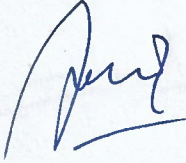
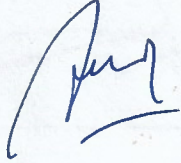
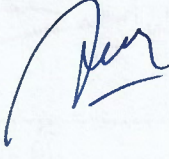
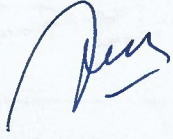
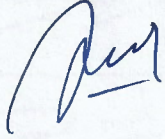
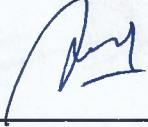
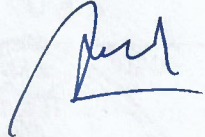


5.

KEGIATAN PEMBELAJARAN
SEMESTER GANJIL TAHUN AKADEMIK 2020 / 2021

Dosen		: 1. A Rachman Soleman. Ir. MT.	Hari : JUM'AT	
		: 2. Iwan Hernawan. ST.MT.	J a m : 19.00 - 20.40	
Mata Kuliah		: Sensor & Transduser	Ruang : A 6	
Kelas		: K		
NO	Tanggal	Materi Pembelajaran	Jml Mhs	Tanda Tangan Dosen
1	18-Sep-20	1. Introduction. 1.1 Analogue and digital quantities 1 1.2 Classification of sensing devices 2 1.3 Sensors, transducers and actuators 3 1.4 Types of transducer 4 1.5 Transducer parameters 6 1.6 Measurement systems 9 1.7 Exercises 11		
2	25-Sep-20	2 Analogies between Systems 12 2.1 Analogies 12 2.2 Mechanical and electrical systems 12 2.3 Fluid systems 16 2.4 Thermal systems 17 2.5 Other systems: radiant, magnetic, chemical 18 2.6 Exercises 20		
3	2-Oct-20	3 Physical Effects available for Use in Transducers 21 3.1 Representation of transducers 21 3.2 Self-generators 23 3.3 Modulators 29 3.4 Modifiers 37 3.5 Exercises 39		
4	9-Oct-20	4 Transducer Bridges and Amplifiers 40 4.1 Transducer bridges 40 4.2 Transducer amplifiers 43 4.3 Practical operational amplifier characteristics 46 4.4 Exercises 50		
5	16-Oct-20	5 Transducers for Length 52 5.1 Classification of length transducers 52 5.2 Displacement transducers 52 5.3 Velocity transducers 71 5.4 Strain transducers 73 5.5 Exercises 78		
6	23-Oct-20	6 Transducers for Temperature 83 6.1 Scale of temperature 83 6.2 Temperature transducers 83 6.3 Exercises 90		
7	30-Oct-20	7 Transducers for Light 93 7.1 Light and its properties 93 7.2 Classification of photodetectors 94 7.3 Thermal photodetectors 95 7.4 Photon detectors 99 7.5 Exercises 107		
8	6-Nov-20	UJIAN TENGAH SEMESTER		U T S

Sensors and Transducers

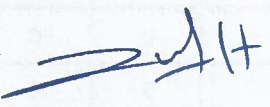
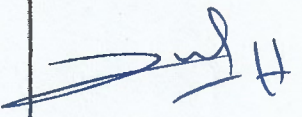
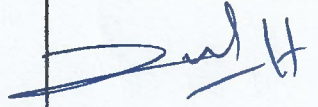
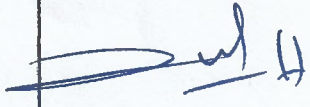
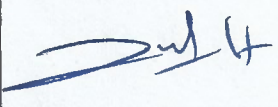
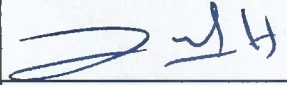
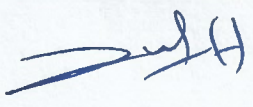
Characteristics, Applications, Instrumentation, Interfacing

M..J. Usher and D.A. Keating

Department of Cybernetics . University of Reading .. Second Edition

**KEGIATAN PEMBELAJARAN
SEMESTER GANJIL TAHUN AKADEMIK 2020 / 2021**

Dosen	: Ir. Rachman Soleman. MT. : 2. Iwan Hernawan. ST.MT.	Hari : SENIN
Mata Kuliah	: Sensor & Transduser	J a m : 19.00 - 20.40
Kelas	: K	Ruang : A 6

