From Chennai

The Head 15-11-2019

Dept. of Biomedical Engineering

BIHER

To

The Dean

**BIHER** 

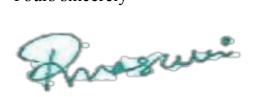
# Respected Sir

Sub: approval to start a value added course on "CERTIFICATE PROGRAM IN BINOCULAR VISION AND VISION THERAPY" -reg

It has been planned by the Dept. of Biomedical Engineering to start a Value Added Course on "CERTIFICATE PROGRAM IN BINOCULAR VISION AND VISION THERAPY" for the B-Tech Biomedical Engineering, Industrial Biotechnology and Genetic Engineering students from 06<sup>th</sup> December, 2019. The duration of the course is 30 hrs comprising of theory. I request you to kindly approve of the same.

Thanking you

Yours sincerely





### BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

Date: 16-11-2019

# **SCHOOL OF BIOENGINEERING**

# **CIRCULAR**

# Notification for Value added courses offered by the School of Bioengineering

The Department of Bio Medical Engineering, School of Bioengineering, is scheduled to offer a Value added Course on **CERTIFICATE PROGRAM IN BINOCULAR VISION AND VISION THERAPY** from 06/12/2019 for a period of 3 weeks. Interested students can approach Dr. Vasukidevi R, Associate Professor and Course Coordinator, Department of Bio Medical Engineering for registration and for further details on or before 03<sup>rd</sup> December 2019.

# Eligibility-II, III and IV B-Tech IBT, GE and BME

Course Coordinator

HOD

Krazuni

# Copy to:

Vice Chancellor

Pro Vice Chancellor

Additional Registrar

Deans

CoE

Heads of Departments

### DEPARTMENT OF BIO MEDICAL ENGINEERING

# VALUE ADDED COURSE ON RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY

### 2019-2020

### **COURSE CO-ORDINATOR DETAILS**

Faculty Name: Dr. Vasukidevi R,

Associate Professor,

Department of Bio Medical Engineering.

Email ID: vasukidevir.bme@bharathuniv.ac.in

**Mobile number:** 95660 75312.

### DEPARTMENT OF BIO MEDICAL ENGINEERING

### VALUE ADDED COURSE SYLLABUS

### 2019-2020

		L	T	P	C
	Certificate Program In Binocular Vision And Vision				
Value added	Therapy				
course code	Total Contact Hours – 30	3	0	0	3
	Prerequisite – Human Anatomy and Physiology				

## **OBJECTIVES**

- Ability to diagnose and manage and co-manage binocular vision anomalies
- Ability to co-manage visual perceptual anomalies
- Ability to manage diplopia, suppression and ARC

# MODULE 1. Refractive Development:

Early Refractive Development- Visually Guided control of Refractive State: Animal Studies-Infant Accommodation and Convergence

### MODULE 2. Oculomotor Function:

Conjugate Eye Movements of Infants-Development of the Vestibuloocular and Optokinetic reflexes

### MODULE 3. Spatial and Chromatic Vision:

Front-end Limitations to Infant Spatial vision: Examination of two analyses-Development of the Human Visual Field- Development of Scotopic Retinal Sensitivity-Infant Color vision-Orientation and Motion selective Mechanisms in Infants-Intrinsic Noise and Infant performance

### MODULE 4. Binocular Vision:

Development of interocular vision in Infants- Stereopsis in Infants and its developmental relation to visual acuity-Sensorimotor Adaptation and Development of the Horopter-Two stages in the development of Binocular Vision and Eye Alignment

## MODULE 5. Retinal and cortical Development

# TEXT/ REFERENCE BOOKS:

- 1. Clinical management of binocular vision Mitchell Scheiman and Bruce Wick
- 2. Applied concepts in vision therapy: Leonard Press
- 3. Pediatric optometry: Jerome K Rosner

# SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# COURSE ON CERTIFICATE PROGRAM IN BINOCULAR VISION AND VISION THERAPY (2019-2020)

Session	Торіс	Date	Duration (Hr)	Resource person
Session I	Refractive Development	06.12.2019	3	Dr.R.Vasukidevi
Session II	Oculomotor Function	07.12.2019	4	Dr.R.Vasukidevi
Session III	Oculomotor Function	07.12.2019	3	Ms.S.Geetha
Session IV	Spatial and Chromatic Vision	13.12.2019	3	Dr.Emerson Solomon
Session V	Spatial and Chromatic Vision	14.12.2019	4	Dr.R.Vasukidevi
Session VI	Binocular Vision	14.12.2019	3	Dr.R.Vasukidevi
Session VII	Binocular Vision	20.12.2019	3	Dr.Emerson Solomon
Session VIII	Retinal and cortical Development	21.12.2019	4	Dr.Emerson Solomon
Session IX	Retinal and cortical Development	21.12.2019	3	Ms.S.Geetha

# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

# SCHOOL OF BIO-ENGINEERING

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# VALUE ADDED COURSE TIMETABLE

### 2019-2020

Days / Period	I 9.00 - 9.50	II 9.50 - 10.40	III 10.50 – 11.40	IV 11.40 – 12.30	12.30 - 1.30	V 1.30 - 2.10	VI 2.10 - 2.50	VII 2.50 - 3.30
MON								
TUE								
WED					LUNCH			
THU					LUNCH			
FRI							CBVT	
SAT		CBV	/T				CBVT	

SUBJECT CODE	SUBJECT NAME	STAFF
Theory		
Value added course	Certificate Program In Binocular Vision And Vision Therapy (CBVT)	Dr.Vasukidevi R
	Room No	SK504

# DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# COURSE ON CERTIFICATE PROGRAM IN BINOCULAR VISION AND VISION THERAPY (2019-2020)

# **Students Name List**

S.NO	REG.NO	NAME	SEM/ YEAR	DEPART MENT
1.			V/III	BME
1.	U17BM026	Bharkavi M S	<b>V</b> /111	DIVIE
2.			V/III	BME
	U17BM028	Sheeba Alexia B		
3.			V/III	BME
4	U17BM029	Jeeva G	X 7 /TTT	DME
4.	U17BM030	Swedha S	V/III	BME
5.			V/III	BME
	U17BM031	Loka Ranjani E		
6.			V/III	BME
7	U17BM032	Pooja B	X 7 / T T T	DME
7.	U17BM033	Varsha M	V/III	BME
8.	C17BIVI033	v di Silu ivi	V/III	BME
	U17BM034	Avula Arun Kumar		
9.			V/III	BME
	U17BM036	Lokesh M		
10.	1117014027	M I II CI D II	V/III	BME
11.	U17BM037	Medivemulla Chenna Reddy	V/III	BME
11.	U17BM106	RAMANAN R	V / 111	DIVIL
12.	CITBINITO		V/III	BME
	U17BM107	TAPALSHAIK FHAZUL RAHMA		
13.			V/III	BME
	U17BM109	CHEEKATIPALLI LEENA		
14.	1117DM110	DUCHACADIWAYWA	V/III	BME
15.	U17BM110	BUCHAGARI KAVYA	V/III	IBT
13.	U17BM113	G VEENA	<b>V</b> /111	ID1
16.			V/III	IBT
	U17BT022	SOLENKA MANOJ KUMAR		
17.	****		V/III	IBT
10	U17BT023	KANCHA SIDHARTHA KUMAI	<b>3</b> 7/ <b>111</b>	IDT
18.	U17BT024	GATTUPALLI VENKATA CHAI	V/III	IBT
	U1/B1024	UATTURALLI VENKATA CHAI		

10			X 7 /TTT	IDT
19.	****		V/III	IBT
	U17BT026	MADHAN KUMAR S		
20.			V/III	IBT
	U17BT027	KATA VEERA SUDARSAN		
21.			V/III	IBT
	U17BT029	A S MOHAN KRISHNA		
22.			V/III	IBT
	U17BT030	MALLIGA V		
23.			V/III	BR
	U17BR009	HEMAMBUJAM D		
24.			V/III	BR
	U17BR010	MOHANED SHAIBI K M		
25.			V/III	BR
	U17BR011	VIJAYASRI T		
26.			V/III	BR
	U17BR012	EVANGELINE SELES J L		
27.			V/III	BR
	U17BR013	SAHANA SHREE S		
28.			V/III	BR
	U17BR014	JEEVANANTHAM N		
29.			V/III	BR
	U17BR015	THAMARAI ARASI R		
30.			V/III	BR
	U17BR016	NAVEEN KUMAR K		

# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# COURSE ON CERTIFICATE PROGRAM IN BINOCULAR VISION AND VISION THERAPY (2019-2020)

### **Students Name List**

		dents Name List	
S.NO	REG.NO	NAME	RESULT ANALYSIS
1.			
	U17BM026	Bharkavi M S	А
2.			
3.	U17BM028	Sheeba Alexia B	А
3.	U17BM029	Jeeva G	S
4.	111 FD) (02 0	g 11 g	
5.	U17BM030	Swedha S	А
3.	U17BM031	Loka Ranjani E	S
6.	1117DM022	Pasia P	C
7.	U17BM032	Pooja B	S
/ •	U17BM033	Varsha M	Α
8.	111701/024	A 1 A 17	
9.	U17BM034	Avula Arun Kumar	S
7.	U17BM036	Lokesh M	S
10.	U17BM037	Medivemulla Chenna Reddy	S
11.			
12	U17BM106	RAMANAN R	S
12.	U17BM107	TAPALSHAIK FHAZUL RAHMA	S
13.			
1.4	U17BM109	CHEEKATIPALLI LEENA	А
14.	U17BM110	BUCHAGARI KAVYA	S
15.	VII.5D) (112	G VIEDV	
16	U17BM113	G VEENA	А
16.	U17BT022	SOLENKA MANOJ KUMAR	А
17.	1117077020	WANGUA ORNA STATE WAS A	
18.	U17BT023	KANCHA SIDHARTHA KUMAI	S
18.	U17BT024	GATTUPALLI VENKATA CHAI	А

19.			
	U17BT026	MADHAN KUMAR S	S
20.			
	U17BT027	KATA VEERA SUDARSAN	S
21.			
	U17BT029	A S MOHAN KRISHNA	A
22.	111707020	MALLICA W	_
22	U17BT030	MALLIGA V	S
23.	U17BR009	HEMAMBUJAM D	٨
24.	U1/BK009	HEMAMBUJAM D	A
<i>2</i> <del>4</del> .	U17BR010	MOHANED SHAIBI K M	S
25.	01721010		
	U17BR011	VIJAYASRI T	Α
26.			
	U17BR012	EVANGELINE SELES J L	S
27.			
	U17BR013	SAHANA SHREE S	Α
28.	U17BR014	JEEVANANTHAM N	
			S
29.	U17BR015	THAMARAI ARASI R	
			S
30.	U17BR016	NAVEEN KUMAR K	
			S

# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# COURSE ON CERTIFICATE PROGRAM IN BINOCULAR VISION AND VISION THERAPY (2019-2020)

### **Students Name List**

S.NO	REG.NO	NAME	RESULT ANALYSIS
1.	U17BM026	Bharkavi M S	4.5
2.	U17BM028	Sheeba Alexia B	4.8
3.	U17BM029	Jeeva G	4.3
4.	U17BM030	Swedha S	4
5.	U17BM031	Loka Ranjani E	4.2
6.	U17BM032	Pooja B	4.5
7.	U17BM033	Varsha M	4.6
8.	U17BM034	Avula Arun Kumar	4.8
9.	U17BM036	Lokesh M	4.9
10.	U17BM037	Medivemulla Chenna Reddy	4.3
11.	U17BM106	RAMANAN R	4.2
12.	U17BM107	TAPALSHAIK FHAZUL RAHMA	4.5
13.	U17BM109	CHEEKATIPALLI LEENA	4.1
14.	U17BM110	BUCHAGARI KAVYA	4.9
15.	U17BM113	G VEENA	4.8
16.	U17BT022	SOLENKA MANOJ KUMAR	4.7
17.	U17BT023	KANCHA SIDHARTHA KUMAI	4.6
18.	U17BT024	GATTUPALLI VENKATA CHAI	4.5

19.	U17BT026	MADHAN KUMAR S	4.6
20.	U17BT027	KATA VEERA SUDARSAN	4.5
21.			
21.	U17BT029	A S MOHAN KRISHNA	4
22.	U17BT030	MALLIGA V	4.1
23.	U17BR009	HEMAMBUJAM D	4.2
24.	U17BR010	MOHANED SHAIBI K M	4.3
25.	U17BR011	VIJAYASRI T	4
26.	U17BR012	EVANGELINE SELES J L	4.1
27.	U17BR013	SAHANA SHREE S	4.3
28.	U17BR014	JEEVANANTHAM N	4.2
29.	U17BR015	THAMARAI ARASI R	4.1
30.	U17BR016	NAVEEN KUMAR K	4.8
<u> </u>	•	•	

# CERTIFICATE PROGRAM IN BINOCULAR VISION AND VISION THERAPY- 07.12.2019







### SCHOOL OF BIOENGINEERING VALUE ADDED COURSE ON CERTIFICATE PRORAM IN BINOCULAR

### VISION AND VISION THERAPY

# Certificate

This is to certify that Mr /Ms Ramanan R has attended three weeks value added course on CERTIFICATE PRORAM IN BINOCULAR VISION AND VISION THERAPY conducted by Department of Biomedical Engineering at Bharath Institute of Higher Education and Research, Chennai (TN), India during 06th -21st Dec 2019.

