#### NANDHA ENGINEERING COLLEGE, ERODE - 638 052

(An Autonomous Institution, Affiliated to Anna University Chennai and Approved by AICTE New Delhi)

#### DEPARTMENT OF BIOMEDICAL ENGINEERING

NEC/BME/CIR/PAC-1/2022

CIRCULAR

Originator: BoS Chairman (HoD - Circulated to: All faculty members

Biomedical Engg.)

Sub: Programme Assessment Committee (PAC) Meeting regarding.

The 1<sup>st</sup> PAC meeting has been scheduled on 18.06.2022 (Saturday). In this connection, PAC members of the Biomedical Engineering Program are requested to attend the meeting and provide their valuable suggestions.

Date & Time of Meeting: 18.06.2022 (1 PM) - Saturday

Venue: Hall No: 104, Block -I

Dr P.Sukumar CHAIRMAN, BoS/BME

Date: 14.06.2022

# NANDHA ENGINEERING COLLEGE, ERODE – 638 052 (An Autonomous Institution, Affiliated to Anna University Chennai and Approved by AICTE New Delhi) DEPARTMENT OF BIOMEDICAL ENGINEERING

# MINUTES OF THE PROGRAMME ASSESSMENT COMMITTEE (PAC) MEETING / DEPARTMENT ADVISORY BOARD (DAB) MEEETING

The 1st PAC meeting was held on 18.06.2022 by 1.00 pm at Block 1 Hall. No: 104.

The Chairman of the PAC, Dr. P. Sukumar, Professor & Head/ BME welcomed the members for the meeting. Then, the items listed below were taken for discussion.

	AGENDA					
Item 1.01	Details of members.					
Item 1.02	Roles and responsibilities of the PAC.					
Item 1.03	Pitfalls and difficulties in the existing curriculum					
Item 1.04	Revision of Department Vision, Mission, PEOs and PSOs, if required.					
Item 1.05	New Regulation and Curriculum (R22)					
Item 1.06	Department activity plan for the academic year 2022 – 2023.					
Item 1.07	Discussion on Budget requirement and Utilization.					
Item 1.08	Annual Report					
Item 1.09	Any other matter					

The proceedings of PAC started and the minutes of the meeting are recorded as follows:

Item 1.01	Details of members.								
Discussion	All the faculty members of the department are nominated as members of PAC with head of the department as chairman.								
Item 1.02	Roles ar	nd responsib	ilities of the PAC.						
Discussion	Roles and responsibilities of the PAC.  The HoD deliberated the roles and responsibilities of the PAC to the members.  Monitoring the achievements of Program Outcomes (POs) and Program Specific Outcomes (PSOs) and proposes necessary changes in curriculum for the attainment of POs and PSOs.  Assessment data would be gathered, reviewed and reported as per assessment cycle and recommend revisions for the programme improvement.  Interact with students, faculty and other stakeholders for the improvement of the PO and PSO attainment.  Allotment of department coordinators for various activities.  Track status and report of work assigned to the members and bring out in notice to DAB.								
Resolution			and follow the Roles and responsib						
Item 1.03									
Discussion	Pitfalls and difficulties in the existing curriculum  Course outcomes may be checked and rewritten based on Bloom's taxonomy  CO-PO mapping with numerical relevance in the syllabus.  PSO mapping may be included in the syllabus like CO & PO.								
Resolution	Resolve	ed to conside	r the above point in the upcoming of	curriculum					
Item 1.04	Revisio	n of Departm	ent Vision, Mission, PEOs and PS	Os, if require	ed.				
Discussion	^		pers discussed the revision of Vision of Visio	The state of the s	atements.				
Resolution	Resolve	ed to approve	e the modification in the Departmen	t Vision, Mis	ssion and PS	SOs sta	tements		
Item 1.05	New Re	egulation and	Curriculum (R22)						
	Regula	ation: 2022 ster 1							
		Course Code	Course Title	Category	Contact Periods	L	Т	Р	С
	Theor	y & Embedd							
	1		Professional Communication - I	HS	3	3	0	0	3
	2		Calculus and linear algebra	BS	4	2	2	0	3
Discussion	3		Chemistry for Engineers	BS	3	3	0	0	3
	4		Problem Solving and C Programming	ES	5	3	0	2	4
	5		Basics of Electrical and Instrumentation Engineering	ES	3	3	0	0	3
	Labora	atory Cours							
	1		Engineering Practices Laboratory	BS	4	0	0	4	2

