

Name: Chinmay Vivek Deshpande

Class: SE B (Mechanical)

Subject: Electrical and Electronics Engineering

Playlist:

EEE\_ Mech Arduino UNO:

<https://www.youtube.com/watch?v=TD6CyFwybSs&list=PLcyXyzEYiL1CVSeYs0Ogb3rZ0LZb-AN>

Induction Motor:

<https://www.youtube.com/watch?v=jGmxiBAXgdA&list=PLcyXyzEYiL1DL8BfFAIwJ3CKVhmdZ84I7>

DC Machines:

[https://www.youtube.com/watch?v=kebfMIVLqoo&list=PLcyXyzEYiL1D9Ep-eMYm\\_lg1rtP7JFIO](https://www.youtube.com/watch?v=kebfMIVLqoo&list=PLcyXyzEYiL1D9Ep-eMYm_lg1rtP7JFIO)

Sr. No.	Name of Topic	URL
<b>Unit I Introduction to Arduino</b>		
1.	Introduction to microcontroller and microprocessors	<a href="https://youtu.be/gh34Kgh9P8I">https://youtu.be/gh34Kgh9P8I</a>
2.	Role of embedded systems, Open source embedded platforms	<a href="https://youtu.be/T0G-PnxHaJY">https://youtu.be/T0G-PnxHaJY</a>
3.	Introduction to Arduino: Basics	<a href="https://youtu.be/XZ3xJxO2YPs">https://youtu.be/XZ3xJxO2YPs</a>
4.	Programming Concept of Arduino IDE Part 1	<a href="https://youtu.be/Kzr9heiaTgE?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN">https://youtu.be/Kzr9heiaTgE?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN</a>
5.	Programming Concept of Arduino IDE Part 2	<a href="https://youtu.be/1wnEMM3xzQM?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN">https://youtu.be/1wnEMM3xzQM?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN</a>
6.	Programming Concept of Arduino IDE Part 3	<a href="https://youtu.be/NwzDdt1C7Zw?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN">https://youtu.be/NwzDdt1C7Zw?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN</a>
7.	Digital Input Output function used in Arduino UNO 328P	<a href="https://youtu.be/imxv7R9gvKk?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN">https://youtu.be/imxv7R9gvKk?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN</a>
<b>Unit II Peripheral Interface</b>		
1.	Interfacing of LED with Arduino UNO 328P	<a href="https://youtu.be/l8SMDSzVd4k?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN">https://youtu.be/l8SMDSzVd4k?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN</a>
2.	Experiment Interfacing of LED with Arduino ATmega 328P using Tinkercad Software	<a href="https://youtu.be/TToZegigABk">https://youtu.be/TToZegigABk</a>
3.	Interfacing of 16 by 2 LCD with Arduino UNO	<a href="https://youtu.be/NwzDdt1C7Zw?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN">https://youtu.be/NwzDdt1C7Zw?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN</a>

4.	Experiment Interfacing of LCD with Arduino ATmega 328P using Tinkercad Software	<a href="https://youtu.be/hDlAtowgkHs">https://youtu.be/hDlAtowgkHs</a>
5.	Concept of serial communication using Arduino IDE	<a href="https://youtu.be/9eHFfGIUzYc?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN">https://youtu.be/9eHFfGIUzYc?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN</a>
6.	Concept of ADC used in ATmega 328P with functions	<a href="https://youtu.be/BXFItlswR7A?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN">https://youtu.be/BXFItlswR7A?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN</a>
7.	Interfacing of Temperature Sensor LM35 with Arduino 328P	<a href="https://youtu.be/nlWKCikTmpE?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN">https://youtu.be/nlWKCikTmpE?list=PLcyXyzEYiL1CVSeYs-0Ogb3rZ0L_Zb-AN</a>
8.	Experiment Temperature Sensor LM35 with Arduino 328P using Tinkercad Software and actual hardware	<a href="https://youtu.be/1b5-BIOy4Uc">https://youtu.be/1b5-BIOy4Uc</a>
9.	Interfacing of LVDT with Arduino ATmega 328P	<a href="https://youtu.be/xznTQC5K-wY">https://youtu.be/xznTQC5K-wY</a>
10.	Interfacing of Strain Gauge with Arduino ATmega 328P	<a href="https://youtu.be/IzNEDqJH2Q0">https://youtu.be/IzNEDqJH2Q0</a>