From

Chennai

Head of the Department

09-08-2019

Department of Biomedical Engineering

**BIHER** 

To

The Dean

**BIHER** 

Respected Sir

Sub: Approval to conduct a certificate program on "BIO SIGNAL PROCESSING" -reg

It has been planned by the Department of Biomedical Engineering to conduct a certificate program on "BIO SIGNAL PROCESSING" for the benefit of B. Tech Biomedical Engineering, B. Tech Industrial Biotechnology and B-Tech Genetic Engineering students from 26<sup>th</sup> August, 2019. The duration of the course is 30 hrs comprising of both theory and practical classes. I request you to kindly approve of the same.

Thanking you





# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

Date: 12-08-2019

# SCHOOL OF BIOENGINEERING CIRCULAR

# Notification for Value added courses offered by the School of Bioengineering

The Department of Bio Medical Engineering, School of Bioengineering, is scheduled to offer a certificate program on "Bio Signal Processing" from 26/08/2019 for a period of 3 weeks. Interested students can approach Mr.S. Prasath, Assistant Professor and Course Coordinator, Department of Bio Medical Engineering, for registration and further details on or before 24<sup>th</sup> August 2019.

# Eligibility-II, III and IV B-Tech IBT, GE and BME

Course Coordinator

Copy to:

Vice Chancellor

Pro Vice Chancellor

Additional Registrar

Deans

CoE

Heads of Departments



# DEPARTMENT OF BIO MEDICAL ENGINEERING CERTIFICATE PROGRAM ON BIO SIGNAL PROCESSING

# 2019-2020

# COURSE CO-ORDINATOR DETAILS

Faculty Name: Mr. S. Prasath,

Assistant Professor,

Department of Bio Medical Engineering.

Email ID: Mail.surendhar@gmail.com

Mobile number: 87545 81937

# DEPARTMENT OF BIO MEDICAL ENGINEERING

2019-2020

# VALUE ADDED COURSE SYLLABUS BIO SIGNAL PROCESSING

# MODULE 1

Fourier transform for continuous signals. Energy spectrum, Properties (without proof), Gibbs phenomena, Auto and cross correlation. Discrete Fourier transforms. Properties (without proof), Inverse DFT, introduction to FFTIIR & FIR Filters, Low pass, High Pass, Band Pass Filters using windows – Kaiser Windows.Sampling Theorem, aliasing Nyquist criteria, ADC's and DAC's.

# **MODULE 2**

Digital signals and systems: Classification of systems causal, time varying, time invariant, lumped. Introduction to digital signals systems. Convolution, Autocorrelation and cross correlation, Use of Matlab signal processing toolbox on various real bio – medical signals.

# **MODULE 3**

Introduction, Characteristics of Bio – Signals, Types of Signals, Measurement, Transformation. and reduction, computation of signal parameters that are diagnostically significant, stationary and non – stationary bio – signals, Application areas of Bio -Signals analysis – EEG, ECG, Phonocardiogram, Spiro Gram, Evoked Signals.

Total Contact Hour: 30

	SCHOOL OF BIO-ENGINEERING			
	DEPARTMENT OF BIO MEDICAL ENGINEERING	RING		
1	Certificate Program on Bio Signal Processing	h		
Session	Topic	Date	Duration (Hr)	Resource person
	Fourier transform for continuous signals. Energy spectrum, Properties (without proof), Gibbs phenomena, Auto and cross correlation. Discrete Fourier transforms. Properties (without	26.08.2019		
Session I	proof)		4	R. Kishore Kanna
	Inverse DFT, introduction to FFTIIR & FIR Filters, Low pass,			
Session II	High Pass, Band Pass Filters using windows – Kaiser Windows.Sampling Theorem,	27.08.2019	4	R. Kishore Kanna
Session III	aliasing Nyquist criteria, ADC's and DAC's	28.08.2019	3	T. Manoj Prasath
Session IV	Digital signals and systems: Classification of systems causal, time varying, time invariant, lumped.	02.09.2019	4	T. Manoj Prasath
Session V	Introduction to digital signals systems. Convolution, Auto-correlation and cross correlation	03.09.2019	3	S. Prasath
Session VI	Use of Matlab signal processing toolbox on various real bio – medical signals.	04.09.2019	3	S. Prasath
Session VII	Introduction, Characteristics of Bio – Signals, Types of Signals, Measurement, Transformation.	09.09.2019	3	Dr.F.Emerson Solomon
	reduction, computation of signal parameters that are diagnostically significant, stationary and non – stationary bio	10.09.2019		,
Session VIII	– signals		3	S. Geetha
Session IX	Application areas of Bio -Signals analysis – EEG, ECG, Phonocardiogram, Spiro Gram, Evoked Signals.	11.09.2019	3	S. Geetha

# DEPARTMENT OF BIO MEDICAL ENGINEERING CERTIFICATE PROGRAM ON BIO SIGNAL PROCESSING STUDENTS NAME LIST

S.NO	REG.NO	NAME		
1.	U17BM001	Sudhanraj J		
2.	U17BM002	Keerthana N		
3.	U17BM003	Raabiya Shareef A		
4.	U_17BM004	Karthika S		
5.	U17BM005	Suprava Paul		
6.	U17BM006	Kartic S		
7.	U17BM007	Divine Winfred W		
8.	U17BM008	Sorakayapeta R Manjusri		
9.	U17BM009	Jeevaraj S		
10.	U17BM010	B Karthikeyan		
11.	U17BM011	V Varatharajan		
12.	U17BM012	Vinodhini S		
13.	U17BM013	Naveen Kumar M		
14.	U17BM014	Dinesh Kumar R		
15.	U17BM015	Mathankumar G K		
16.	U17BM016	Ignatius Arun Sinjin G		
17.	U17BM017	Debabrata Bandyopadhyay		
18.	U17BM018	Supratik Nandi		
19.	U17BM019	Kalyaneswar Mishra		
20.	U17BM020	Dhayanithi J		
21.	U17BM021	Akash Kumar T		
22.	U17BM022	Nithishkumar G		
23.	U17BM023	Lokesh V		
24.	U17BM024	Afreen Banu A		
25.	U17BM026	Bharkavi M S		
26.	U17BM028	Sheeba Alexia B		
27.	U17BM029	Jeeva G		
28.	U17BM030	Swedha S		
29.	U17AC001	VICKRANTH M		
30.	U17AC002	MANI KANDAN N		
31	U17AC003	HARINISRI REKHA G		
32	U17AC004	VIGNESWARAN M		
33	U17AC005	KODURI MERCY GRACE .		
34	U17AC006	VIMAL KUMAR A		
35	U17AC007	IRENI POORNIMA		
36	U17AC008	VISHNU V		
37	U17AC009	PAVAN KALYAN G		
38	U17AC010	ASHWINI B		
39	U17AC011	BOOMIBALAN B		

40		
	U17AC012	MARIA JOSEPH M
41	U17AC013	LOGESH G
42	U17AC014	BIRUNTHAA C G
43	U17AC015	GALI KOTESH
44	U17AC016	KALAIRAJAN T
45	U17AC018	GUNAPRIYA D
46	U17AC019	RIMMALAPUDI REVATHI
47	U17AC020	DURGA R
48	U17AC021	KAMALASH V B
49	U17BR001	KAMALI V
50	U17BR002	RAJALAKSJMI E
51	U17BR003	PADMAPRIYA R
52	U17BR004	PREETHI P

# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

# SCHOOL OF BIO-ENGINEERING

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# CERTTIFICATE PROGRAM BIO SIGNAL PROCESSING (2019-2020)

# Students Result

	T T C NO	Students Result NAME	RESULT
S.NO	REG.NO		S
1.	U17BM001	Sudhanraj J	S
2.	U17BM002	Keerthana N	A
3.	U17BM003	Raabiya Shareef A	S
4.	U17BM004	Karthika S	S
5.	U17BM005	Suprava Paul	S
6.	U17BM006	Kartic S	A
7.	U17BM007	Divine Winfred W	S
8.	U17BM008	Sorakayapeta R Manjusri	S
9.	U17BM009	Jeevaraj S	S
10.	U17BM010	B Karthikeyan	S
11.	U17BM011	V Varatharajan	S
12.	U17BM012	Vinodhini S	S
13.	U17BM013	Naveen Kumar M	S
14.	U17BM014	Dinesh Kumar R	S
15.	U17BM015	Mathankumar G K	S
16.	U17BM016	Ignatius Arun Sinjin G	A
17.	U17BM017	Debabrata Bandyopadhyay	S
18.	U17BM018	Supratik Nandi	S
19.	U17BM019	Kalyaneswar Mishra	S
20.	U17BM020	Dhayanithi J	S
21.	U17BM021	Akash Kumar T	S
22.	U17BM022	Nithishkumar G	S
23.	U17BM023	Lokesh V	S
24.	U17BM024	Afreen Banu A	S
25.	U17BM026	Bharkavi M S	S
26.	U17BM028	Sheeba Alexia B	S
27.	U17BM029	Jeeva G	S
28.	U17BM030	Swedha S	S
29.	U17AC001	VICKRANTH M	S
30.	U17AC002	MANI KANDAN N	S
31		HARINISRI REKHA G	S
31	2004	VIGNESWARAN M	S
33	5005	KODURI MERCY GRACE.	S
	7.000	VIMAL KUMAR A	S
34		IRENI POORNIMA	A
35	7.7.0000	VISHNU V	S
36	7000	PAVAN KALYAN G	S
37	7.0010	ASHWINI B	S
38	. 5011	BOOMIBALAN B	S
39		MARIA JOSEPH M	

41	U17AC013	LOGESH G	S
42	U17AC014	BIRUNTHAA C G	A
43	U17AC015	GALI KOTESH	S
44	U17AC016	KALAIRAJAN T	S
45	U17AC018	GUNAPRIYA D	S
46	U17AC019	RIMMALAPUDI REVATHI	S
47	U17AC020	DURGA R	А
48	U17AC021	KAMALASH V B	S
49	U17BR001	KAMALI V	S
50	U17BR002	RAJALAKSJMI E	S
51	U17BR003	PADMAPRIYA R	S
52	U17BR004	PREETHI P	S

# DEPARTMENT OF BIOMEDICAL ENGINEERING

Name: Boomibalan.B

Register Number: UI7ACOII

Academic year: 2019-2020

Name of the course offered: Certificate program on "Biosignal processing".

# **Student Feedback**

				Rating	3	
S.No	Criteria	Excellent	Very Good	Good	Fair	Satisfactory
1	Course content	~				
2	Skill development	/				
3	Motivation		/			
4	Regularity of the faculty		~			
5	Coverage of the syllabus	~				
6	Resourse person interaction with students		/			
7	Outcome	~				
8	Individual Attention	/				

Signature of the Course co-ordinator

Signature of the Student

# DEPARTMENT OF BIOMEDICAL ENGINEERING

Name: Sudhanaaj. J

Register Number: U138 M001

Academic year: 2019 - 2020

Name of the course offered: Ccalificale paggaam on "BIO SIGNAL PROCESSING"

# **Student Feedback**

				Rating	g	
S.No	Criteria	Excellent	Very Good	Good	Fair	Satisfactory
1	Course content	<b></b>				
2	Skill development		<u></u>			
3	Motivation	<b>/</b>				
4	Regularity of the faculty	/				
5	Coverage of the syllabus		/			
6	Resourse person interaction with students	/				
7	Outcome					
8	Individual Attention					

Signature of the Course co-ordinator

Signature of the Student







# CERTIFICATE

This is to certify that Mr Ignatius Arun Sinjin G has attended three weeks Certificate Program on Bio Signal Processing conducted by the Department of Biomedical Engineering at Bharath Institute of Higher Education and Research, Chennai, India during  $26^{
m th}$  August to  $11^{
m th}$  September 2019.





From

Chennai

The Head of the Department

12-02-2020

Department of Biomedical Engineering

**BIHER** 

To

The Dean

BIHER

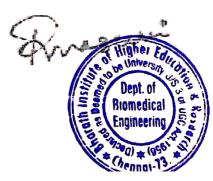
Respected Sir

Sub: Approval toconduct a value added course on "Introduction to Artificial Organs" -reg

It has been planned by the Department of Biomedical Engineering to start a Value Added Course on "Introduction to Artificial Organs" for the benefit of B.Tech Biomedical Engineering, B.Tech Industrial Biotechnology and B-Tech Genetic Engineering students from 02<sup>nd</sup>March, 2020. The duration of the course is 30 hrs comprising of both theory and practical classes. I request you to kindly approve for the same.

