



SRI SRINIVASA EDUCATIONAL AND CHARITABLE TRUST®
SAPTHAGIRI COLLEGE OF ENGINEERING

(Affiliated to Visvesvaraya Technological University, Belagavi and Approved by AICTE, New Delhi)

(Accredited by NAAC with "A" grade)

(An ISO 9001:2015 & ISO 14001:2015 Certified)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

(Accredited by NBA)

CIRCULAR

Date: 05.01.2022

All the Academic committee members are informed to attend a meeting scheduled on 06/01/2022 at 11 AM in HOD's office for analyzing curriculum syllabus.

Sl No.	Faculty Name	Designation	Signature
1.	Dr. Sateesh Kumar H C	Professor & Head	
2.	Prof. Agalya P.	Associate Professor	
3.	Prof. Shobha S.	Associate Professor	
4.	Prof. Ravi Shankara M.N.	Associate Professor	
5.	Prof. Shobha I Hugar	Assistant Professor	

HOD

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Heeraghatta Main Road
Bengaluru - 560 067



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Action Taken:

Based on the feedback obtained from Students, Faculty and Alumni, the curriculum for the academic year 2021 - 22 has been analysed by department academic committee members and it has been decided to conduct certification course on Implementation of Image Processing Algorithms using Matlab to bridge the gaps identified in the curriculum/syllabus.

In the meeting the committee members decided that Prof. Agalya P & Prof. Shobha S, Associate professor, Department of ECE as resource persons for the certification course.

HOD

Head of the Department
Electronics & Communication
Sapthagiri College of Engineering
Belagavi - 580 057

Principal

Sapthagiri College of Engineering
14/5, Chikkaandra, Hosanghatta Main Road
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Date: 08/01/2022

To

IQAC Coordinator

Sapthagiri College of Engineering

Bengaluru-560 057

Respected sir/madam,

Subject: Requisition for Approval of conducting certification course

With reference to the Academic committee members meeting held for analyzing department curriculum/syllabus for the academic year 2021 - 22. The committee members identified few gaps after analyzing the syllabus and feedback from the stakeholders. To bridge the gaps identified in the curriculum, the committee members proposed to conduct a certification course on Implementation of Image Processing Algorithms using Matlab from 16.05.2022 to 20.05.2022 for the academic year 2021-22. So, I request you to forward and get the approval from the governing council for the same.

Thanking You,

*forwarded for approval
and ratification*

[Signature]
(R. HARISH)

[Signature]
Principal
Sapthagiri College of Engineering
14/6, Chikkasandra, Heeraghatta Main Road
Bengaluru - 560 057

[Signature]
HOD

Head of the Department
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02-05-2022

CIRCULAR

This is to inform that the following Academic Committee members are requested to attend the meeting on 04/05/2022 at 10.30AM in the HODs office to decide the syllabus and the lesson plan for the certification course on Implementation of Image Processing Algorithms using Matlab.

Sl No.	Faculty Name	Designation	Signature
1.	Dr. H C Sateesh Kumar	Professor & Head	
2.	Prof. Agalya P.	Associate Professor	
3.	Prof. Shobha S.	Associate Professor	
4.	Prof. Ravi shankara M.N.	Associate Professor	
5.	Prof. Shobha I Hugar	Assistant Professor	

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Head of the Department
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Bangalore - 560 057



04.05.22

Minutes of Meeting

A meeting was conducted on 4th May 2022 in HOD's office to discuss and approve the following about the 5 days Certification Course for 6th semester ECE Students.

- **Course Title** : Implementation of Image Processing Algorithms using Matlab
- **Resource Personnel** : Prof. Agalya P & Prof. Shobha S
- **Course Duration & Date**: 5 Days from 16.05.2022 to 20.05.2022

Syllabus

Display of Gray Scale Images, Read different attributes and display of color images, Image Transformations, Histogram equalisation of an image, Spatial domain filtering Techniques on an image, Frequency domain filtering techniques on an image, Image Compression techniques, Image restoration techniques, Detection of edges in an image using various operators, Image Segmentation techniques.