NO	Tanggal	Materi Pembelajaran	Jml Mhs	Tanda Tangan Dosen
9	13-Nov-20	8 Other Transducers 109 8.1 Acceleration transducers 109 8.2 Force transducers 114 8.3 Pressure transducers 115 8.4 Flow transducers 118 8.5 Microphones 126 8.6 Exercises 128		
10	20-Nov-20	9 Actuators 131 9.1 Electromagnetic actuators 131 9.2 Electrostatic actuators 140 9.3 Electro-optic devices 142 9.4 Piezoelectric actuators 145 9.5 Exercises 145		
11	27-Nov-20	10 Measurement Systems 147 10.1 Solid-state transducers 147 10.2 Resonator sensors 150 10.3 Optical fibre transducers 153 10.4 Pyrometry 162 10.5 Ultrasonic measurement systems 167 10.6 Exercises 172		
12	4-Dec-20	11 Digital Transducers and Interfacing As discussed in chapter 1 of this book, the quantities we wish to measure are usually inherently analogue in nature, and most so-called digital transducers simply employ well-known analogue effects in such a way as to produce a digital output. Various digital devices have		
13	11-Dec-20	11.1 Digital measurements The digital measurement of a quantity means that its value is represented by a certain number of digits, usually decimal, as provided by a measurement of voltage with a 4-digit digital volt meter (DVM) or of frequency by a 6-digit electronic counter.		
14	18-Dec-20	A digital measurement usually involves either measuring a frequency or counting the number of pulses in a given time, and the basic process is illustrated in figure 11.1.		
15	8-Jan-21	11.2 Digital transducers 176 11.3 Interfacing 180 11.4 Smart sensors 188 11.5 Exercises 189		
16	29-Jan-21	Ujian Akhir Semester.		UAS

Ket : Kuliah dimulai dari 01 September 2020 s/d 27 Februari 2021

Jakarta 2020

Kaprodi Teknik Elektro S1. FTI. 1621


Ir. HARLAN EFFENDI



5

DAFTAR NILAI

SEMESTER GANJIL REGULER TAHUN 2020/2021

Program Studi : Teknik Elektro S1
 Matakuliah : Sensor & Tranducer
 Kelas / Peserta : K
 Perkuliahan : Kampus ISTN Bumi Srengseng P2K - Kelas
 Dosen : H. Rachman Soleman, Ir. MT.

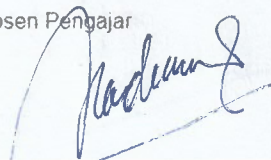
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No	NIM	N A M A	ABSEN	TUGAS	UTS	UAS	MODEL	PRESENTASI	NA	HURUF
			0%	0%	0%	100%	0%	0%		
1	19224702	Habiburrahman	100	0	80	0	0	0	0	
2	19224703	Yahya Abdurrozaq	100	0	80	0	0	0	0	

Rekapitulasi Nilai			
A	0	B+	0
A-	0	B	0
		B-	0
		C+	0
		C	0
		C-	0
		D+	0
		D	0
		E	0

Jakarta 14 November 2020

Dosen Pengajar



DAFTAR NILAI

SEMESTER GANJIL REGULER TAHUN 2020/2021

Program Studi : Teknik Elektro S1
 Matakuliah : Sensor & Transducer
 Kelas / Peserta : K
 Perkuliahan : Kampus ISTN Bumi Srengseng P2K - Kelas
 Dosen : H. Rachman Soleman, Ir. MT.

Hal. 1/1

No	NIM	N A M A	ABSEN	TUGAS	UTS	UAS	MODEL	PRESENTASI	NA	HURUF
			0%	40%	30%	30%	0%	0%		
1	19224702	Habiburrahman	100	85	80	80	0	0	82	A
2	19224703	Yahya Abdurrozaq	100	85	80	80	0	0	82	A

Rekapitulasi Nilai							
A	2	B+	0	C+	0	D+	0
A-	0	B	0	C	0	D	0
		B-	0	C-	0	E	0

Jakarta, 10 February 2021

Dosen Pengajar

