

## Lesson Plan

**Name of the Faculty** : Er. Sorabh Malhotra

**Discipline** : Electronics and Communication Engineering

**Semester** : 8<sup>th</sup>

**Subject** : **Transducer and Its Applications (ECE-420N)**

**Lesson Plan Duration** : 15 weeks (from January, 2020 to April, 2020)

**\*\*Work Load (Lecture / Practical) per week (in hours) :** Lectures-03

Week	Theory	
	Lecture Day	Topic (including assignment / test)
1 <sup>st</sup>	1 <sup>st</sup>	Definition of transducer
	2 <sup>nd</sup>	Advantages of an electrical signal as out-put
	3 <sup>rd</sup>	Basic requirements of transducers
2 <sup>nd</sup>	4 <sup>th</sup>	Primary and Secondary Transducer
	5 <sup>th</sup>	Analog or digital types of transducers
	6 <sup>th</sup>	Resistive Transducer
3 <sup>rd</sup>	7 <sup>th</sup>	First Open Book Test
	8 <sup>th</sup>	Inductive Transducer
	9 <sup>th</sup>	Capacitive Transducer
4 <sup>th</sup>	10 <sup>th</sup>	Piezoelectric Transducer
	11 <sup>th</sup>	Photoelectric Transducer
	12 <sup>th</sup>	Hall effect Transducer
5 <sup>th</sup>	13 <sup>th</sup>	Measurement of pressure – Manometers
	14 <sup>th</sup>	Force summing devices
	15 <sup>th</sup>	Electrical transducers
6 <sup>th</sup>	16 <sup>th</sup>	Measurement of temperature – Metallic resistance thermometers
	17 <sup>th</sup>	Semi conductor resistance sensors (Thermistors)
	18 <sup>th</sup>	First Assignment
7 <sup>th</sup>	19 <sup>th</sup>	Thermo-electric sensors
	20 <sup>th</sup>	Pyrometers
	21 <sup>st</sup>	Measurement of displacement – Potentiometric resistance type transducers
8 <sup>th</sup>	22 <sup>nd</sup>	Inductive type transducers
	23 <sup>rd</sup>	Differential transformer (L.V.D.T)
	24 <sup>th</sup>	Capacitive transducers

9 <sup>th</sup>	25 <sup>th</sup>	Hall effect devices
	26 <sup>th</sup>	Strain gage transducers
	27 <sup>th</sup>	2 <sup>nd</sup> Open Book Test
10 <sup>th</sup>	28 <sup>th</sup>	Measurement of velocity – variable reluctance pick up
	29 <sup>th</sup>	Electromagnetic tachometers
	30 <sup>th</sup>	Photoelectric tachometer
11 <sup>th</sup>	31 <sup>st</sup>	Toothed rotor tachometer generator
	32 <sup>nd</sup>	2 <sup>nd</sup> Assignment
	33 <sup>rd</sup>	Measurement of Force – Strain-gauge
12 <sup>th</sup>	34 <sup>th</sup>	Load cells
	35 <sup>th</sup>	Pneumatic load cell
	36 <sup>th</sup>	LVDT type force transducer
13 <sup>th</sup>	37 <sup>th</sup>	Measurement of Torque
	38 <sup>th</sup>	3 <sup>rd</sup> Open Book Test
	39 <sup>th</sup>	Torque meter
14 <sup>th</sup>	40 <sup>th</sup>	Torsion meter
	41 <sup>st</sup>	Absorption dynamometers,
	42 <sup>nd</sup>	Inductive torque transducer
15 <sup>th</sup>	43 <sup>rd</sup>	Digital methods
	44 <sup>th</sup>	Revision
	45 <sup>th</sup>	Revision

**Er. Sorabh Malhotra**

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