### Unit III DC Machines

1.	Basic Law for Generator and Motor (Generating and Motoring Action)	<a href="https://youtu.be/TfHrKQwB1n8">https://youtu.be/TfHrKQwB1n8</a>
2.	Constructional features of a DC machine	<a href="https://youtu.be/ZrjVdL72bKw">https://youtu.be/ZrjVdL72bKw</a>
3.	Working Principle of DC Generator	<a href="https://youtu.be/RnAApFjE6Ww">https://youtu.be/RnAApFjE6Ww</a>
4.	EMF Equation of DC Machine and its significance	<a href="https://youtu.be/xqM32gFF2HY">https://youtu.be/xqM32gFF2HY</a>
5.	Torque Equation of DC Motor	<a href="https://youtu.be/78krOBU_OjM">https://youtu.be/78krOBU_OjM</a>
6.	Concept of load torque and types of loads	<a href="https://youtu.be/67xbDfQKRlg">https://youtu.be/67xbDfQKRlg</a>
7.	Characteristics of DC Shunt Motor	<a href="https://youtu.be/iZ65lpTUrt0">https://youtu.be/iZ65lpTUrt0</a>
8.	Types of DC Motor	<a href="https://youtu.be/wSSrGk40AA0">https://youtu.be/wSSrGk40AA0</a>
9.	DC Machines: Dynamics of motor and load combination	<a href="https://youtu.be/kebfMIVLqoo">https://youtu.be/kebfMIVLqoo</a>
10.	DC MACHINES:	<a href="https://youtu.be/aKR0h3Lc81Q">https://youtu.be/aKR0h3Lc81Q</a>

	Speed Control Method of DC Shunt Motor	
11.	DC MACHINE: Reversal of direction of rotation of DC motor	<a href="https://youtu.be/GYuBVM_GyOw">https://youtu.be/GYuBVM_GyOw</a>
12.	DC MACHINES: Regenerative Braking in DC Motor	<a href="https://youtu.be/LAE85NT1iMY">https://youtu.be/LAE85NT1iMY</a>
<b>Unit IV Three Phase Induction Motors</b>		
1.	Induction Motor: Constructional Features	<a href="https://youtu.be/FTWRs48YbEA">https://youtu.be/FTWRs48YbEA</a>
2.	Induction Motor: Working Principle	<a href="https://youtu.be/w9SRWmgIyyY">https://youtu.be/w9SRWmgIyyY</a>
3.	Induction Motor: Types as per rotor construction	<a href="https://youtu.be/vHL0ArU5GrE">https://youtu.be/vHL0ArU5GrE</a>
4.	Induction Motor: Important Terminologies	<a href="https://youtu.be/Bjq4egiLeHU">https://youtu.be/Bjq4egiLeHU</a>
5.	Induction Motor: Relation between Rotor Input Power and Rotor Copper Loss	<a href="https://youtu.be/a6TzNe9X8Bs">https://youtu.be/a6TzNe9X8Bs</a>
6.	Induction Motor: Power Stages and Efficiency in Three Phase Induction Motor	<a href="https://youtu.be/jGmxiBAXgdA">https://youtu.be/jGmxiBAXgdA</a>

**Name: Chinmay Vivek Deshpande**  
**Class: SE (Electrical)**  
**Subject: Numerical Methods and Computer Programming**

**Playlist:**

**Numerical Methods:**

<https://www.youtube.com/watch?v=l303Ou0GwZc&list=PLcyXyzEYiL1AC0TBO3kadjeeaz8pws2-e>

**Numerical Methods and C Programming:**

<https://www.youtube.com/watch?v=uhJwYuGxHaw&list=PLcyXyzEYiL1CpY0HHTJtSU2Cs4FOtqW8L>