Thanking you

Yours sincerely





# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

Date: 14-02-2020

# SCHOOL OF BIOENGINEERING CIRCULAR

# Notification for Value added courses offered by the School of Bioengineering

The Department of Bio Medical Engineering, School of Bioengineering, is scheduled to offer a Value added Course on "Introduction to Artificial Organs" from 02/03/2020 for a period of 3 weeks. Interested students can approach Ms. R. Indumathi, Assistant Professor and Course Coordinator, Department of Bio Medical Engineering, for registration and further details on or before 28<sup>th</sup> February 2020.

# Eligibility-II, III and IV B-Tech IBT, GE and BME

Course Coordinator

Delvert

Copy to:

Vice Chancellor

Pro Vice Chancellor

Additional Registrar

Deans

CoE

Heads of Departments

HOD



# DEPARTMENT OF BIO MEDICAL ENGINEERING

# VALUE ADDED COURSE ON INTRODUCTION TO ARTIFICIAL ORGANS

## 2019-2020

# COURSE CO-ORDINATOR DETAILS

Faculty Name: Ms. R. Indumathi,

Assistant Professor,

Department of Bio Medical Engineering.

Email ID: indhu.maheshradha@gmail.com

**Mobile number:** 99626 60176

# DEPARTMENT OF BIO MEDICAL ENGINEERING

2019-2020

# VALUE ADDED COURSE SYLLABUS INTRODUCTION TO ARTIFICIAL ORGANS

# MODULE 1

Introduction to artificial organs, Biomaterials used in artificial organs and prostheses, Artificial kidney: kidney filtration, artificial waste removal methods, hemodialysis, regeneration of dialysate, membrane configuration, wearable artificial kidney machine, Artificial heart-lung machine: lungs gaseous exchange/ transport, Artificial heart valves.

# **MODULE 2**

Liver support system, Artificial pancreas, Artificial limbs, Audiometry: air conduction, bone conduction, masking Ophthalmoscope, Artificial cornea, Prosthetic and Orthotic devices.

# MODULE 3

Hybrid organs, Regenerative medicine - is it a future of artificial organ?, Ethical, economical, environmental and legal aspects in artificial organs domain.

Total Contact Hour: 30

# SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# Introduction to Artificial Organs

Session	Topic	Date	Duration (Hr)	Resource person
Session I	Introduction to artificial organs, Biomaterials used in artificial organs and prostheses	02.03.2020	4	Dr. F. Emerson Solomon
	Artificial kidney: kidney filtration, artificial waste removal methods, hemodialysis, regeneration of dialysate, membrane	03.03.2020		
Session II	configuration, wearable artificial kidney machine		3	Dr. F. Emerson Solomon
Session III	Artificial heart-lung machine: lungs gaseous exchange/	04.03.2020	3	Dr. Vasukidevi
	Liver support system, Artificial pancreas, Artificial limbs	09.03.2020	4	Ms. S. Geetha
	Audiometry: air conduction, bone conduction, masking	10.03.2020	æ	Dr. Vasukidevi
Session V	Ophthamnoscope, Authoria connea	11.03.2020	3	Dr. Vasukidevi
Session vi	FIOSILICITE and Other derives	16.03.2020	4	Ms. S. Geetha
Session VII	Session VII Hybrid organis	17.03.2020	3	Ms. S. Geetha
Session VIII	Session VIII Regenerative medicine – is it a rum of medicine – is it a	18.03.2020	3	Dr. F. Emerson Solomon
Session IX	Session IX artificial organs domain.			

# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# Introduction to Artificial Organs STUDENTS NAME LIST

S.NO	REG.NO	NAME
1.	U16BR004	MONALISHA B A
2.	U16BR011	MONIT KUMAR CHANDAN
3.	U16BR020	PREM KUMAR R
4.	U16BR029	KAMARAPU AMULYA
5.	U16BR044	PAVITHRA S
6.	U16BR048	NARAPPAGARI RADHIKA
7.	U16BR055	NAVYA_PRANAVI KANDALA
8.	U16BR062	NARENDRA
9.	U16EA003	SURYAPRAKASH G
10.	U16BT007	VISHAL S K
11.	U16BT010	POOVARASAN A
12.	U16BT015	ASWIN M
13.	U16BT022	DARA VIJAYCHANDRA GANGADHAR GUPTHA
14.	U16BT027	KOKKILIGADDA JESSICA CAROLINE
15.	U16BT031	RATHNAKUMAR L
16.	U17BT002	KUMARESH M
17.	U17BT006	K KARAN
18.	U17BT016	S KEERTANA
19.	U17BT021	DOLE ARAVIND
20.	U17BT024	GATTUPALLI VENKATA CHARISHMA
21.	U17BT030	MALLIGA V
22.	U17BT033	SEERA SIRISHA
23.	U17BT039	GONDA SAHITH
24.	U17BT701	JOVIALITY SNAITANG
25.	U18BT004	ROGITH KUMAR A
26.	U18BT009	SOWNTHARYA P
27.	U18BT010	ANSAL V S
28.	U18BT013	TRIDEV HALDAY
29.	U18BT017	RAVI SRI SAI NANDINI
30.	U16BM011	Pavithra V
31	U16BM023	Nawaz Shariff A
32	U16BM028	Hari Ritu Sheshasai Niharika
33	U16BM036	Tulabandula Geetha Madhuri
34	U16BM057	Upputholla Rohith
35	U16BM072	Gattamaneni Swetha
36	U16BM081	Pravallika B
37	U17BM011	V Varatharajan
38	U17BM021	Akash Kumar T

39	U17BM031	Loka Ranjani E
40	U17BM043	Prashanth M
41	U17BM054	Madasu M Sri Lakshmi Sirisha
42	U17BM061	Duddela Bharathi
43	U17BM071	Arava Sharon Niharika
44	U17BM095	M Deepa
45	U17BM102	Kishore D
46	U17BM122	Gujarathi Hari Priya
47	U18BM008	Bhavya M
48	U18BM027	Bhavani M

# DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# **Introduction to Artificial Organs**

S.NO	REG.NO	NAME	RESULT
1.	U16BR004 .	MONALISHA B A	А
2.	U16BR011	MONIT KUMAR CHANDAN	S
3.	U16BR020	PREM KUMAR R	S
4.	U16BR029	KAMARAPU AMULYA	Α
5.	U16BR044	PAVITHRA S	S
6.	U16BR048	NARAPPAGARI RADHIKA	S
7.	U16BR055	NAVYA PRANAVI KANDALA	A
8.	U16BR062	NARENDRA	S
9.	U16EA003	SURYAPRAKASH G	S
10.	U16BT007	VISHAL S K	Α
11.	U16BT010	POOVARASAN A	S
12.	U16BT015	ASWIN M	S
13.	U16BT022	DARA VIJAYCHANDRA GANGADHAR GUPTHA	Α
14.	U16BT027	KOKKILIGADDA JESSICA CAROLINE	S
15.	U16BT031	RATHNAKUMAR L	А
16.	U17BT002	KUMARESH M	S
17.	U17BT006	K KARAN	Α
18.	U17BT016	S KEERTANA	Α
19.	U17BT021	DOLE ARAVIND	S
20.	U17BT024	GATTUPALLI VENKATA CHARISHMA	Α
21.	U17BT030	MALLIGA V	S
22.	U17BT033	SEERA SIRISHA	A
23.	U17BT039	GONDA SAHITH	S
24.	U17BT701	JOVIALITY SNAITANG	Α
25.	U18BT004	ROGITH KUMAR A	S
26.	U18BT009	SOWNTHARYA P	A
27.	U18BT010	ANSAL V S	S
28.	U18BT013	TRIDEV HALDAY	Α
29.	U18BT017	RAVI SRI SAI NANDINI	_ S
30.	U16BM011	Pavithra V	Α
31	U16BM023	Nawaz Shariff A	Α
32	U16BM028	Hari Ritu Sheshasai Niharika	S
33	U16BM036	Tulabandula Geetha Madhuri	Α
34	U16BM057	Upputholla Rohith	S
35	U16BM072	Gattamaneni Swetha	S
36	U16BM081	Pravallika B	A
37	U17BM011	V Varatharajan	A
38	U17BM021	Akash Kumar T	S
39	U17BM031	Loka Ranjani E	A

40	U17BM043	Prashanth M	Α
41	U17BM054	Madasu M Sri Lakshmi Sirisha	S
42	U17BM061	Duddela Bharathi	Α
43	U17BM071	Arava Sharon Niharika	S
44	U17BM095	M Deepa	А
45	U17BM102	Kishore D	А
46	U17BM122	Gujarathi Hari Priya	S
47	U18BM008	Bhavya M	Α
48	U18BM027	Bhavani M	S

# DEPARTMENT OF BIOMEDICAL ENGINEERING

Name: MONALISHA B.A

Register Number: U16BR004

Academic year: 2019 - 2010

Name of the course offered: Value added course on Introduction to Artifial

organs

# **Student Feedback**

	Criteria		Rating					
S.No		Excellent	Very Good	Good	Fair	Satisfactory		
1	Course content	<b>✓</b>	•					
2	Skill development		V					
3	Motivation	✓						
4	Regularity of the faculty		<b>/</b>					
5	Coverage of the syllabus	V						
6	Resourse person interaction with students		✓					
7	Outcome	✓						
8	Individual Attention		V					

Monde Signature of the Course co-ordinator

Signature of the Student

# DEPARTMENT OF BIOMEDICAL ENGINEERING

Name: ANSAL VS

Register Number: U18 BTO10

Academic year: 2019 - 2020

Name of the course offered: Value added Course on Introduction to Artificial Organs

# **Student Feedback**

S.No	Criteria	Excellent	Very Good	Good	Fair	Satisfactory
1	Course content				(4)	
2	Skill development					
3	Motivation				,	
4	Regularity of the faculty					
5	Coverage of the syllabus		~			
6	Resourse person interaction with students	✓				
7	Outcome	~				
8	Individual Attention	~				

Signature of the Course co-ordinator

Signature of the Student





# DEPARTMENT OF BIOMEDICAL ENGINEERING CERTIFICATE OF PARTICIPATION

This is to certify that Mr/Ms/Mrs/Dr MONIT KUMAR CHANDAN

organized by the Department of Biomedical Engineering, Bharath Institute of Higher Education and Research, Chennai (TN), India during 02nd March to has completed the value added course on "Introduction to Artificial Organs" 18th March, 2020.

n March, 2020.

Co-ordinator Ms. R. Indumathi

Convenor Dr. R. Vasuki From

Chennai

Head of the Department

01-07-2019

Department of Biomedical Engineering

**BIHER** 

To

The Dean

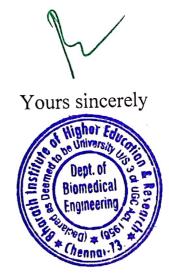
**BIHER** 

Respected Sir

Sub: Approval to conduct a certificate program on "MEDICAL IMAGE PROCESSING" -reg

It has been planned by the Department of Biomedical Engineering to Conduct a certificate program on "MEDICAL IMAGE PROCESSING" for the benefit of B.Tech Biomedical Engineering, B.Tech Industrial Biotechnology and B-Tech Genetic Engineering students from 15<sup>th</sup> July, 2019. The duration of the course is 30 hrs comprising of both theory and practical classes. I request you to kindly approve of the same.

Thanking you





Date: 05-07-2019

# SCHOOL OF BIOENGINEERING CIRCULAR

# Notification for Value added courses offered by the School of Bioengineering

The Department of Bio Medical Engineering, School of Bioengineering, is scheduled to offer a certificate program on "Medical Image Processing" from 15/07/2019 for a period of 3 weeks. Interested students can approach Mr. R. Kishore Kanna, Assistant Professor and Course Coordinator, Department of Bio Medical Engineering, for registration and further details on or before 14<sup>th</sup> July 2019.

# Eligibility-II, III and IV B-Tech IBT, GE and BME

Course Coordinator

Copy to:

Vice Chancellor

Pro Vice Chancellor

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# SCHOOL OF BIO-ENGINEERING

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# VALUE ADDED COURSE

# CERTIFICATE PROGRAM ON MEDICAL IMAGE PROCESSING

2019-2020

# COURSE CO-ORDINATOR DETAILS

Faculty Name: Mr. R. Kishore Kanna,

Assistant Professor,

Department of Bio Medical Engineering.

Email ID: kishorekanna007@gmail.com

Mobile number: 9003049998

# DEPARTMENT OF BIO MEDICAL ENGINEERING

2019-2020

### **SYLLABUS**

# CERTIFICATE PROGRAM ON MEDICAL IMAGE PROCESSING

# **MODULE 1**

Objectives of biomedical image analysis – Computer aided diagnosis – Nature of medical images: X-ray imaging – Tomography – Nuclear medicine imaging – SPECT imaging – Positron imaging tomography – Ultrasonography – Magnetic resonance imaging. Removal of artifacts – Space domain filters – Frequency domain filters – Optimal filtering – Adaptive filters.

