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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| **Sl.No.** | **Semester** | **Subject** | **Topic** | **NPTEL/YouTube Link** |
| 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 microcontroller  2.LCD Interfacing with 8051 microcontroller  3.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 Motor  2. Speed Controlled DC Motor  3. Relay LED Buzzer.  4. Seven Segment Display Interface  5. PWM Interface  6. Keypad Interface  7. ADC Interface  8. DAC Interface  9. External Interrupt  10. 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**