



**PROGRAM STUDI TEKNIK BIOMEDIS
FAKULTAS SAINS DAN TEKNOLOGI
UNIVERSITAS PGRI YOGYAKARTA**

KONTRAK PERKULIAHAN

Nama Dosen : Amalia Cemara Nur'aidha, M.Si
Mata Kuliah : Sensor dan Transduser
Program Sarjana : Teknik Biomedis
Kelas/ Angkatan : 21.A1
Semester : 5 (Lima)
Tahun Akademik : 2023/2024

KODE: TKM15119 SENSOR DAN TRANSDUSER 2 SKS (2-0)

Semester : 5 (Lima)

Prasyarat : -

Deskripsi Singkat :

Matakuliah ini membahas tentang parameter sensor dan transduser, klasifikasi jenis sensor, pemanfaatan sensor menjadi biosensor, dan teknologi sensor pada bidang medis.

Capaian :

Mampu memahami, menjelaskan, konsep dasar sensor dan biosensor serta menerapkan pada bidang medis.

Materi :

1. Pengantar sensor dan Transduser
2. Definisi, Jenis, dan Klasifikasi
3. Karakteristik Statis
4. Karakteristik Dinamis
5. Pengkondisi Sinyal Sensor
6. Ragam Sensor dan Aplikasinya

Pustaka :

1. Togawa, Tatsuo. 2011. Second edition: Biomedical Sensors and Instrumentations. CRC Press. London
2. Harsanyi, Gabor. 2000. Sensors in Biomedical Application, Fundamentals, Technology and Applications. CRC Press. London
3. Wang, Ping and Qingjun Liu. Biomedical Sensors and Measurement. Springer. Zhejiang Universitas Press.
4. Bronzino, Joseph D. 2006. Medical device and system. Taylor and Francis. New York

KETENTUAN/ KESEPAKATAN

1. Kehadiran mahasiswa dalam kuliah minimal 80% dari total tatap muka (12 Pertemuan)
2. Setiap mahasiswa wajib mengisi presensi yang telah disediakan
3. Setiap mahasiswa wajib mengerjakan tugas yang diberikan
4. Setiap mahasiswa wajib menyelesaikan proyek yang telah diberikan
5. Mahasiswa wajib mengikuti UAS
6. Selama proses pembelajaran mahasiswa wajib berperilaku sopan dan menggunakan pakaian yang rapi.

PENILAIAN HASIL BELAJAR

No	Uraian	Bobot (%)
1.	Presensi	10%
2.	Tugas Individu dan Presentasi	15%
3.	Keaktifan	5%
4.	Kerja Tim	15
5.	Proyek Akhir	45%
6.	Ujian Akhir Semester	10%
Total		100%

Yogyakarta, 19 September 2023

Ketua Program Studi,



(Wahyu Sugianto, M.Si)
NIS. 19950801 202010 1 003

Dosen Pengampu,



(Amalia Cemara Nur'aidha, M.Si)
NIS. 19930612 201907 2 005

Ketua Kelas/ Angkatan



(Amanda Nurul Khasanah)
NPM. 21111500007



Universitas PGRI Yogyakarta
Jl. PGRI I Sonosewu No. 117 Yogyakarta Telp. 0274-376808, 373198 Fax. 0274-376808

PRESENSI DOSEN MENGAJAR
Semester Ganjil Tahun Akademik 2023/2024

Program Stud :Teknik Biomedis
Matakuliah :Sensor dan Transduser [TKM15119]
Bobot :2 SKS
Dosen :AMALIA CEMARA NUR [0512069302]