Sr. No.	Name of Topic	URL
1.	Numerical Method: Birge-Vieta Method	<a href="https://youtu.be/AsaKO9Bqs_w">https://youtu.be/AsaKO9Bqs_w</a>
2.	Numerical Method: Newton Raphson Method for the solution of non-linear equation (Two-Variable)	<a href="https://youtu.be/DqBgZI2EbF4">https://youtu.be/DqBgZI2EbF4</a>
3.	Numerical Methods: Bisection (Half Interval) method for the solution of Transcendental equation	<a href="https://youtu.be/GhR3AFFPbFI">https://youtu.be/GhR3AFFPbFI</a>
4.	Numerical Methods: Least Square Error Technique (Curve Fitting as Straight Line)	<a href="https://youtu.be/Gz9pf5LHaUg">https://youtu.be/Gz9pf5LHaUg</a>
5.	Numerical Method: LaGrange's Interpolation Method	<a href="https://youtu.be/PxwXh6rm06s">https://youtu.be/PxwXh6rm06s</a>
6.	Numerical methods: Solution of the linear simultaneous equation by using the Gauss Jacobi Method	<a href="https://youtu.be/y-KHJzLVK5U">https://youtu.be/y-KHJzLVK5U</a>
7.	Numerical Methods: Numerical Integration Basics & Derivation of Newton's Quotes Quadrature Formula	<a href="https://youtu.be/OdI0ObVGvfM">https://youtu.be/OdI0ObVGvfM</a>
8.	Numerical Methods: Numerical Integration Trapezoidal Method	<a href="https://youtu.be/pxxqxNfKiPc">https://youtu.be/pxxqxNfKiPc</a>
9.	Numerical Methods: Numerical Double Integration	<a href="https://youtu.be/3GWCxD5CUP8">https://youtu.be/3GWCxD5CUP8</a>
10.	Runge Kutta Method_Numerical Solution	<a href="https://youtu.be/l303Ou0GwZc">https://youtu.be/l303Ou0GwZc</a>
11.	Numerical Methods: Matrix Inversion by using Gauss Jordan Method	<a href="https://youtu.be/l5X2cvPvL54">https://youtu.be/l5X2cvPvL54</a>

12.	Numerical methods: Solution of linear simultaneous equation by using Gauss Jordan Method	<a href="https://youtu.be/P5hl-4FezT0">https://youtu.be/P5hl-4FezT0</a>
13.	Numerical Method: Eigen Value and vector calculation by Power Method.	<a href="https://youtu.be/_7FyUT3K9Ug">https://youtu.be/_7FyUT3K9Ug</a>
14.	Numerical Methods: Solution of linear simultaneous equation by using Gauss Elimination Method	<a href="https://youtu.be/RTIs-ENpAQw">https://youtu.be/RTIs-ENpAQw</a>
15.	Basics of C: Operators in C	<a href="https://youtu.be/uhJwYuGxHaw">https://youtu.be/uhJwYuGxHaw</a>
16.	Basics of C: Input Output Statements	<a href="https://youtu.be/aVNH43QW3P4">https://youtu.be/aVNH43QW3P4</a>
17.	Basics of C Language: Data Types	<a href="https://youtu.be/RuUwBanmJm4">https://youtu.be/RuUwBanmJm4</a>
18.	Basics Of C language: C Tokens 1	<a href="https://youtu.be/PLuj9FeY_uc">https://youtu.be/PLuj9FeY_uc</a>
19.	Basics of C Language: Algorithm and Flowchart	<a href="https://youtu.be/AIGLSzczU_k">https://youtu.be/AIGLSzczU_k</a>
20.	Numerical Methods RK Method	<a href="https://youtu.be/-qJyIdgRIAU">https://youtu.be/-qJyIdgRIAU</a>
21.	Numerical Methods: Fitting Straight Line or Curve Fitting Method	<a href="https://youtu.be/UsO4Q0-pw_k">https://youtu.be/UsO4Q0-pw_k</a>
22.	Numerical Methods: Gauss Jacobi Method	<a href="https://youtu.be/et0LvStCkys">https://youtu.be/et0LvStCkys</a>
23.	Numerical Methods: Simpson's One Third Method	<a href="https://youtu.be/KuTi1v8HL_E">https://youtu.be/KuTi1v8HL_E</a>
24.	Numerical Methods: LaGrange's Interpolation Method	<a href="https://youtu.be/XY67A8ATB1Y">https://youtu.be/XY67A8ATB1Y</a>
25.	Numerical Methods: Newton Rampson Two Variable Method	<a href="https://youtu.be/bq1ohWNmdgs">https://youtu.be/bq1ohWNmdgs</a>
26.	Numerical Methods Birge Vieta Method	<a href="https://youtu.be/5kFxu23U9-s">https://youtu.be/5kFxu23U9-s</a>
27.	Numerical Methods: Bisection Method with C Program	<a href="https://youtu.be/AGpbVtbuhLY">https://youtu.be/AGpbVtbuhLY</a>