



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

From

Chennai

Head of the Department

16-09-2022

Department of Biomedical Engineering

BIHER

To

The Dean


BIHER

Respected Sir,

Sub: Approval to conduct a value added course on “MEDICAL IMAGE PROCESSING” -reg

It has been planned by the Department of Biomedical Engineering to conduct a Value Added Course on “MEDICAL IMAGE PROCESSING” for the benefit of B. Tech & M.Tech Biomedical Engineering, B. Tech Industrial Biotechnology and B-Tech Genetic Engineering students from 04th October, 2022. 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


Yours sincerely
Dr. R. Vasuki
Professor & Head/ BME



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BHARATH INSTITUTE OF SCIENCE & TECHNOLOGY

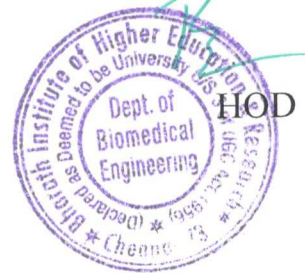
Date: 20-09-2022

**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 “**MEDICAL IMAGE PROCESSING**” from 04/10/2022 for a period of 3 weeks. Interested students can approach Ms. R. Vinodhini, Assistant Professor and Course Coordinator, Department of Bio Medical Engineering, for registration and further details on or before 26th September 2022.

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



Copy to:

Vice Chancellor

Pro Vice Chancellor

Additional Registrar

Deans

CoE

Heads of Departments

BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

SCHOOL OF BIO-ENGINEERING

DEPARTMENT OF BIO MEDICAL ENGINEERING

VALUE ADDED COURSE ON “MEDICAL IMAGE PROCESSING”

2022-2023

COURSE CO-ORDINATOR DETAILS

Faculty Name: Ms. R. Vinodhini,
Assistant Professor,
Department of Bio Medical Engineering.

Email ID: vinodhini.biomedical@bharathuniv.ac.in

Mobile number: 9176571537



BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

SCHOOL OF BIO-ENGINEERING

DEPARTMENT OF BIO MEDICAL ENGINEERING

2022-2023

VALUE ADDED COURSE SYLLABUS

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

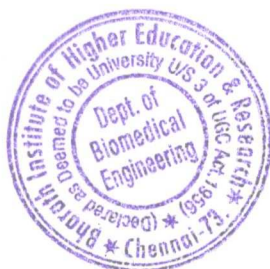
MODULE 2

Image enhancement – Gray level Transforms – Histogram transformation – convolution mask operators – contrast enhancement – detection of region 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 – Model for generation of texture – Statistical analysis of texture - Fractal analysis – Fouries domain analysis - segmentation and structural analysis – Pattern classification & diagnostic decision – measure of diagnostic accuracy

Total Contact Hour: 30



SCHOOL OF BIO-ENGINEERING
DEPARTMENT OF BIO MEDICAL ENGINEERING
VALUE ADDED COURSE - MEDICAL IMAGE PROCESSING

LESSON PLAN

Session	Topic	Date	Duration (Hr)	Resource person
Session I	Objectives of biomedical image analysis- computer aided diagnosis- nature of medical images: X-ray imaging – Tomography – Nuclear Medicine Imaging –	04/10/2022	3	R. Vinodhini
Session II	SPECT imaging – Positron imaging tomography – Ultrasonography – Magnetic resonance imaging, Removal of artifacts –	07/10/2022	3	R. Vinodhini
Session III	Space domain filters - Frequency domain filters – Optimal filtering – Adaptive filters	11/10/2022	3	R. Indhumathi
Session IV	Image enhancement – Gray level Transforms – Histogram transformation – convolution mask operators	14/10/2022	3	T. Manoj Prasath
Session V	contrast enhancement – detection of region of interest – Thresholding and binarization	18/10/2022	3	R. Indhumathi
Session VI	Detection of isolated lines and points – edge detection – region growing.	21/10/2022	3	R. Indhumathi
Session VII	Analysis of shape and texture – Representation of shapes and contours – shape factors	25/10/2022	3	T. Manoj Prasath
Session VIII	Model for generation of texture – Statistical analysis of texture - Fractal analysis	28/10/2022	3	T. Manoj Prasath
Session IX	Fouries domain analysis - segmentation and structural analysis	01/11/2022	3	R. Vinodhini
Session X	Pattern classification & diagnostic decision – measure of diagnostic accuracy	04/11/2022	3	R. Vinodhini



BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
SCHOOL OF BIO-ENGINEERING
DEPARTMENT OF BIO MEDICAL ENGINEERING
VALUE ADDED COURSE - Medical Image Processing
STUDENTS NAME LIST