Kelas :21.A1
Hari :Selasa
Pukul :07.00-10.20
Ruang :Lab. Fisika

Pertemuan	Tanggal	Pokok Bahasan	Materi	Jumlah Mahasiswa	Paraf
1	12/09/2023	PENGANTAR	1. Kontrak Kuliah 2. Rencana Perkuliahan	10	
2	19/09/2023		Pengantar Sensor dan Transduser	10	
3	26/09/2023		1. Klasifikasi Sensor 2. Praktik Sensor PIR	10	
4	03/10/2023		Pembahasan Sensor PIR	10	
5	10/10/2023		Tahapan Pemilihan Sensor	10	
6	17/10/2023	REVIEW SENSOR	Sensor Suhu, Kelembapan, Getaran, pH, Jarak, Tekanan, dan Sudut	10	
7	24/10/2023		Sensor Suhu, Kelembapan, Getaran, pH, Jarak, Tekanan, dan Sudut	10	
8	31/10/2023	IMPLEMENTASI SENSOR	Review Sensor proyek SIM	10	
9	07/11/2023		Presentasi Spesifikasi sensor: 1. Heart Rate Monitoring 2. Glukometer	10	
10	14/11/2023	IMPLEMENTASI SENSOR	Perancangan sensor: 1. Suhu 2. Api 3. Cahaya	10	
11	21/11/2023	Proyek Akhir Semester	Perencanaan proyek akhir sensor	10	
12	28/11/2023		Pemilihan sensor	10	
13	05/12/2023		Perancangan proyek akhir sensor	9	
14	12/12/2023		Perancangan proyek akhir sensor	9	
15	19/12/2023		Pengujian hasil proyek	9	
16	09/01/2024		Ujian Akhir Semester Ganjil 2023-2024	9	



DAFTAR HADIR KULIAH

Program Studi : TEKNIK BIOMEDIS
 Tahun Akademik : 2023/2024
 Semester : GASAL
 Dosen : AMALIA CEMARA NUR [0512069302]
 Kode Matakuliah : TKM15119
 Matakuliah : SENSOR & TRANSDUSER
 Bobot : 2 SKS
 Kelas : 21.A1
 Semester Hari Pukul Ruang : 5 : 00:00 s.d. 00:00

No	NP Mahasiswa	Nama Mahasiswa	BIU/P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Jumlah Hadir	% Hadir
1	20111500004	EVANGELISTA MILITCHIA CHRISTY DASMASELA		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		
2	20111500020	RUFAIDA FATKHUL JANNA		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		
3	20111500022	ELMI RAMLAN BUGIS		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		
4	21111500005	RINI DWI NUR HAYATI		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		
5	21111500007	AMANDA NURUL KHASANAH		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		
6	21111500009	CHANDRA ADITYA		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		
7	20111500017	Richa Nanda Fitria		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		
8	21111500008	Pelvicus Kati		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		
9	21111500001	Mananus T. Aquinardo		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		
10	21111500001	PAWKRASILUS PIONJIS		[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]	[Handwritten]		



PRESENSI UJIAN AKHIR SEMESTER GASAL
TAHUN AKADEMIK 2023/2024

Program Studi : TEKNIK BIOMEDIS -- S1
Matakuliah : SENSOR & TRANSDUSER
Kode MK : TKM15119
Dosen : AMALIA CEMARA NUR' AIDHA, S.Si., M.Si

Kelas : 21 A1
Ruang : 307A
Hari/Tanggal : Selasa, 09-01-2024
Waktu : 10.00 - 11.30

No	NPM	Nama Mahasiswa	B/U/P	Tanda Tangan	Nilai
1	20111500004	EVANGELISTA MILITCHIA CHRISTY DASMASELA	B		A
2	20111500005	PANKRASIUS PIONIS	B		A
3	20111500017	RICHA NANDA FITRIA			A
4	20111500020	RUFAIDA FATKHUL JANNA	B		A
5	20111500022	ELMI RAMLAN BUGIS	B		A
6	21111500001	MARIANUS IRVANJURA AQUINALDO	B	Susulan	C-
7	21111500002	MUCHAMMAD MAULANA	B	-	D+
8	21111500005	RINI DWI NUR HAYATI	B		A
9	21111500007	AMANDA NURUL KHASANAH	B		A
10	21111500008	FEBRIANSYAH	B		A
11	21111500009	CHANDRA ADITIYA	B		A

Yogyakarta, 09-01-2024

Pengawas

1. Mira-Setiana, M.Si
2. _____
3. _____
4. _____

AMALIA CEMARA NUR' AIDHA, S.Si., M.Si