# **MODULE 2**

Image enhancement – Gray level transforms – Histogram transformation – Convolution mask operators – Contrast enhancement. Detection of regions of interest – Thresholding and binarization – Detection of isolated lines and points – Edge detection – Region growing.

# **MODULE 3**

Analysis of shape and texture – Representation of shapes and contours – Shape factors – Models for generation of texture – Statistical analysis of texture – Fractal analysis – Fourier domain analysis of texture – Segmentation and structural analysis of texture. Pattern classification and diagnostic decision – Measures of diagnostic accuracy – Applications: Contrast enhancement of mammograms – Detection of calcifications by region growing – Shape and texture analysis of tumors.

Total Contact Hour: 30

# SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING CERTIFICATE PROGRAM ON MEDICAL IMAGE PROCESSING

**LESSON PLAN** 

Session	Topic	Date	Duration (Hr)	Resource person
	Objectives of biomedical image analysis - Computer aided			
	diagnosis - Nature of medical images: X-ray imaging -	15 07 2019		
	Tomography - Nuclear medicine imaging - SPECT imaging	7107:10:01		
Session I	<ul> <li>Positron imaging tomography</li> </ul>		4	R. Kishore Kanna
	Ultrasonography - Magnetic resonance imaging. Removal of			
	artifacts - Space domain filters - Frequency domain filters -	16.07.2019		
Session II	Optimal filtering - Adaptive filters.		4	S. Prasath
	Image enhancement - Gray level transforms - Histogram			
	transformation - Convolution mask operators - Contrast	17.07.2019		
Session III	enhancement.		3	R. Kishore Kanna
	Detection of regions of interest - Thresholding and			
	binarization - Detection of isolated lines and points - Edge	22.07.2019		
Session IV	detection - Region growing.		4	S. Prasath
Session V	Analysis of shape and texture - Representation of shapes and q	23.07.2019	3	T. Manoj Prasath
Session VI	Statistical analysis of texture - Fractal analysis - Fourier doma	24.07.2019	4	T. Manoj Prasath
}		29.07.2019		Dr. F. Emerson
Session VII	Session VII Pattern classification and diagnostic decision – Measures of dia	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	4	Solomon
	Applications: Contrast enhancement of mammograms –			
	Detection of calcifications by region growing - Shape and	30.07.2019		Dr. F. Emerson
Session VIII	Session VIII texture analysis of		4	Solomon

# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING

# VALUE ADDED COURSE

Certificate Program on Medical Image Processing (2019-2020)

# STUDENTS NAME LIST

S.NO	REG.NO	NAME
	1101/48/1011	Pavillira V
1	1119BV1015	Ashini TS
-	U16BM013	P V Jhanst Kiran
-	C10BV1014	Jayapreetha M
3	U16BN1015	Jeya Barathi S
6	U16BM016	Ajmeera Aruna
<u>c</u>	U16BN1017	Bysani Anjani Umesh
6	U16BM018	Ajith Kumar P
9.	UIGBNIOIA	Ajcesh S P
10.	U16BM020	Abisha G
11.	U16BM021	Chrysolyte Precious Rant S
12.	U16BM022	Sasikumar J
13.	U16BN1023	Nawaž Shariff A
14.	U16BM024	Karanam Adarash Rao
15.	U16BM025	Kudugunta Achyutha Reddy
16.	U16BM026	Mohammad Abraar Ahmad
17.	U16BM027	Komatiguntla Brahmendra
18.	U16BM028	Hari Ritu Sheshasai Niharika
19.	U16BM029	Mulagada Nikshiptha
20.	U16BM030	Shweta Singh
21.	U16BM031	Tumma Sathvik Phani Ravi Teja
22.	U16BM032	Kakani Karthik
23.	U16BM033	Bollu Gowri
24.	U16BM034	Neha Kumari
25.	U16BM035	Vijay Kūmar P
26.	U16BM036	Tulabandula Geetha Madhuri
26. 27.	U16BM038	Mitaigiri Afreen Banu
28.	U16BM039	Riminalapudi Guna Shankar
28. 29. 30.	U16BM040	E Pravallika
30.	U16BM041	Vignesh K
31	U16BM042	Kalleapadam Akshay Das
32 33	U16BM043	V Mownika
33	U16BM044	Janana Priyan S
34	U16BM045	T Neeraja
34 35	U16BM046	Jayashree A
36	U17AC079	RAHUL K
37	U17AC080	SHAIK MOHAMMAD FAYAZ .
38	U17AC081	MATETI MANEESHA
39	U17AC083	VASANTHKUMAR S
40	U17AC085	SOMA HARI PRIYA .
41	U17AC087	SIVASHANMUGA VELAN P
42	U17AC088	ŚWETHA P
	U17AC089	YASHMA A
43	U17AC090	ARUL A
44	U17AC091	AKASH B N
45	U17BR012	EVANGELINE SELES J L
46	U17BR013	SAHANA SHREE S
47	U17BR014	JEEVANANTHAM N
48		THAMARAI ARASI R
49 50	U17BR015	NAVEEN KUMAR K
50	U17BR016	
51 52	U17BR017	PENDYALA SANDHYA RANI
52	U17BR018	KARTHIK RAJA G
53	U17BR019	SURAPAREDDY TEJA
54	U17BR020	MADDILATE SAI RAGA MAI
55	U17BR021	SONIYA SHANAVAS

# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE Certificate Program on Medical Image Processing (2019-2020) Students Result

	Certificate Pro	gram on Medical Image Processing (2017-2020) Students Result	RESULT
	REG.NO	NAME	S
S.NO		Pavithra V	S
	U16BM011	Ashini 1 S	A
<u> </u>	U16BM012	P V Jhansi Kiran	S
2	U16BM013	Jayapreetha M	S
3	UT6BM014	Jeya Barathi S	S
4	U16BM015	A imagra Aruna	S
	U198W019	Bysani Anjani Umesh	
6	U16BM017	Ajith Kumar P	S
7	016RW018	Ajeesh S P	S
8	U16BM019	Table 1	S
10	U16BM020	Chrysolyte Precious Rani S	5
11	U16BM021	Sasikumar J	S
12	U16BM022	Shariff A	S
13.	U16BM023	Waranam Adarash Rao	S
14	U16BM024	Traducinta Achvillia Reddy	S
15	U16BM025	- Mahammad Abraat Allillad	S
16.	U16BM026	Brannenua Brannenua	
17	U16BM027	Herr Ritu Sheshasai Ninarika	S
18.	U16BM028	Mulagada Nikshiptha	S
19	016BM029		5
20.	U16BM030	Tumma Sathvik Phani Ravi Toju	S
21	U16BM031	Kakani Karthik	A
22	U16BM032	Bollu Gowri	S
23	U16BM033	Neha Kumari	S
24	U16BM034	Tumor D	S
25	U16BM035		S
26	U16BM036	Treen Dally	A
27	U16BM038	Rimmalapudi Guna Shankar	S
28	U16BM039	E Pravallika	S
	U16BM040		S
30	U16BM041	Kalleapadam Akshay Das	S
31	U16BM042	= V Mownika	S
32	U16BM043	Janana Priyan S	S
33	UT6BM044	1 Neeraja	S
34	U16BM045	Jayashree A	S
35	U16BM046		- 8
	UT/AC079		S
36	U1/AC080	MATEITMANEESHA	A
37	UT7AC081		S
38	177AC083	HARIPRIYA.	S
39	UT7AC085	SIVASHANMUGA VELAN P	S
40	—= <del>-1017AC</del> 087	SWETHA P	- S
41		YASHMA A	
42	1777AC089	ARUL A	
43	ITT7AC090	AVASHBN	S
44	1117/AC091	EVANGELINE SELES J L	
45		SAHANA SHREE S	
46	<del>- Iпт</del> 7ВК013	JEEVANANTHAM N	
47		THAMARAI ARASI R	S
48	—— <del>———————————————————————————————————</del>	L A CONTRACTOR OF THE CONTRACT	
_ 49		NAVEEN KUMAR K	
50		PENDYALA SANDHYA RANI	
51	IIII / DICOI	KARTHIK RAJA G	
52	II)I/DROID	SURAPAREDDY TEJA	
53		MADDILATE SAI RAGA MAI SUNIYA SHANAVAS	
		THANAVAS	

# SCHOOL OF BIOENGINEERING

# DEPARTMENT OF BIOMEDICAL ENGINEERING

Name: ARUL. A

Register Number: 17 AC 090

Name of the course offered: CERTIFICATE PROGRAM ON MEDICAL THAGE PROCESSING

# Student Feedback

				Rating		Satisfactory
S.No	Criteria	Excellent	Very Good	Good	Fair	
1	Course content					
2	Skill development					
3	Motivation					
4	Regularity of the faculty	1				
5	Coverage of the syllabus	✓				
6	Resourse person interaction with students	✓				
7	Outcome					
8	Individual Attention					

Signature of the Course co-ordinator

Signature of the Student

# SCHOOL OF BIOENGINEERING

# DEPARTMENT OF BIOMEDICAL ENGINEERING

Name: ABISHA. 9

Register Number: UIDAMO20

Academic year: 2019-1000

Name of the course offered: MEDILAC EMAGE PROCESSINY

# Student Feedback

				Rating		Satisfactory
S.No	Criteria	Excellent	Very Good	Good	Fair	Satisfactory
1	Course content					
2	Skill development					
3	Motivation					
4	Regularity of the faculty					
5	Coverage of the syllabus		/			
6	Resourse person interaction with students					
7	Outcome					
8	Individual Attention					

Signature of the Course co-ordinator

Signature of the Student





# SCHOOL OF BIOENGINEERING

Certificate Program on Medical Image Processing

# CERTIFICATE

Program on Medical Image Processing conducted by the Department of This is to certify that Ms. Pavithra V has attended three weeks Certificate Biomedical Engineering at Bharath Institute of Higher Education and Research, Chennai, India during 15th July to 30th July 2019



From Chennai

The Head 10-10-2019

Dept. of Biomedical Engineering

BIHER

To

The Dean

**BIHER** 

# Respected Sir

Sub: approval to start a value added course on "Neuroscience Of Human Movements" -reg

It has been planned by the Dept. of Biomedical Engineering to start a Value Added Course on "Neuroscience Of Human Movements" for the B-Tech Biomedical Engineering, Industrial Biotechnology and Genetic Engineering students from 30<sup>th</sup> October, 2019. The duration of the course is 30 hrs comprising of theory. I request you to kindly approve of the same.

Thanking you

Yours sincerely





Date: 11-10-2019

# SCHOOL OF BIOENGINEERING

# **CIRCULAR**

# Notification for Value added courses offered by the School of Bioengineering

The Department of Bio Medical Engineering, School of Bioengineering, is scheduled to offer a Value added Course on **NEUROSCIENCE OF HUMAN MOVEMENTS** from 30/10/2019 for a period of 3 weeks. Interested students can approach Dr.F.Emerson Solomon, Professor and Course Coordinator, Department of Bio Medical Engineering for registration and for further details on or before 27<sup>th</sup> October 2019.

# Eligibility-II, III and IV B-Tech IBT, GE and BME

Course Coordinator

HOD

Krazuni

# Copy to:

Vice Chancellor

Pro Vice Chancellor

Additional Registrar

Deans

CoE

Heads of Departments

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# VALUE ADDED COURSE ON NEUROSCIENCE OF HUMAN MOVEMENTS

# 2019-2020

# **COURSE CO-ORDINATOR DETAILS**

Faculty Name: Dr. Emerson Solomon F,

Professor,

Department of Bio Medical Engineering.

Email ID: emerson.bme@bharathuniv.ac.in

**Mobile number:** 95660 70703.

# SCHOOL OF BIO-ENGINEERING

### DEPARTMENT OF BIO MEDICAL ENGINEERING

### VALUE ADDED COURSE SYLLABUS

### 2019-2020

		L	1	P	C
	Neuromechanics of Human				
Value added	Total Contact Hours – 30	3	0	0	3
course code	Prerequisite – Human Anatomy and Physiology				
OBJECTIVE	ES				
1 To int	roduce the neural system responsible for generation of hu	ıman mov	ement	ts.	
2 To int	troduce neural control of movements (principles and the	ories)			

# **MODULE 1Features of movement production system**

6

Muscles, Neurons, Neuronal pathways, Sensory receptors, Reflexes and its kinds, Spinal control mechanisms

3 Briefly introduce topics of motor disorders and rehabilitation approaches.

# MODULE 2 Major brain structures responsible for movement generation 6 Motor Cortex (including a discussion of premotor and supplementary motor areas), Basal Ganglia, Cerebellum, Descending and ascending pathways

# **MODULE 3 Control theory approaches to motor control**

6

Force control, generalized motor programs, muscle activation control, Merton's servo hypothesis, optimal control (including Posture based movement control)

### **MODULE 4 Coordination of human movement**

6

Approaches to studying coordination: Optimization, Dynamical systems approach, Synergies, Action-Perception interactions and coupling.