S.NO	REG.NO	NAME
1	U20BM001	AAFRIN KHAN
2	U20BM002	ABBURI SATISH
3	U20BM003	ADLA SANGEETHA PURNA
4	U20BM004	ALLANERADI PRIYANSHU
5	U20BM005	AMBATI DURGA SATYA MALLESH
6	U20BM006	AYENABOINA VARAPRASAD
7	U20BM007	BANDAPALLI JAYALAKSHMI
8	U20BM008	BANDI JOLLYRUTH
9	U20BM009	BENJAMIN FRANKLIN
10	U20BM010	BHASKARA RAO PEETHA
11	U20BM011	BHAVANASRI S
12	U20BM012	BIBIS S M
13	U20BM013	BRINDHA R
14	U20BM014	DARSHIKA T
15	U20BM016	DEVIKA P
16	U20BM017	AMRUTHA DK
17	U20BM018	EZHUMALAI M
18	U20BM019	GOLLA SAI SUSHMA
19	U20BM020	IRRUMPORAI R
20	U20BM021	JADDU VENKATA SAINATH REDDY
21	U20BM022	JAVVAJI BHARATH
22	U20BM023	JAYALAKSHMI .
23	U20BM024	KAMARUL MUHAMMED BIN SYED ALI
24	U20BM025	KANIMOZHI S
25	U20BM026	KANITI KALYANI
26	U20BM027	KANTHETI BHUVANA
27	U20BM028	KARRI NAGA SAI RAGHAVA DURGA BALAJI
28	U20BM029	KATTA NAGAPULLA REDDY
29	U20BM030	KEERTHANA R
30	U20BM032	KOLETI HEMA SRI
31	U20BM033	KUNKALAGUNTA SAI NIKHITHA
32	U20BM034	MADHAMANCHI DEEVENA
33	U20BM035	MALLINENI SUCHITHRA CHOWDARY
34	U20BM036	MARTHALA RAMYA REDDY
35	U20BM037	MATTEDULA BINDU PRIYA
36	U20BM038	MORAVANENI SARITHA
37	U20BM039	NISHA R
38	U20BM040	PAVITHRA S
39	U20BM041	PUTHINRAJ D
40	U20BM042	RAAGHAVI K
41	U20BM043	RATHIKA R

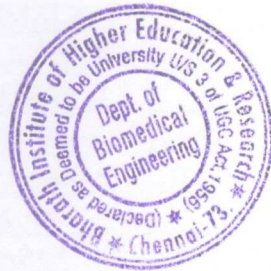
42	U20BM044	SAI NIKHILA G
43	U20BM045	SANGEETHA PRIYA D
44	U20BM046	SANJAI S
45	U20BM047	SANJAY SRINIVAS V
46	U20BM048	SHAIK MAHAMMAD SHAHID
47	U20BM049	SOMANNAGARI JAGAN PARASHURAM REDDY
48	U20BM050	K A SREELAKSHMI
49	U20BM051	SRIRAM G
50	U20BM052	SRIRAM S
51	U20BM053	SUNIL KUMAR
52	U20BM054	THOTA VENKATA RAMESH
53	U20BM055	VADLAKONDA ASRITHA
54	U20BM056	VADLAMUDI ANIL
55	U20BM057	VARUN KUMARAN M
56	U20BM058	VASUDEVAN K
57	U20BM060	VENKADESWARAN R
58	U20BM061	VISHNU R
59	U20BM062	YAMJALA BHUPESH
60	U20BM063	YUVASREE D
61	U20BM065	MADDU BHAGYA SRI
62	U20BM066	DOSAPATI SRIKANTH



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SCHOOL OF BIO-ENGINEERING
DEPARTMENT OF BIO MEDICAL ENGINEERING
VALUE ADDED COURSE
Medical Image Processing (2022-2023)

S.NO	REG.NO	NAME	RESULT
1	U20BM001	AAFRIN KHAN	B
2	U20BM002	ABBURI SATISH	S
3	U20BM003	ADLA SANGEETHA PURNA	A
4	U20BM004	ALLANERADI PRIYANSHU	S
5	U20BM005	AMBATI DURGA SATYA MALLESH	A
6	U20BM006	AYENABOINA VARAPRASAD	S
7	U20BM007	BANDAPALLI JAYALAKSHMI	S
8	U20BM008	BANDI JOLLYRUTH	S
9	U20BM009	BENJAMIN FRANKLIN	S
10	U20BM010	BHASKARA RAO PEETHA	S
11	U20BM011	BHAVANASRI S	S
12	U20BM012	BIBIS S M	A
13	U20BM013	BRINDHA R	A
14	U20BM014	DARSHIKA T	S
15	U20BM016	DEVIKA P	S
16	U20BM017	AMRUTHA DK	S
17	U20BM018	EZHUMALAI M	A
18	U20BM019	GOLLA SAI SUSHMA	S
19	U20BM020	IRRUMPORAI R	S
20	U20BM021	JADDU VENKATA SAINATH REDDY	S
21	U20BM022	JAVVAJI BHARATH	A
22	U20BM023	JAYALAKSHMI .	S
23	U20BM024	KAMARUL MUHAMMED BIN SYED ALI	S
24	U20BM025	KANIMOZHI S	S
25	U20BM026	KANITI KALYANI	S
26	U20BM027	KANTHETI BHUVANA	S
27	U20BM028	KARRI NAGA SAI RAGHAVA DURGA BALAJI	A
28	U20BM029	KATTA NAGAPULLA REDDY	S
29	U20BM030	KEERTHANA R	S
30	U20BM032	KOLETI HEMA SRI	S
31	U20BM033	KUNKALAGUNTA SAI NIKHITHA	A
32	U20BM034	MADHAMANCHI DEEVENA	S
33	U20BM035	MALLINENI SUCHITHRA CHOWDARY	S
34	U20BM036	MARTHALA RAMYA REDDY	A
35	U20BM037	MATTEDULA BINDU PRIYA	S
36	U20BM038	MORAVANENI SARITHA	S
37	U20BM039	NISHA R	S
38	U20BM040	PAVITHRA S	S
39	U20BM041	PUTHINRAJ D	S
40	U20BM042	RAAGHAVI K	A
41	U20BM043	RATHIKA R	S