228		I Labraciology I ob	THE RESERVE TO SHARE THE PARTY OF THE PARTY				100	AND DESCRIPTIONS
Marie A	2	Anatomy and Human Physiology Lab	PC	4	0	0	4	1
	1	Digital System Design Lab	PC	4	0	0	4	
	oratory Cour		1 110					
	6	Universal Human Values - II	HS	3	3	0	0	
	5	Signals and Systems	PC	3	3	0	0	
	1	Engineering Mechanics for Biomedical Engineers	PC	3	3	0	2	
	3	Physiology	PC	3	3	0	0	
		Anatomy and Human						
	2	Digital System Design	PC	3	3	0	0	
	1 Embed	ded Courses  Transforms and Differential Equations	BS	4	2	2	0	1
The	Code	Course Title	Julia	Periods				L
S.No	Course		Category	Contact	L	Т	P	1
	ester Total							-
	ester Total	Sports and Yoga - II			U	U		2
	2	Soft / Analytical Skills - II		3	1 0	0	2	
		redit Courses		2	1	0	1 2	To
	4	Lab	PC	4	0	0	4	1
		Electronic Devices and Circuits					4	2
3		Engineering Graphics Lab	ES	4	0	0	4	2
2		Physics Lab	BS	4	0	0	4	1
1		Python Programming Laboratory	ES	4	0	0	4	2
abor	ratory Cours							
5		Electronic Devices and Circuits	PC	3	3	0	0	3
4		Problem Solving using Python Programming	ES	3	3	0	0	3
3		Problem Colving using Duther	BS	3	3	0	0	3
2		Complex Analysis and Laplace Transform	BS	4	2	2	0	3
1		Professional Communication -	HS	3	3	0	0	3
neory	& Embedde							
	Code	Course Title	Category	Periods	L	Т	Р	С
	Course			Contact				
emes								20
	ter Total	Sports and Yoga - I	MC	1	0	0	1	0
3		Soft/Analytical Skills - I	MC	3	1	0	2	0
2		Induction Programme	MC	0	0	0	0	0
andat	tory Non Cre							
3		Chemistry Lab	ES	2	0	0	2	1
2		Problem Solving and C Programming Lab	ES	4	0	0	4	2

1		Soft/ Analytical Skills - III	MC	5	3	0	2	0
2		Constitution of India	MC	1	1	0	0	0
meste	r Total							22
meste	r 4							
	ourse ode	Course Title	Category	Contact Periods	L	T	Р	С
neory 8	& Embedde	ed Courses						
1		Probability Theory and Stochastic Processes	BS	4	2	2	0	3
2		Data Structures and Algorithms	ES	3	3	0	0	3
3			PC	3	3	0	0	3
4		Analog Circuit Design Bio Control Systems	PC	3	3	0	0	3
5		Bio Signal Processing	PC	3	3	0	0	3
	ani Caura							
	ory Course	Data Structures and Algorithms	ES	4	0	0	4	2
1		Lab	PC	4	0	0	4	2
2		Analog Circuit Design Lab Bio Signal Processing Lab	PC	4	0	0	4	2
	on Non C							
viandat	ory Non C	redit Courses Soft/Analytical Skills - IV	MC	5	3	0	2	0
1		Personality and Character	MC	2	0	0	2	0
2		Development						21
	ter Total	A SECOND PROPERTY OF THE PARTY						
_	1 F						-	
Semes				Contact				
S.No	Course Code	Course Title	Category	Contact Periods	L	Т	P	С
S.No	Course Code		Category		L	Т	P	С
S.No	Course Code	ded Courses  Microprocessors and	Category		L 3	T 0	P 2	C 4
S.No Theory	Course Code	Microprocessors and Microcontrollers Interfacing	PC	Periods 5				
S.No Theory	Course Code	Microcontrollers Interfacing Biosensors and Measurement	PC PC	Periods	3	0	2	4
S.No Theory	Course Code	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology	PC PC PC	Periods 5	3	0 0	2 2	4 4
S.No Theory	Course Code / & Embedo	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials	PC PC PC	Periods 5 5 4	3 3 2	0 0 2	2 2 0	4 4 3
S.No Theory	Course Code / & Embedo	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials Elective (OE/PSE)	PC PC PC	5 5 4 4	3 3 2 2 2	0 0 2 2 2	2 2 0 0	4 4 3 3
S.No	Course Code / & Embedo	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials Elective (OE/PSE) Elective (PSE)	PC PC PC OE/PSE	5 5 4 4 3	3 3 2 2 2 3	0 0 2 2 2 0	2 2 0 0 0 0	4 4 3 3 3 3
S.No Theory  1 2 3 4 5 6 Labora	Course Code / & Embedo	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials Elective (OE/PSE) Elective (PSE) ses Microprocessors and Microcontrollers interfacing	PC PC PC OE/PSE	5 5 4 4 3	3 3 2 2 2 3	0 0 2 2 2 0	2 2 0 0 0 0	4 4 3 3 3 3
S.No	Course Code / & Embedo	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials Elective (OE/PSE) Elective (PSE) ses Microprocessors and	PC PC PC PC OE/PSE PEC	5 5 4 4 3 3	3 3 2 2 3 3 3	0 0 2 2 2 0 0 0	2 2 0 0 0 0 0 0	4 4 3 3 3 3 3 3 3
S.No Theory  1 2 3 4 5 6 Labora	Course Code / & Embedon	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials Elective (OE/PSE) Elective (PSE)  ses  Microprocessors and Microcontrollers interfacing Lab Sensors and Signal Conditioning Lab	PC PC PC PC OE/PSE PEC	5 5 4 4 3 3	3 3 2 2 3 3 3	0 0 2 2 2 0 0 0	2 2 0 0 0 0 0	4 4 3 3 3 3 3 3 3 3 3 3 3 3
S.No Theory  1 2 3 4 5 6 Labora	E1 E2 atory Non 0	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials Elective (OE/PSE) Elective (PSE) ses Microprocessors and Microcontrollers interfacing Lab Sensors and Signal	PC PC PC PC OE/PSE PEC	5 5 4 4 3 3	3 3 2 2 2 3 3 3	0 0 2 2 2 0 0 0	2 2 0 0 0 0 0	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
S.No Theory  1 2 3 4 5 6 Labora  1	E1 E2 atory Non 0	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials Elective (OE/PSE) Elective (PSE) ses Microprocessors and Microcontrollers interfacing Lab Sensors and Signal Conditioning Lab Credit Courses	PC PC PC PC OE/PSE PEC	5 5 4 4 3 3 4	3 3 2 2 3 3 3	0 0 2 2 2 0 0 0	2 2 0 0 0 0 0	4 4 3 3 3 3 3 3 3 3 3 3
S.No Theory  1 2 3 4 5 6 Labora  1 2 Manda	E1 E2 atory Non 0	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials Elective (OE/PSE) Elective (PSE) ses Microprocessors and Microcontrollers interfacing Lab Sensors and Signal Conditioning Lab Credit Courses Soft/Analytical Skills - V	PC PC PC PC OE/PSE PEC	5 5 4 4 3 3 4	3 3 2 2 2 3 3 3	0 0 2 2 2 0 0 0	2 2 0 0 0 0 0	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
S.No Theory  1 2 3 4 5 6 Labora  1 2 Manda	E1 E2 atory Course ster Total	Microprocessors and Microcontrollers Interfacing Biosensors and Measurement Pathology and Microbiology Biomaterials Elective (OE/PSE) Elective (PSE) ses Microprocessors and Microcontrollers interfacing Lab Sensors and Signal Conditioning Lab Credit Courses Soft/Analytical Skills - V	PC PC PC PC OE/PSE PEC	5 5 4 4 3 3 4	3 3 2 2 2 3 3 3	0 0 2 2 2 0 0 0	2 2 0 0 0 0 0	4 4 3 3 3 3 3 3 3 3 3 3