# **MODULE 5 Changing and Evolving behaviors**

6

Changes to movement control due to fatigue and aging- Spinal cord injury and Spasticity, Cortical disorders (Examples: Stroke, Cerebral Palsy), Disorders of Basal Ganglia (Examples: Parkinson's disease, Huntington's disease), Cerebellar disorders (Ataxia, Tremor, Timing issues,

problems with error correction). Approaches to rehabilitation (Example: Deep Brain Stimulation in Parkinson's patients)

### **Total Contact Hours: 30**

### **Text Book:**

- 1. Neurophysiological basis of movement (2 ed), Mark Latash, Human Kinetics, 2008
- 2. Fundamentals of Motor control Mark Latash, Academic Press (Elsevier) (2012)

### **Reference Books:**

- 1. Progress in Motor Control: A Multidisciplinary Perspective (Advances in Experimental Medicine and Biology) (No. 5), Dagmar Sternad (ed), Springer (2007)
- 2. Neuroscience (5 ed), Dale Purves et al, Sinauer Associates (2011)
- 3. Human Motor Control (2 ed), David Rosenbaum, Academic Press (Elsevier) (2009)
- 4. Principles of neural science (5 ed), Eric Kandel, James Schwartz et al (2012)

# SCHOOL OF BIO-ENGINEERING

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# VALUE ADDED COURSE

# COURSE ON NEUROSCIENCE OF HUMAN (2019-2020)

Session	Торіс	Date	Duration (Hr)	Resource person
Session I	FEATURES OF MOVEMENT PRODUCTION SYSTEM	30.10.2019	3	Dr.F.Emerson Solomon
Session II	FEATURES OF MOVEMENT PRODUCTION SYSTEM	31.10.2017	4	Dr.R.Vasukidevi
Session III	MAJOR BRAIN STRUCTURES RESPONSIBLE FOR MOVE	31.10.2017	3	Ms.S.Geetha
Session IV	MAJOR BRAIN STRUCTURES RESPONSIBLE FOR MOVE	6.11.2019	3	Mr.S.Prasath
Session V	CONTROL THEORY APPROACHES TO MOTOR CONTROL	7.11.2019	4	Dr.F.Emerson Solomon
Session VI	COORDINATION OF HUMAN MOVEMENT	7.11.2019	3	Dr.R.Vasukidevi
Session VII	COORDINATION OF HUMAN MOVEMENT	13.11.2019	3	Ms.S.Geetha
Session VIII	CHANGING AND EVOLVING BEHAVIORS	14.11.2019	3	Mr.S.Prasath
Session IX	CHANGING AND EVOLVING BEHAVIORS	14.11.2019	4	Ms.S.Geetha

# SCHOOL OF BIO-ENGINEERING

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# VALUE ADDED COURSE TIMETABLE

# 2019-2020

Days / Period	I 9.00 - 9.50	II 9.50 - 10.40	III 10.50 – 11.40	IV 11.40 – 12.30	12.30 - 1.30	V 1.30 - 2.10	VI 2.10 - 2.50	VII 2.50 - 3.30
MON								
TUE					EAK			
WED					BR		NMH	
THU		NM	Н		LUNCH	NMH		
FRI					$\Gamma \Omega$			
SAT								

SUBJECT CODE	SUBJECT NAME	STAFF
Theory		
Value added course	Neuroscience Of Human Movements (NMH)	Dr.Emerson Solomon F
	Room No	SK504

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# **VALUE ADDED COURSE**

# COURSE ON NEUROSCIENCE OF HUMAN MOVEMENTS (2019-2020

S.NO	REG.NO	NAME	SEM/ YEAR	DEPART MENT
1.	U17BM002	Keerthana N	V/III	BME
2.	U17BM003	Raabiya Shareef A	V/III	BME
3.	U17BM004	Karthika S	V/III	BME
4.	U17BM005	Suprava Paul	V/III	BME
5.	U17BM006	Kartic S	V/III	BME
6.	U17BM008	Sorakayapeta R Manjusri	V/III	BME
7.	U17BM009	Jeevaraj S	V/III	BME
8.	U17BM010	B Karthikeyan	V/III	BME
9.	U17BM011	V Varatharajan	V/III	BME
10.	U17BM012	Vinodhini S	V/III	BME
11.	U17BM013	Naveen Kumar M	V/III	BME
12.	U17BM014	Dinesh Kumar R	V/III	BME
13.	U17BM015	Mathankumar G K	V/III	BME
14.	U17BM016	Ignatius Arun Sinjin G	V/III	BME
15.	U17BM017	Debabrata Bandyopadhyay	V/III	BME
16.	U17BM058	Rajalaxmi Mallick	V/III	BME
17.	U17BM059	Shaik Afnan Ali	V/III	BME
18.	U17BM060	Rajulapati Bhargavi	V/III	BME
19.	U17BM061	Duddela Bharathi	V/III	BME

20			X 7 /TTT	DME
20.	U17BM062	Rayala Pavan	V/III	BME
21.	U17BM064	Jerin Judery D S	V/III	BME
22.	U17BM065	Ambati Anitha	V/III	BME
23.	U17BM066	NARMADHA E S	V/III	BME
24.	U17BM067	VINCY SHAMLEY EBEN V	V/III	BME
25.	U17BM068	THEVAR KALAYARASI SENTH	V/III	BME
26.	U17BM069	ASHOK S	V/III	BME
27.	U17BM070	CHINTHAPANTI PRANEETHA	V/III	BME
28.	U17BT004	JEEVITHA S	V/III	IBT
29.	U17BT005	PALOJU DHARANI	V/III	IBT
30.	U17BT006	K KARAN	V/III	IBT
31	U17BT007	NIVEDHITHA T	V/III	IBT
32	U17BT009	JOTHI ILAVARASAN	V/III	IBT
33	U17BT010	AISHWARYA R	V/III	IBT
34	U17BT012	NAGAREDDY PRANEETH REI	V/III	IBT
35	U17BT013	MUTHYALA RAMYA	V/III	IBT
36	U17BT015	TOTTARAMUDI JABILI	V/III	BI
37	U17BR004	PREETHI P	V/III	BI
38	U17BR005	PRIYADARSHENEE R	V/III	BI
39	U17BR006	SONIYA M	V/III	BI
40	U17BR007	JARIS J	V/III	BI

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# **VALUE ADDED COURSE**

# COURSE ON NEUROSCIENCE OF HUMAN MOVEMENTS (2019-2020

S.NO	REG.NO	NAME	RESULT ANALYSIS
1.			
2	U17BM002	Keerthana N	A
2.	U17BM003	Raabiya Shareef A	А
3.	U17BM004	Karthika S	S
4.	U17BM005	Suprava Paul	A
5.	U17BM006	Kartic S	S
6.	U17BM008	Sorakayapeta R Manjusri	S
7.	U17BM009	Jeevaraj S	А
8.	U17BM010	B Karthikeyan	S
9.	U17BM011	V Varatharajan	S
10.	U17BM012	Vinodhini S	S
11.	U17BM013	Naveen Kumar M	S
12.	U17BM014	Dinesh Kumar R	S
13.	U17BM015	Mathankumar G K	А
14.	U17BM016	Ignatius Arun Sinjin G	S
15.	U17BM017	Debabrata Bandyopadhyay	А
16.	U17BM058	Rajalaxmi Mallick	А
17.	U17BM059	Shaik Afnan Ali	S
18.	U17BM060	Rajulapati Bhargavi	А
19.	U17BM061	Duddela Bharathi	S

20.		1	
20.	U17BM062	Rayala Pavan	S
21.	U17BM064	Jerin Judery D S	А
22.	U17BM065	Ambati Anitha	S
23.	C17BW1003	7 Hilouti 7 Hiltilu	<u> </u>
	U17BM066	NARMADHA E S	А
24.	U17BM067	VINCY SHAMLEY EBEN V	S
25.	U17BM068	THEVAR KALAYARASI SENTH	А
26.	U17BM069	ASHOK S	S
27.	U17BM070	CHINTHAPANTI PRANEETHA	A
28.	U17BT004	JEEVITHA S	S
29.	U17BT005	PALOJU DHARANI	S
30.	U17BT006	K KARAN	
			S
31	U17BT007	NIVEDHITHA T	S
32	U17BT009	JOTHI ILAVARASAN	S
33	U17BT010	AISHWARYA R	S
34	U17BT012	NAGAREDDY PRANEETH	S
35	U17BT013	REDDY MUTHYALA RAMYA	
36	U17BT015	TOTTARAMUDI JABILI	S
37	U17BR004	PREETHI P	S
38	U17BR005	PRIYADARSHENEE R	S
			А
39	U17BR006	SONIYA M	А
40	U17BR007	JARIS J	А

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# **VALUE ADDED COURSE**

# **COURSE ON NEUROSCIENCE OF HUMAN MOVEMENTS (2019-2020)**

S.NO	REG.NO	NAME	RESULT ANALYSIS
1.			
	U17BM002	Keerthana N	4.5
2.	U17BM003	Raabiya Shareef A	4.8
3.	U17BM004	Karthika S	4.3
4.	U17BM005	Suprava Paul	4
5.	U17BM006	Kartic S	4.2
6.	U17BM008	Sorakayapeta R Manjusri	4.5
7.	U17BM009	Jeevaraj S	4.6
8.	U17BM010	B Karthikeyan	4.8
9.	U17BM011	V Varatharajan	4.9
10.	U17BM012	Vinodhini S	4.3
11.	U17BM013	Naveen Kumar M	4.2
12.	U17BM014	Dinesh Kumar R	4.5
13.	U17BM015	Mathankumar G K	4.1
14.	U17BM016	Ignatius Arun Sinjin G	4.9
15.	U17BM017	Debabrata Bandyopadhyay	4.8
16.	U17BM058	Rajalaxmi Mallick	4.7
17.	U17BM059	Shaik Afnan Ali	4.6
18.	U17BM060	Rajulapati Bhargavi	4.5
19.	U17BM061	Duddela Bharathi	4.6

20.	U17BM062	Rayala Pavan	4.5
21.	U17BM064	Jerin Judery D S	4
22.	O I / DIVIOUT	Jerin Judery D 5	<u> </u>
	U17BM065	Ambati Anitha	4.1
23.	U17BM066	NARMADHA E S	4.2
24.			
	U17BM067	VINCY SHAMLEY EBEN V	4.3
25.	U17BM068	THEVAR KALAYARASI SENTH	4
26.			
	U17BM069	ASHOK S	4.1
27.			
	U17BM070	CHINTHAPANTI PRANEETHA	4.3
28.	U17BT004	JEEVITHA S	
			4.2
29.	U17BT005	PALOJU DHARANI	
			4.1
30.	U17BT006	K KARAN	4.8
31	U17BT007	NIVEDHITHA T	
			4.6
32	U17BT009	JOTHI ILAVARASAN	
			4.6
33	U17BT010	AISHWARYA R	
			4.5
34	U17BT012	NAGAREDDY PRANEETH	
		REDDY	4
35	U17BT013	MUTHYALA RAMYA	
			4.5
36	U17BT015	TOTTARAMUDI JABILI	
			4.2
37	U17BR004	PREETHI P	
			4.3
38	U17BR005	PRIYADARSHENEE R	
			4.6
39	U17BR006	SONIYA M	
			4.3
40	U17BR007	JARIS J	
			4.2
		•	

# **Value Added Course On Neuroscience Of Human Movements – 7.11.2019**







From Chennai

The Head 29-08-2019

Dept. of Biomedical Engineering

BIHER

To

The Dean

**BIHER** 

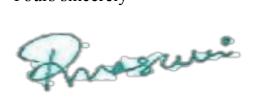
# Respected Sir

Sub: approval to start a value added course on "RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY" -reg

It has been planned by the Dept. of Biomedical Engineering to start a Value Added Course on "RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY" for the B-Tech Biomedical Engineering, Industrial Biotechnology and Genetic Engineering students from 16<sup>th</sup> September, 2019. The duration of the course is 30 hrs comprising of theory. I request you to kindly approve of the same.

Thanking you

Yours sincerely





Date: 30-08-2019

# SCHOOL OF BIOENGINEERING

# **CIRCULAR**

# Notification for Value added courses offered by the School of Bioengineering

The Department of Bio Medical Engineering, School of Bioengineering, is scheduled to offer a Value added Course on **RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY** from 16/09/2019 for a period of 3 weeks. Interested students can approach Dr. Vasukidevi R, Associate Professor and Course Coordinator, Department of Bio Medical Engineering for registration and for further details on or before 14<sup>th</sup> September 2019.

# Eligibility-II, III and IV B-Tech IBT, GE and BME

Course Coordinator

HOD

Kraguin

# Copy to:

Vice Chancellor

Pro Vice Chancellor

Additional Registrar

Deans

CoE

Heads of Departments

# DEPARTMENT OF BIO MEDICAL ENGINEERING

# VALUE ADDED COURSE ON RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY

# 2019-2020

# **COURSE CO-ORDINATOR DETAILS**

Faculty Name: Dr. Vasukidevi R,

Associate Professor,

Department of Bio Medical Engineering.