42	U20BM044	SAI NIKHILA G	S
43	U20BM045	SANGEETHA PRIYA D	A
44	U20BM046	SANJAI S	A
45	U20BM047	SANJAY SRINIVAS V	S
46	U20BM048	SHAIK MAHAMMAD SHAHID	A
47	U20BM049	SOMANNAGARI JAGAN PARASHURAM REDDY	S
48	U20BM050	K A SREELAKSHMI	S
49	U20BM051	SRIRAM G	A
50	U20BM052	SRIRAM S	A
51	U20BM053	SUNIL KUMAR	S
52	U20BM054	THOTA VENKATA RAMESH	A
53	U20BM055	VADLAKONDA ASRITHA	S
54	U20BM056	VADLAMUDI ANIL	S
55	U20BM057	VARUN KUMARAN M	B
56	U20BM058	VASUDEVAN K	A
57	U20BM060	VENKADESWARAN R	B
58	U20BM061	VISHNU R	B
59	U20BM062	YAMJALA BHUPESH	A
60	U20BM063	YUVASREE D	S
61	U20BM065	MADDU BHAGYA SRI	B
62	U20BM066	DOSAPATI SRIKANTH	A



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DEPARTMENT OF BIO MEDICAL ENGINEERING
VALUE ADDED COURSE - MEDICAL IMAGE PROCESSING

Feedback

S.NO	REG.NO	NAME	Feedback	Overall rating of the VAC
1	U20BM001	AAFRIN KHAN	Good	5
2	U20BM002	ABBURI SATISH	Excellent	5
3	U20BM003	ADLA SANGEETHA PURNA	Good	5
4	U20BM004	ALLANERADI PRIYANSHU	Good	4
5	U20BM005	AMBATI DURGA SATYA MALLES	Good	5
6	U20BM006	AYENABOINA VARAPRASAD	Good	5
7	U20BM007	BANDAPALLI JAYALAKSHMI	Excellent	5
8	U20BM008	BANDI JOLLYRUTH	Excellent	5
9	U20BM009	BENJAMIN FRANKLIN	Excellent	5
10	U20BM010	BHASKARA RAO PEETHA	Good	5
11	U20BM011	BHAVANASRI S	Excellent	4
12	U20BM012	BIBIS S M	Excellent	5
13	U20BM013	BRINDHA R	Excellent	5
14	U20BM014	DARSHIKA T	Good	5
15	U20BM016	DEVIKA P	Excellent	5
16	U20BM017	AMRUTHA DK	Excellent	5
17	U20BM018	EZHUMALAI M	Excellent	5
18	U20BM019	GOLLA SAI SUSHMA	Good	4
19	U20BM020	IRRUMPORAI R	Excellent	5
20	U20BM021	JADDU VENKATA SAINATH REDDY	Good	5
21	U20BM022	JAVVAJI BHARATH	Excellent	5
22	U20BM023	JAYALAKSHMI .	Good	5
23	U20BM024	KAMARUL MUHAMMED BIN SYED ALI	Good	4
24	U20BM025	KANIMOZHI S	Excellent	5
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26	U20BM027	KANTHETI BHUVANA	Excellent	5
27	U20BM028	KARRI NAGA SAI RAGHAVA DURGA BALAJI	Good	5
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54	U20BM056	VADLAMUDI ANIL	Good	5
55	U20BM057	VARUN KUMARAN M	Excellent	5
56	U20BM058	VASUDEVAN K	Excellent	5
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60	U20BM063	YUVASREE D	Good	5
61	U20BM065	MADDU BHAGYA SRI	Excellent	5
62	U20BM066	DOSAPATI SRIKANTH	Excellent	5





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SCHOOL OF BIOENGINEERING
VALUE ADDED COURSE ON
MEDICAL IMAGE PROCESSING

COURSE COMPLETION CERTIFICATE

This is to certify that Ms/Mr. **ABBURI SATISH** has attended three weeks value added course on **MEDICAL IMAGE PROCESSING** conducted by the Department of Biomedical Engineering at Bharath Institute of Higher Education and Research, Chennai, India during 04th October to 04th November 2022.