	1		Biomedical Instrumentation	PC	3	3	0	0	3	
			Diagnostic and Therapeutic							
	2		Equipments	PC	3	3	0	0	3	
	3		Medical Image Processing	PC	4	2	0	2	3	
	4 E3		Elective(OE/PSE)	OE/PSE	3	3	0	0	3	
	5 E4		Elective(PSE)	PSE	3	3	0	0	3	
La	borator	y Courses					•	1	10	
	1		Biomedical Instrumentation Lab	PC	4	0	0	4	2	
			Diagnostic and Therapeutic	PC	4	0	0	4	2	
	2		Equipments Lab							
M	andato	ry Non Cre	edit Courses		3	1	0	1 2	10	
	1		Soft/Analytical Skills - VI		1	0	0	1	0	
	2		Certification Course - II			0			19	
	emeste									
S	semeste	er 7			Contact		-	P	C	
S	التوششف	ourse		Category	Periods	L	T		-	
		Code	Course Title		Torroad					
	Theory	& Embedo	led Courses	PC	3	3	0	0	3	_
	1		Rehabilitation Engineering	PC	3	3	0	0		-
	2		Hospital Management	PEC	3	3	0	0		
	3		Elective(PSE)	PEC	3	3	0	0		
	and the same of th	E6	Elective(PSE)	OE	3	3	0	(		3
		E7	Elective(OE)	02						
	Labora	atory Cour	ses : !!!starnahin	EEC	4	0	0			4
	1		Mini Project/ Internship	PC	2	0	(		2	1
	2		Hospital Training							20
		ster Total								
	Semes			0.1	Contac	ct		T	P	C
	S.No	Course	Course Title	Categor	Period	s				
		Code							0 1	3
			dded Courses Elective(OE)	OE	3	3		0	0	3
		E8	Elective(PSE)	PSE	3		3	0	0	0
	2	E9						0 1	46	8
	Labor	ratory Cou	Project Work	EEC	16		0	0	16	0
	1		Project Work					-	40	14
	Mand	latory Non	Credit Courses		14		6	0	16	14
	Seme	ester Total	the shave curriculum for	placing befor	e DAB and	BOSn	neeting	).		
esolution	PAC	nembers a	pproved the above curriculum for	placing select						
0301041011			vity plan for the academic year 20	22 - 2023.						
tem 1.06										
	0014	IE Associ	iation Activity 2022-2023					7		
		CONTRACTOR DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NAMED IN COLUMN T	Activity			Month	12			
	S.N	STATE OF THE PARTY NAMED IN	Association Inaugural		August-22		-			
		1.	Academic seminar-2	2		Sep-22				
Discussion		2.	Industrial seminar-2	2		Oct-22				
JISCUSSION		3.	Workshop-1			Nov-22				
		4.	Exam			Dec22				
		5.	Inter Dept Meet			Jan23				
		6.	mer Dept Weet							