Email ID: vasukidevir.bme@bharathuniv.ac.in

**Mobile number:** 95660 75312.

# DEPARTMENT OF BIO MEDICAL ENGINEERING

### VALUE ADDED COURSE SYLLABUS

### 2019-2020

		L	T	P	C
	Residency Program In Binocular Vision And Vision				
Value added	Therapy				
course code	Total Contact Hours – 30	3	0	0	3
	Prerequisite – Human Anatomy and Physiology				

# **OBJECTIVES**

- To review basic refraction techniques including over fogging procedures.
- To learn the basic Binocular Vision (BV) assessments and nuances in diagnosing the BV anomalies
- To plan for Vision Therapy protocols for the BV conditions.

# MODULE 1. Strabismus:

Early Refractive Development- Visually Guided control of Refractive State: Animal Studies-Infant Accommodation and Convergence

### MODULE 2. Amblyopia

Conjugate Eye Movements of Infants-Development of the Vestibuloocular and Optokinetic reflexes

# MODULE 3. Eye movements:

Front-end Limitations to Infant Spatial vision: Examination of two analyses-Development of the Human Visual Field- Development of Scotopic Retinal Sensitivity-Infant Color vision-Orientation and Motion selective Mechanisms in Infants-Intrinsic Noise and Infant performance

# MODULE 4. Sensory and Motor evaluation:

Development of interocular vision in Infants- Stereopsis in Infants and its developmental relation to visual acuity-Sensorimotor Adaptation and Development of the Horopter-Two stages in the development of Binocular Vision and Eye Alignment

## MODULE 5. Diagnosis

#### TEXT/ REFERENCE BOOKS

- Scheiman M, Wick B. Clinical Management of Binocular Vision Heterophoric, Accommodative, and eye movement disorders, 2nd edition.
- 2. Philadelphia: Lippincott Williams & Wilkins, 2002.
- 3. Press L J. Applied Concepts in Vision Therapy. St. Louis: Mosby, 1997.

# SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# COURSE ON RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY (2019-2020)

	====)			
Session	Торіс	Date	Duration (Hr)	Resource person
Session I	Strabismus	16.09.2019	4	Dr.R.Vasukidevi
Session II	Strabismus	17.09.2019	4	Dr.R.Vasukidevi
Session III	Amblyopia	17.09.2019	3	Ms.S.Geetha
Session IV	Amblyopia	2309.2019	4	Dr.Emerson Solomon
Session V	Eye movements	24.09.2019	4	Dr.R.Vasukidevi
Session VI	Accommodation & Vergence interactions	24.09.2019	3	Dr.R.Vasukidevi
Session VII	Sensory and Motor evaluation	30.9.2019	4	Dr.Emerson Solomon
Session VIII	Diagnosis of accommodative, Vergence and oculomotor anomalies	01.10.2019	4	Dr.Emerson Solomon
Session IX	Diagnosis of accommodative, Vergence and oculomotor anomalies	01.10.2019	3	Ms.S.Geetha

## SCHOOL OF BIO-ENGINEERING

## DEPARTMENT OF BIO MEDICAL ENGINEERING

#### VALUE ADDED COURSE TIMETABLE

#### 2019-2020

Days / Period	9.00 - 9.50	II 9.50 - 10.40	III 10.50 – 11.40	IV 11.40 – 12.30	12.30 - 1.30	V 1.30 - 2.10	VI 2.10 - 2.50	VII 2.50 - 3.30
MON	RBVT							
TUE	RBVT			ΑK		RBVT		
WED					BREAK			
THU					LUNCH			
FRI					ΓΩ			
SAT								

SUBJECT CODE	SUBJECT NAME	STAFF
Theory		
Value added course	Residency Program In Binocular Vision And Vision Therapy (RBVT)	Dr.Vasukidevi R
	Room No	SK504

## DEPARTMENT OF BIO MEDICAL ENGINEERING

#### VALUE ADDED COURSE

# COURSE ON RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY (2019-2020) Students Name List

-		nts Name List		
S.NO	REG.NO	NAME	SEM/ YEAR	DEPART MENT
1.			V/III	BME
	U17BM026	Bharkavi M S		
2.			V/III	BME
	U17BM028	Sheeba Alexia B		
3.			V/III	BME
	U17BM029	Jeeva G		
4.			V/III	BME
	U17BM030	Swedha S		
5.			V/III	BME
	U17BM031	Loka Ranjani E		
6.			V/III	BME
	U17BM032	Pooja B		
7.			V/III	BME
	U17BM033	Varsha M		
8.			V/III	BME
	U17BM034	Avula Arun Kumar		
9.			V/III	BME
	U17BM036	Lokesh M		
10.			V/III	BME
	U17BM037	Medivemulla Chenna Reddy		
11.			V/III	BME
	U17BM106	RAMANAN R		
12.			V/III	BME
	U17BM107	TAPALSHAIK FHAZUL RAHMA		
13.			V/III	BME
	U17BM109	CHEEKATIPALLI LEENA		
14.			V/III	BME
	U17BM110	BUCHAGARI KAVYA		
15.			V/III	IBT
	U17BM113	G VEENA		
16.			V/III	IBT
	U17BT022	SOLENKA MANOJ KUMAR		
17.			V/III	IBT
	U17BT023	KANCHA SIDHARTHA KUMAI		
18.			V/III	IBT
	U17BT024	GATTUPALLI VENKATA CHAI		1
19.			V/III	IBT
	U17BT026	MADHAN KUMAR S		

	Г			
20.			V/III	IBT
	U17BT027	KATA VEERA SUDARSAN		
21.			V/III	IBT
	U17BT029	A S MOHAN KRISHNA		
22.			V/III	IBT
	U17BT030	MALLIGA V		
23.			V/III	BR
	U17BR009	HEMAMBUJAM D		
24.			V/III	BR
	U17BR010	MOHANED SHAIBI K M		
25.			V/III	BR
	U17BR011	VIJAYASRI T		
26.			V/III	BR
	U17BR012	EVANGELINE SELES JL		
27.			V/III	BR
	U17BR013	SAHANA SHREE S		
28.			V/III	BR
	U17BR014	JEEVANANTHAM N		
29.			V/III	BR
	U17BR015	THAMARAI ARASI R		
30.			V/III	BR
	U17BR016	NAVEEN KUMAR K		

# SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING

#### VALUE ADDED COURSE

# COURSE ON RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY (2019-2020) Students Name List

	Stu	dents Name List	
S.NO	REG.NO	NAME	RESULT ANALYSIS
1.			
1.	U17BM026	Bharkavi M S	А
2.			
	U17BM028	Sheeba Alexia B	А
3.	U17BM029	Jeeva G	S
4.	U17BM030	Swedha S	А
5.	U17BM031	Loka Ranjani E	S
6.	U17BM032	Pooja B	S
7.		Varsha M	
8.	U17BM033	v arsna M	Α
0.	U17BM034	Avula Arun Kumar	S
9.	U17BM036	Lokesh M	S
10.	U17BM037	Medivemulla Chenna Reddy	S
11.	U17BM106	RAMANAN R	S
12.	U17BM107	TAPALSHAIK FHAZUL RAHMA	S
13.	CT/BWTO/	THE ALBITAIN THE ZOL KATIMA	3
	U17BM109	CHEEKATIPALLI LEENA	А
14.	U17BM110	BUCHAGARI KAVYA	S
15.	U17BM113	G VEENA	А
16.	U17BT022	SOLENKA MANOJ KUMAR	A
17.	U17BT023	KANCHA SIDHARTHA KUMAI	S
18.	U17BT024	GATTUPALLI VENKATA CHAI	A
19.			
	U17BT026	MADHAN KUMAR S	S

20.			
20.	U17BT027	KATA VEERA SUDARSAN	S
	U1/B102/	KATA VEERA SUDAKSAN	3
21.			
	U17BT029	A S MOHAN KRISHNA	Α
22.			
	U17BT030	MALLIGA V	S
23.			
	U17BR009	HEMAMBUJAM D	Α
24.			
	U17BR010	MOHANED SHAIBI K M	S
25.			
	U17BR011	VIJAYASRI T	Α
26.			
	U17BR012	EVANGELINE SELES J L	S
27.			
	U17BR013	SAHANA SHREE S	Α
28.	U17BR014	JEEVANANTHAM N	
			S
29.	U17BR015	THAMARAI ARASI R	
			S
30.	U17BR016	NAVEEN KUMAR K	
			S

#### SCHOOL OF BIO-ENGINEERING

#### **DEPARTMENT OF BIO MEDICAL ENGINEERING**

#### VALUE ADDED COURSE

# COURSE ON RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY (2019-2020) Students Name List

	Students Name List						
S.NO	REG.NO	NAME	RESULT ANALYSIS				
1							
1.	U17BM026	Bharkavi M S	4.5				
2.	01/DW020	Bharkavi W S	4.5				
2.	U17BM028	Sheeba Alexia B	4.8				
3.							
	U17BM029	Jeeva G	4.3				
4.	V115D) (020						
5	U17BM030	Swedha S	4				
5.	U17BM031	Loka Ranjani E	4.2				
6.	CT/BIVIOST	Loka Kanjani E	7.2				
	U17BM032	Pooja B	4.5				
7.		-					
	U17BM033	Varsha M	4.6				
8.	1117DM024	A1- A V	4.0				
9.	U17BM034	Avula Arun Kumar	4.8				
<i>)</i> .	U17BM036	Lokesh M	4.9				
10.							
	U17BM037	Medivemulla Chenna Reddy	4.3				
11.							
10	U17BM106	RAMANAN R	4.2				
12.	U17BM107	TAPALSHAIK FHAZUL RAHMA	4.5				
13.	O1/BW110/	TATALSHAIK PHAZOL KAHWA	4.5				
10.	U17BM109	CHEEKATIPALLI LEENA	4.1				
14.							
	U17BM110	BUCHAGARI KAVYA	4.9				
15.	1117DW112	CATENIA	4.0				
16.	U17BM113	G VEENA	4.8				
10.	U17BT022	SOLENKA MANOJ KUMAR	4.7				
17.	21,2102						
	U17BT023	KANCHA SIDHARTHA KUMAI	4.6				
18.							
10	U17BT024	GATTUPALLI VENKATA CHAI	4.5				
19.	U17BT026	MADHAN KUMAR S	4.6				
	U1/D1020	MADIIAN KUMAK S	4.0				

20. U17BT027 KATA VEERA SUDARSAN  21. U17BT029 A S MOHAN KRISHNA  22. U17BT030 MALLIGA V  23. U17BR009 HEMAMBUJAM D  24. U17BR010 MOHANED SHAIBI K M  25. U17BR011 VIJAYASRI T  26. U17BR012 EVANGELINE SELES J L  27. U17BR013 SAHANA SHREE S	4.5 4 4.1 4.2 4.3 4 4.1
U17BT029   A S MOHAN KRISHNA	4.1 4.2 4.3
U17BT030   MALLIGA V	4.2 4.3 4
U17BR009 HEMAMBUJAM D  24. U17BR010 MOHANED SHAIBI K M  25. U17BR011 VIJAYASRI T  26. U17BR012 EVANGELINE SELES J L  27. U17BR013 SAHANA SHREE S	4.3
U17BR010 MOHANED SHAIBI K M  25. U17BR011 VIJAYASRI T  26. U17BR012 EVANGELINE SELES J L  27. U17BR013 SAHANA SHREE S	4
U17BR011 VIJAYASRI T  26. U17BR012 EVANGELINE SELES J L  27. U17BR013 SAHANA SHREE S	
U17BR012 EVANGELINE SELES J L  27. U17BR013 SAHANA SHREE S	4.1
U17BR013 SAHANA SHREE S	4.1
	4.3
28. U17BR014 JEEVANANTHAM N	4.2
29. U17BR015 THAMARAI ARASI R	4.1
30. U17BR016 NAVEEN KUMAR K	4.8
I	

## COURSE ON RESIDENCY PROGRAM IN BINOCULAR VISION AND VISION THERAPY -24.9.2019







# SCHOOL OF BIOENGINEERING VALUE ADDED COURSE ON RESIDENCY PRORAM IN BINOCULAR VISION

#### AND VISION THERAPY

#### Certificate

This is to certify that Mr /Ms Ramanan R has attended three weeks value added course on RESIDENCY PRORAM IN BINOCULAR VISION AND VISION THERAPY conducted by Department of Biomedical Engineering at Bharath Institute of Higher Education and Research, Chennai (TN), India during 16<sup>th</sup> Sept -01<sup>st</sup> Oct 2019.

HOD

DEAN

From

Chennai

The Head of the Department

27-12-2019

Department of Biomedical Engineering

**BIHER** 

To

The Dean

**BIHER** 

# Respected Sir

Sub: Approval to conduct a "Short term course on Nanotechnology Medicine" -reg

It has been planned by the Department of Biomedical Engineering to start a "Short term course on Nanotechnology Medicine" for the benefit of B.Tech Biomedical Engineering, B.Tech Industrial Biotechnology and B-Tech Genetic Engineering students from 27<sup>th</sup>January, 2020. The duration of the course is 30 hrs comprising of both theory and practical classes. I request you to kindly approve for the same.

