youtu.be/BCfpLH41lAU> |
|  | IV | Micro Controller | Module 2 | https://www.youtube.com/playlist?list=PLcwp2fRcIXJUFthj5CKNNamSBDtf3We7A |
|  | IV | Signals and System | NPTEL videos on signal and system | <https://nptel.ac.in/courses/117/104/117104074/> |
|  | V | Information Theory and Coding | NPTEL Web Notes on ITC | [https://nptel.ac.in/courses/117/108/117108097/#](https://nptel.ac.in/courses/117/108/117108097/) |
|  | VII | IoT and Wireless Sensor Networks | Sensors and Actuators |  <https://youtu.be/z3VEZPwl5gA><https://youtu.be/SXz0XR68dwE> |

Lab Videos

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| **Sl.No.** | **Semester** | **Subject** | **Topic** | **You Tube Link** |
| 1 | IV | Micro Controller 18ECL47 | 1.DAC Interfacing with 8051 microcontroller2.LCD Interfacing with 8051 microcontroller3.Stepper motor Interfacing with 8051 microcontroller | <https://youtu.be/AiR-6BjuFuc><https://youtu.be/cXnfvhEe9Ao><https://youtu.be/MUEyVoAblHE> |
| 2. | IV | Analog Circuits LAB 18ECL48 | 1. Design and set-up BJT/FET i) Colpitts Oscillator ii) Crystal Oscillator.2. Design active second order Butterworth low pass and high pass filters.3. Test a comparator circuit and design a Schmitt trigger for the given UTP and LTP values and obtain the hysteresis.4. Design 4 bit R – 2R Op-Amp Digital to Analog Converter (i) Using 4 bit binary input  from toggle switches  (ii) By generating digital inputs  using mod-16 counter.5. Design Monostable and a stable Multivibrator using 555 Timer. | <https://youtu.be/1Q2x3u6VAc4><https://youtu.be/o0GH_h18ZEk><https://youtu.be/XvUAZ8vo5hk><https://youtu.be/twmo7YM7eXc><https://youtu.be/KBIGI6py2KI><https://youtu.be/DeGQ3zA2NTo><https://youtu.be/0qeFyOXt8I0><https://youtu.be/5xHTmR1qDvw><https://youtu.be/IvP5OQ6CzSo> |
| 3. | VI | Embedded Controller LAB 17ECL67 | 1. Direction Controlled DC Motor2. Speed Controlled DC Motor3. Relay LED Buzzer.4. Seven Segment Display Interface 5. PWM Interface6. Keypad Interface7. ADC Interface8. DAC Interface 9. External Interrupt10. UART Interface | <https://youtu.be/nGGfTwIz7rY><https://youtu.be/CnrIT50yBJ8>https://youtu.be/9hneSfnjGls<https://youtu.be/0Em9Ji1t7tY><https://youtu.be/Oqo2P9A_nvU><https://youtu.be/yFLcjD3vib8><https://youtu.be/lihQ7Df8o0I><https://youtu.be/suIMuSZAg-w><https://youtu.be/ovhGGQ5-8Q0><https://youtu.be/foDPTVSoEgg> |
| 4. | VI | Computer Networks LAB 17ECL68 | 1.Implement a point to point network with four nodes and duplex links between them. Analyze the network performance by setting the queue size and varying the bandwidth.2.Implement a four node point to point network with links n0-n2, n1-n2 and n2-n3. Apply TCP agent between n0-n3 and UDP between n1-n3. Apply relevant applications over TCP and UDP agents changing the parameter and determine the number of packets sent by TCP/UDP.3.Implement Ethernet LAN using n (6-10) nodes. Compare the throughput by changing the error rate and data rate.4.Implement Ethernet LAN using n nodes and assign multiple traffic to the nodes and obtain congestion window for different sources/ destinations.5.Implement ESS with transmission nodes in Wireless LAN and obtain the performance parameters. | <https://classroom.google.com/c/MTMzNjE2OTUxNzA5/p/MTA3NjgwMzY2OTkz/details>https://classroom.google.com/c/MTMzNjE2OTUxNzA5/p/MTA3NTUxNjUxMTQ5/details |

**Program Coordinator**