	7.	Intra Dept Meet	Feb23			
	8.	Symposium Workshop-4	Mar23			
	9.	Academic seminar-1 Industrial seminar-1	Apr23			
Resolution	Members no	oted the above Association Activity plan for	the academic year 2022 – 2023.			
Item 1.07	Discussion o	n Budget requirement and Utilization.				
Discussion	Dept Budget coordinator explains the details related to budget requirement and Utilization for the academic vear 2020-2021.					
Resolution	Members no	ted the Budget requirement and Utilization details	3.			
Item 1.08	Annual Report					
Item 1.09	Any other matter					
	> Alu	ssed out students should be encouraged to regist imni salary packages details could be collected to imni. udents could be motivated and guided to attend or	maintain the database regarding			

Date: 18-6-2022



CHAIRMAN PAC-BME

## NANDHA ENGINEERING COLLEGE, ERODE - 638 052

(An Autonomous Institution, Affiliated to Anna University Chennai and

## Approved by AICTE New Delhi)

## DEPARTMENT OF BIOMEDICAL ENGINEERING

# ATR OF THE PROGRAMME ASSESSMENT COMMITTEE (PAC) MEETING -1

Academic Year: 2022-23

The 1st PAC meeting for the academic year 2022-23 was held on 18.06.2022 at 1.00 pm at Block 1 Hall. No: 104.

		ACTION TAKEN
ITEM	DESCRIPTION	
Item 1.03	Pitfalls and difficulties in the existing curriculum	Accepted and taken into
Discussion	Course outcomes may be checked and rewritten based on Bloom's taxonomy  CO-PO mapping with numerical relevance in the syllabus.  PSO mapping may be included in the syllabus like CO & PO.	consideration for R22
404	Burisian of Donartment Vision, Mission, PEOs and PSOs, if required.	· I d to propose revised
Item 1.04 Discussion	PAC Members discussed the revision of Vision, Mission statements.      PAC Members discussed the PSO to be revised.	Accepted to propose revised vision, mission, PEO and PSO statements in DAB
u 1 0E	New Regulation and Curriculum (R22)	
Item 1.05 Discussion	New curriculum to be framed with reference to AICTE model curriculum.     The pitfalls and difficulties in the existing curriculum have to be overcome in the new curriculum.	Accepted to prepare and present in DAB
Item 1.06	Department activity plan for the academic year 2022 – 2023.	
Discussion	<ul> <li>Academic seminars, Industrial seminars, Industrial Visit and other department activities under various heads to be conducted in time.</li> </ul>	Resolved to follow
Item 1.09	Any other matter  Passed out students should be encouraged to register in the	Accepted
	<ul> <li>Passed out students should be encouraged to register and Alumni portal.</li> <li>Alumni salary packages details could be collected to maintain the database regarding Alumni.</li> <li>Students could be motivated and guided to attend online courses to earn credits.</li> </ul>	



CHAIRMAN, PAC-BME



### NANDHA ENGINEERING COLLEGE, ERODE – 638 052

# (An Autonomous Institution, Affiliated to Anna University Chennai and Approved by AICTE New Delhi)

#### PROGRAMME ASSESSMENT COMMITTEE

S. No	Members	Signature
1	Dr. P. Sukumar [HoD – Chairman]	7 hun
2	Dr. M. Dhipa [ASP/BME]	Well
3	Mr. A. Amarnath Prabhakaran A [AP/BME]	Maria
4	Ms. K. K. Sangeetha [AP/BME]	J. J. 18000
5	Ms. V. T. Nithya [AP/BME]	V.T. NA
6	Ms. R. Arthi [AP/BME]	2.44.
7	Ms. B. Sowparnika [AP/BME]	Drofn
8	Ms. C. Saranya [AP/BME]	C. Sarart.
9	Ms. E. Madura [AP/BME]	9.0