Thanking you





Date: 03-01-2020

# SCHOOL OF BIOENGINEERING CIRCULAR

# Notification for Value added courses offered by the School of Bioengineering

The Department of Bio Medical Engineering, School of Bioengineering, is scheduled to offer a "Short term course on Nanotechnology Medicine" from 27/01/2020 for a period of 3 weeks. Interested students can approach Mr. S. Prasath, Assistant Professor and Course Coordinator, Department of Bio Medical Engineering, for registration and further details on or before 24<sup>th</sup> January 2020.

Eligibility-II, III and IV B-Tech IBT, GE and BME

Course Coordinator

Copy to:

Vice Chancellor

Pro Vice Chancellor

Additional Registrar

Deans

CoE

Heads of Departments

HOD



# DEPARTMENT OF BIO MEDICAL ENGINEERING

## SHORT TERM COURSE ON NANOTECHNOLOGY MEDICINE

#### 2019-2020

#### **COURSE CO-ORDINATOR DETAILS**

Faculty Name: Mr. S. Prasath,

Assistant Professor,

Department of Bio Medical Engineering.

Email ID: mail.surendhar@gmail.com

Mobile number: 87545 81937

# DEPARTMENT OF BIO MEDICAL ENGINEERING

#### 2019-2020

# VALUE ADDED COURSE SYLLABUS SHORT TERM COURSE ON NANOTECHNOLOGY MEDICINE

### **MODULE 1**

Introduction to nano, Nano-biomimicry, Synthesis of nanomaterials by physical and chemical methods, Synthesis of nanomaterials by biological methods, Characterisation of nanomaterials.

#### **MODULE 2**

Nanomaterials for cancer diagnosis, Nanomaterials for cancer therapy, Nanotechnology in tissue engineering, Nano artificial cells, Nanotechnology in organ printing.

#### **MODULE 3**

Nanotechnology in point-of-care diagnostics, Nanopharmacology& drug targeting, Cellular uptake mechanisms of nanomaterials, In vitro methods to study antibacterial and anticancer properties of nanomaterials, Nanotoxicology

Total Contact Hour: 30

# SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

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Session	Topic	Date	Duration (Hr)	Resource person
Session I	Introduction to nano, Nano-biomimicry.	27.01.2020	4	Mr S Pracath
Cococo II	Synthesis of nanomaterials by physical and chemical	28 01 2020		
Session II	methods, Synthesis of nanomaterials by biological methods	0707:10:07	رع	Mr.S.Prasath
Session III	Characterisation of nanomaterials	29.01.2020	3	Mr.S.Prasath
	Nanomaterials for cancer diagnosis, Nanomaterials for cancer			
Session IV	therapy.	03.02.2020	4	Ms. S. Geetha
Session V	Nanotechnology in tissue engineering	04.02.2020		Ms S Geetha
Session VI	Session VI Nano artificial cells, Nanotechnology in organ printing.	05.02.2020	3	Ms. S. Geetha
			,	
Session VII	Session VII Nanotechnology in point-of-care diagnostics, Nanopharmacol	10.02.2020	4	Dr. F. Emerson Solomon
	Cellular uptake mechanisms of nanomaterials, In vitro			
	methods to study antibacterial and anticancer properties of	11.02.2020		
Session VIII	Session VIII nanomaterials.		3	Dr. F. Emerson Solomon
		000000000000000000000000000000000000000		
Session IX	Session IX Nanotoxicology	12.02.2020	3	Dr. F. Emerson Solomon

# DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# Short term course on Nanotechnology Medicine STUDENTS NAME LIST

REG.NO	NAME		
U16BM006	Siva Harish S		
U16BM012	Ashini IS		
U16BM019	Ajeesh S P		
U16BM025	Kudugunta Achyutha Reddy		
U16BM029	Mulagada Nikshiptha		
U16BM035	Vijay Kumar P		
U16BM042	Kalleapadam Akshay Das		
U16BM050	Karanam Kavya		
U16BM054	Rakhi Dash		
U16BM060	Divi Divya Sree		
U16BM067	Ajitha .K		
U16BM074	Shouvik Poddar		
U16BM081	Pravallika B		
U17BM005	Suprava Paul		
U17BM006	Kartic S		
U17BM007	Divine Winfred W		
U17BM015	Mathankumar G K		
U17BM019	Kalyaneswar Mishra		
U17BM024	Afreen Banu A		
U17BM030	Swedha S		
U17BM037	Medivemulla Chenna Reddy		
U17BM041	Kottinti Swati		
U17BM050	Madhav P		
U17BM056	Kusampudi Likhita Supraja		
U17BM064	Jerin Judery D S		
U17BM075	Rahul K		
U17BM083	Fathima K		
U17BM091	Jency C		
U17BM098	Karthik B		
U17BM103	Vijay shankar Tiwary.S		
U17BM107	Tapalshaik Fhazul Rahman		
U17BM115	Jayasree S		
U17BM121	Hariharan S		
U17BM127	Marigari Hemalatha		
U17BM132	Kudikala Vani		
U18BM004	Selvaganapathy V		
U18BM005	Paveesh M		
	Yushaaq Hussain Z		
	U16BM006 U16BM012 U16BM019 U16BM025 U16BM029 U16BM035 U16BM042 U16BM050 U16BM054 U16BM060 U16BM067 U16BM067 U16BM081 U17BM005 U17BM006 U17BM007 U17BM015 U17BM019 U17BM019 U17BM030 U17BM030 U17BM041 U17BM037 U17BM041 U17BM056 U17BM050 U17BM050 U17BM050 U17BM050 U17BM050 U17BM050 U17BM075 U17BM083 U17BM091 U17BM091 U17BM098 U17BM103 U17BM103 U17BM103 U17BM103 U17BM103 U17BM103 U17BM103		

39	U18BM023	Siddavatam Mounika
40	U18BM027	Bhavani M
41	U18BM031	Jajula Prahnitha
42	U18BM035	Jonnagadla Harika
43	U18BM043	Gottiparthi Vaishnavi
44	U18BM056	P Haritha
45	U18BM066	Vykuntam Chandini .
46	U18BM069	Mandem Sumanasree
47	U18BM070	Srikanth M
48	U18BM071	Basode Veeranna
49	U17BM120	Arun K
50	U17BM130	Thagirisapu Venu Bhargavi

# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH SCHOOL OF BIO-ENGINEERING DEPARTMENT OF BIO MEDICAL ENGINEERING VALUE ADDED COURSE

# Short term course on Nanotechnology Medicine Students Result

2.         U16BM0012         Ashini 1 S         A           3.         U16BM019         Ajcesh S P         A           4.         U16BM025         Kudugunta Achyutha Reddy         A           5.         U16BM029         Mulagada Nikshiptha         S           6.         U16BM035         Vija Kumar P         S           7.         U16BM042         Kalleapadam Akshay Das         A           8.         U16BM050         Karanam Kavya         S           9.         U16BM054         Rakhi Dash         A           10.         U16BM060         Divi Divya Sree         S           11.         U16BM060         Divi Divya Sree         S           11.         U16BM061         Ajitha K         A           12.         U16BM074         Shouvik Poddar         S           13.         U16BM081         Pravallika B         A           14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM024         <	S.NO	REG.NO	NAME	RESULT
2.         U16BM019         Ajeesh S P         A           4.         U16BM025         Kudugunta Achyutha Reddy         A           5.         U16BM029         Mulagada Nikshiptha         S           6.         U16BM035         Vijay Kumar P         5           7.         U16BM042         Kalleapadam Akshay Das         A           8.         U16BM050         Karanam Kavya         5           9.         U16BM054         Rakhi Dash         A           10.         U16BM060         Divi Divya Sree         5           11.         U16BM060         Divi Divya Sree         5           12.         U16BM074         Shouvik Poddar         5           13.         U16BM073         Pravallika B         A           14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         5           17.         U17BM006         Kartic S         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030	1.	U16BM006	Siva Harish S	S
3.         U16BM019         Ajeesh S P         A           4.         U16BM025         Kudugunta Achyutha Reddy         A           5.         U16BM029         Mulagada Nikshiptha         5           6.         U16BM035         Vijay Kumar P         5           7.         U16BM042         Kalleapadam Akshay Das         A           8.         U16BM054         Rakhi Dash         A           10.         U16BM060         Divi Divya Sree         S           11.         U16BM067         Ajitha .K         A           12.         U16BM067         Ajitha .K         A           12.         U16BM074         Shouvik Poddar         \$           13.         U16BM081         Pravallika B         A           14.         U17BM005         Suprava Paul         \$           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         \$           17.         U17BM0015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         \$           19.         U17BM024         Afreen Banu A         A           20.         U17BM030		U16BM012	Ashini 1S	
4.         U16BM025         Kudugunta Achyutha Reddy         A           5.         U16BM029         Mulagada Nikshiptha         S           6.         U16BM035         Vijay Kumar P         S           7.         U16BM042         Kalleapadam Akshay Das         A           8.         U16BM050         Karanam Kavya         S           9.         U16BM054         Rakhi Dash         A           10.         U16BM067         Ajitha .K         A           11.         U16BM067         Ajitha .K         A           12.         U16BM074         Shouvik Poddar         S           13.         U16BM081         Pravallika B         A           14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM030		U16BM019	Ajeesh S P	
5.         U16BM029         Mulagada Nikshiptha         5           6.         U16BM035         Vijay Kumar P         S           7.         U16BM042         Kalleapadam Akshay Das         A           8.         U16BM050         Karanam Kavya         S           9.         U16BM054         Rakhi Dash         A           10.         U16BM060         Divi Divya Sree         S           11.         U16BM067         Ajitha .K         A           12.         U16BM0681         Pravallika B         A           13.         U16BM081         Pravallika B         A           14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedtha S         S           21.         U17BM037         Medivermulla Chenna Reddy         A           22.         U17BM041		U16BM025	Kudugunta Achyutha Reddy	
6.         U16BM035         Vijay Kumar P         5           7.         U16BM042         Kalleapadam Akshay Das         A           8.         U16BM050         Karanam Kavya         S           9.         U16BM064         Rakhi Dash         A           10.         U16BM060         Divi Divya Sree         S           11.         U16BM067         Ajitha .K         A           12.         U16BM074         Shouvik Poddar         S           13.         U16BM081         Pravallika B         A           14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM031         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM056		U16BM029	Mulagada Nikshiptha	
8.         U16BM050         Karanam Kavya         S           9.         U16BM054         Rakhi Dash         A           10.         U16BM060         Divi Divya Sree         S           11.         U16BM067         Ajitha .K         A           12.         U16BM074         Shouvik Poddar         S           13.         U16BM081         Pravallika B         A           14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM031         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM056         Kusampudi Likhita Supraja         S           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U1		U16BM035	Vijay Kumar P	
8.         U16BM050         Karanam Kavya         5           9.         U16BM054         Rakhi Dash         A           10.         U16BM060         Divi Divya Sree         5           11.         U16BM067         Ajitha K         A           12.         U16BM074         Shouvik Poddar         S           13.         U16BM081         Pravallika B         A           14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM031         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064		U16BM042	Kalleapadam Akshay Das	A
10.		U16BM050	Karanam Kavya	
11.			Rakhi Dash	A
12.		U16BM060	Divi Divya Sree	S
12.         U16BM074         Shouvik Poddar         S           13.         U16BM081         Pravallika B         A           14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM037         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064         Jerin Judery D S         S           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         S           28.         U17BM091         Jency C         A           29.         U17BM098 <td< td=""><td></td><td>U16BM067</td><td>Ajitha .K</td><td>A</td></td<>		U16BM067	Ajitha .K	A
13.         U16BM081         Pravallika B         A           14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM037         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064         Jerin Judery D S         S           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         S           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM107         Tapa	-	U16BM074	Shouvik Poddar	
14.         U17BM005         Suprava Paul         S           15.         U17BM006         Kartie S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM031         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064         Jerin Judery D S         S           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         S           28.         U17BM091         Jency C         A           29.         U17BM103         Vijay shankar Tiwary.S         S           31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U17BM11		<u>U</u> 16BM081	Pravallika B	
15.         U17BM006         Kartic S         A           16.         U17BM007         Divine Winfred W         S           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM037         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064         Jerin Judery D S         S           26.         U17BM064         Jerin Judery D S         S           27.         U17BM083         Fathima K         A           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM103         Vijay shankar Tiwary.S         S           31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U		U17BM005	Suprava Paul	
16.         U17BM007         Divine Winfred W         \$           17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         \$           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         \$           21.         U17BM037         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         \$           23.         U17BM050         Madhav P         A           24.         U17BM050         Kusampudi Likhita Supraja         \$           25.         U17BM064         Jerin Judery D S         \$           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         \$           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM103         Vijay shankar Tiwary.S         \$           31         U17BM107         Tapalshaik Fhazul Rahman         \$           32         U17BM115         Jayasree S         A           33         U17BM121<		U17BM006	Kartic S	
17.         U17BM015         Mathankumar G K         A           18.         U17BM019         Kalyaneswar Mishra         S           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM037         Medivemulla Chema Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064         Jerin Judery D S         S           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         S           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM103         Vijay shankar Tiwary.S         S           31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U17BM115         Jayasree S         A           33         U17BM121         Hariharan S         S           34         U17BM127		U17BM007	Divine Winfred W	
18.         U17BM019         Kalyaneswar Mishra         \$           19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         \$           21.         U17BM037         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         \$           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         \$           25.         U17BM064         Jerin Judery D S         \$           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         \$           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM103         Vijay shankar Tiwary.S         \$           31         U17BM107         Tapalshaik Fhazul Rahman         \$           32         U17BM115         Jayasree S         A           33         U17BM121         Hariharan S         \$           34         U17BM122         Kudikala Vani         \$           36         U18BM004		U17BM015	Mathankumar G K	
19.         U17BM024         Afreen Banu A         A           20.         U17BM030         Swedha S         S           21.         U17BM037         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064         Jerin Judery D S         S           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         S           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM103         Vijay shankar Tiwary.S         S           31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U17BM115         Jayasree S         A           33         U17BM121         Hariharan S         S           34         U17BM127         Marigari Hemalatha         A           35         U18BM004         Selvaganapathy V         S           37         U18BM005		U17BM019	Kalyaneswar Mishra	
20.         U17BM030         Swedha S         S           21.         U17BM037         Medivemulla Chenna Reddy         A           22.         U17BM041         Kottinti Swati         S           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064         Jerin Judery D S         S           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         S           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM103         Vijay shankar Tiwary.S         S           31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U17BM115         Jayasree S         A           33         U17BM121         Hariharan S         S           34         U17BM127         Marigari Hemalatha         A           35         U18BM004         Selvaganapathy V         S           37         U18BM005         Paveesh M         S           38         U18BM018		U17BM024	Afreen Banu A	
21.       U17BM037       Medivenulla Chenna Reddy       A         22.       U17BM041       Kottinti Swati       S         23.       U17BM050       Madhav P       A         24.       U17BM056       Kusampudi Likhita Supraja       S         25.       U17BM064       Jerin Judery D S       S         26.       U17BM075       Rahul K       A         27.       U17BM083       Fathima K       S         28.       U17BM091       Jency C       A         29.       U17BM098       Karthik B       A         30.       U17BM103       Vijay shankar Tiwary.S       S         31       U17BM107       Tapalshaik Fhazul Rahman       S         32       U17BM115       Jayasree S       A         33       U17BM121       Hariharan S       S         34       U17BM127       Marigari Hemalatha       A         35       U17BM132       Kudikala Vani       S         36       U18BM004       Selvaganapathy V       S         37       U18BM005       Paveesh M       S         38       U18BM018       Yushaaq Hussain Z		U17BM030	Swedha S	
22.         U17BM041         Kottinti Swati         S           23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064         Jerin Judery D S         S           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         S           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM103         Vijay shankar Tiwary.S         S           31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U17BM115         Jayasree S         A           33         U17BM121         Hariharan S         S           34         U17BM127         Marigari Hemalatha         A           35         U18M004         Selvaganapathy V         S           37         U18BM005         Paveesh M         S           38         U18BM018         Yushaaq Hussain Z		U17BM037	Medivemulla Chenna Reddy	
23.         U17BM050         Madhav P         A           24.         U17BM056         Kusampudi Likhita Supraja         S           25.         U17BM064         Jerin Judery D S         S           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         S           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM103         Vijay shankar Tiwary.S         S           31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U17BM115         Jayasree S         A           33         U17BM121         Hariharan S         S           34         U17BM127         Marigari Hemalatha         A           35         U17BM132         Kudikala Vani         S           36         U18BM004         Selvaganapathy V         S           37         U18BM005         Paveesh M         S           38         U18BM018         Yushaaq Hussain Z		U17BM041	Kottinti Swati	
24.       U17BM056       Kusampudi Likhita Supraja       S         25.       U17BM064       Jerin Judery D S       S         26.       U17BM075       Rahul K       A         27.       U17BM083       Fathima K       S         28.       U17BM091       Jency C       A         29.       U17BM098       Karthik B       A         30.       U17BM103       Vijay shankar Tiwary.S       S         31       U17BM107       Tapalshaik Fhazul Rahman       S         32       U17BM115       Jayasree S       A         33       U17BM121       Hariharan S       S         34       U17BM127       Marigari Hemalatha       A         35       U17BM132       Kudikala Vani       S         36       U18BM004       Selvaganapathy V       S         37       U18BM005       Paveesh M       S         38       U18BM018       Yushaaq Hussain Z		U17BM050		
25.         U17BM064         Jerin Judery D S         S           26.         U17BM075         Rahul K         A           27.         U17BM083         Fathima K         S           28.         U17BM091         Jency C         A           29.         U17BM098         Karthik B         A           30.         U17BM103         Vijay shankar Tiwary.S         S           31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U17BM115         Jayasree S         A           33         U17BM121         Hariharan S         S           34         U17BM127         Marigari Hemalatha         A           35         U17BM132         Kudikala Vani         S           36         U18BM004         Selvaganapathy V         S           37         U18BM005         Paveesh M         S           38         U18BM018         Yushaaq Hussain Z         A		U17BM056	Kusampudi Likhita Supraja	
26.       U17BM075       Rahul K       A         27.       U17BM083       Fathima K       S         28.       U17BM091       Jency C       A         29.       U17BM098       Karthik B       A         30.       U17BM103       Vijay shankar Tiwary.S       S         31       U17BM107       Tapalshaik Fhazul Rahman       S         32       U17BM115       Jayasree S       A         33       U17BM121       Hariharan S       S         34       U17BM127       Marigari Hemalatha       A         35       U17BM132       Kudikala Vani       S         36       U18BM004       Selvaganapathy V       S         37       U18BM005       Paveesh M       S         38       U18BM018       Yushaaq Hussain Z       A		U17BM064	Jerin Judery DS	
27.       U17BM083       Fathima K       S         28.       U17BM091       Jency C       A         29.       U17BM098       Karthik B       A         30.       U17BM103       Vijay shankar Tiwary.S       S         31       U17BM107       Tapalshaik Fhazul Rahman       S         32       U17BM115       Jayasree S       A         33       U17BM121       Hariharan S       S         34       U17BM127       Marigari Hemalatha       A         35       U17BM132       Kudikala Vani       S         36       U18BM004       Selvaganapathy V       S         37       U18BM005       Paveesh M       S         38       U18BM018       Yushaaq Hussain Z       A		U17BM075	Rahul K	
28.       U17BM091       Jency C       A         29.       U17BM098       Karthik B       A         30.       U17BM103       Vijay shankar Tiwary.S       S         31       U17BM107       Tapalshaik Fhazul Rahman       S         32       U17BM115       Jayasree S       A         33       U17BM121       Hariharan S       S         34       U17BM127       Marigari Hemalatha       A         35       U17BM132       Kudikala Vani       S         36       U18BM004       Selvaganapathy V       S         37       U18BM005       Paveesh M       S         38       U18BM018       Yushaaq Hussain Z       A		U17BM083	Fathima K	
29.       U17BM098       Karthik B       A         30.       U17BM103       Vijay shankar Tiwary.S       S         31       U17BM107       Tapalshaik Fhazul Rahman       S         32       U17BM115       Jayasree S       A         33       U17BM121       Hariharan S       S         34       U17BM127       Marigari Hemalatha       A         35       U17BM132       Kudikala Vani       S         36       U18BM004       Selvaganapathy V       S         37       U18BM005       Paveesh M       S         38       U18BM018       Yushaaq Hussain Z       A		U17BM091	Jency C	
30.         U17BM103         Vijay shankar Tiwary.S         S           31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U17BM115         Jayasree S         A           33         U17BM121         Hariharan S         S           34         U17BM127         Marigari Hemalatha         A           35         U17BM132         Kudikala Vani         S           36         U18BM004         Selvaganapathy V         S           37         U18BM005         Paveesh M         S           38         U18BM018         Yushaaq Hussain Z         A		U17BM098	Karthik B	
31         U17BM107         Tapalshaik Fhazul Rahman         S           32         U17BM115         Jayasree S         A           33         U17BM121         Hariharan S         S           34         U17BM127         Marigari Hemalatha         A           35         U17BM132         Kudikala Vani         S           36         U18BM004         Selvaganapathy V         S           37         U18BM005         Paveesh M         S           38         U18BM018         Yushaaq Hussain Z         A		U17BM103	Vijay shankar Tiwary.S	
32       U17BM115       Jayasree S       A         33       U17BM121       Hariharan S       S         34       U17BM127       Marigari Hemalatha       A         35       U17BM132       Kudikala Vani       S         36       U18BM004       Selvaganapathy V       S         37       U18BM005       Paveesh M       S         38       U18BM018       Yushaaq Hussain Z       A		U17BM107	Tapalshaik Fhazul Rahman	
33         U17BM121         Hariharan S         S           34         U17BM127         Marigari Hemalatha         A           35         U17BM132         Kudikala Vani         S           36         U18BM004         Selvaganapathy V         S           37         U18BM005         Paveesh M         S           38         U18BM018         Yushaaq Hussain Z         A		U17BM115	Jayasree S	
34       U17BM127       Marigari Hemalatha       A         35       U17BM132       Kudikala Vani       S         36       U18BM004       Selvaganapathy V       S         37       U18BM005       Paveesh M       S         38       U18BM018       Yushaaq Hussain Z       A	33	U17BM121	Hariharan S	
35         U17BM132         Kudikala Vani         S           36         U18BM004         Selvaganapathy V         S           37         U18BM005         Paveesh M         S           38         U18BM018         Yushaaq Hussain Z         A	34	U17BM127	Marigari Hemalatha	
36         U18BM004         Selvaganapathy V         S           37         U18BM005         Paveesh M         S           38         U18BM018         Yushaaq Hussain Z         A	35	U17BM132	Kudikala Vani	
37         U18BM005         Paveesh M         S           38         U18BM018         Yushaaq Hussain Z         A	_ 36	U18BM004	Selvaganapathy V	
38 U18BM018 Yushaaq Hussain Z	37	U18BM005	Paveesh M	
	38	U18BM018	Yushaaq Hussain Z	
39 U18BM023 Siddavatam Mounika S	39	U18BM023		A

40	U18BM027	Bhavani M	Α
41	U18BM031	Jajula Prahnitha	S
42	U18BM035	Jonnagadla Harika	S
43	U18BM043	Gottiparthi Vaishnavi	S
44	U18BM056	P Haritha	S
45	U18BM066	Vykuntam Chandini .	S
46	U18BM069	Mandem Sumanasree	A
47	U18BM070	Srikanth M	S
48	U18BM071	Basode Veeranna	S
49	U17BM120	Arun K	A
50	U17BM130	Thagirisapu Venu Bhargavi	S

# **DEPARTMENT OF BIOMEDICAL ENGINEERING**

Name: SIVA HARISH . S

Register Number: U16BM006

Academic year: 2019 - 2020

Name of the course offered: SHORT TERM COURSE ON NANOTECHNOLOGY MEDICINE

## **Student Feedback**

		Rating				
S.No	Criteria	Excellent	Very Good	Good	Fair	Satisfactory
1	Course content	~				
2	Skill development		~			
3	Motivation	~				
4	Regularity of the faculty	/				
5	Coverage of the syllabus		~			
6	Resourse person interaction with students	/				
7	Outcome					
8	Individual Attention	~				

Signature of the Course co-ordinator

Signature of the Student

# BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH SCHOOL OF BIOENGINEERING DEPARTMENT OF BIOMEDICAL ENGINEERING

Name: M, powersh

Register Number: 018 Bmoo5

Academic year: 2019 - 2020

Name of the course offered: Short term Course on Wanotechnology medcine

# Student Feedback

		Rating				
S.No	Criteria	Excellent	Very Good	Good	Fair	Satisfactory
1	Course content	V				
2	Skill development	V				
3	Motivation		И			
4	Regularity of the faculty	И				
5	Coverage of the syllabus		N			
6	Resourse person interaction with students	U				
7	Outcome	N				
8	Individual Attention		И			

Signature of the Course co-ordinator

Signature of the Studen





# DEPARTMENT OF BIOMEDICAL ENGINEERING CERTIFICATE OF PARTICIPATION

This is to certify that Mr/Ms/Mrs/Dr Mulagada Nikshiptha

Medicine" organized by the Department of Biomedical Engineering, Bharath has completed the value added course on "Short term course on Nanotechnology

Institute of Higher Education and Research, Chennai (TN), India during 27th

January to 12th February, 2020.

Co-ordinator Mr. S. Prasath

Convenor Dr. R. Vasuki