Syllabus& Schedule of the certification program

Date	Time	Topics
16.05.2022	9 AM - 10:15 AM	Image processing toolbox, Display of Gray Scale Images, Read different attributes and display of color images.
	10:30 AM - 12:30 PM	Hands on Session
	1:30PM - 3PM	Image Transformations.
	3.15PM - 4.30pm	Hands on session
17.05.2022	9 AM - 10:15 AM	Histogram equalisation of an image.
	10:30 AM - 12:30 PM	Hands on session
	1:30PM - 3PM	Spatial domain filtering Techniques on an image.


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	3.15PM – 4.30pm	Hands on session
18.05.2022	9 AM - 10:15 AM	Frequency domain filtering techniques on an image.
	10:30 AM – 12:30 PM	Hands on session
	1:30PM – 3PM	Image Compression techniques.
	3.15PM – 4.30pm	Hands on session
19.05.2022	9 AM - 10:15 AM	Image restoration techniques.
	10:30 AM – 12:30 PM	Hands on session
	1:30PM – 3PM	Detection of edges in an image using various operators.
	3.15PM – 4.30pm	Hands on session
20.05.2022	9 AM - 12:30PM	Image Segmentation techniques
	1:30PM – 4:30PM	Hands on session
27.05.22	3PM – 4PM	Test

The following members were present in the meeting and the syllabus and lesson plan for the certification program has been decided.

Sl No.	Faculty Name	Designation	Signature
1.	Dr. H C Sateesh Kumar	Professor & Head	
2.	Prof. Agalya P.	Associate Professor	
3.	Prof. Shobha S.	Associate Professor	
4.	Prof. Ravi shankara M.N.	Associate Professor	
5.	Prof. Shobha I Hugar	Assistant Professor	

Principal

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HOD

Head of the Department
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06.05.22

NOTICE

As a part of programming skill development Department of Electronics and Communication Engineering is conducting Five days Certification Course on "Implementation of Image Processing Algorithms using Matlab" from 16th May-2022 to 20th May -2022.

All 6th semester ECE students enrolled for the course are informed to attend the course compulsorily.

Signature of HOD

Head of the Department
Electronics & Communication
Sapthagiri College of Engineering
Bangalore - 560 057

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Fax: 080-28372797

Department of Electronics & Communication Engineering

Enrollment List for Certification Course

Implementation of Image Processing Algorithms using Matlab

Sl.No.	USN	NAME
1	1SG19EC028	DINESH B
2	1SG19EC042	JEEVAN T V
3	1SG19EC018	BRUNDA GP
4	1SG19EC055	MOHAMMED MOULANA
5	1SG19EC075	RAJAPU RISHIKESH
6	1SG19EC012	BHARGAV A
7	1SG19EC051	MANJUNATH.M
8	1SG19EC066	PREETAM HEGDE
9	1SG19EC015	BHOOMIKA N
10	1SG19EC087	SANKEERTH M
11	1SG19EC060	PAVAN K S
12	1SG20EC401	HARSHITH V
13	1SG19EC091	SHIVAM SHIVA
14	1SG19EC011	AVINASH HM
15	2SG19EC080	ROHITH DG
16	1SG19EC118	YAMUNA A C
17	1SG19EC103	SUSHMA BO
18	1SG19EC072	RAHUL N
19	1SG19EC108	THANUSHREE.G
20	1SG19EC097	SNEHARANI U
21	1SG19EC025	DEEPIKA P
22	1SG19EC105	SWAROOP S
23	1SG19EC065	PRAVEEN B R
24	1SG19EC037	HARSHITHA H G
25	1SG19EC047	KOUSHIK V
26	1SG19EC076	RAKESH L
27	1SG19EC115	VINUTHA H. V
28	1SG19EC030	DIVYA SHREE G K
29	1SG19EC029	DIPTHI N
30	1SG19EC038	HARSHITHA.N
31	1SG20EC406	NIKHIL SS

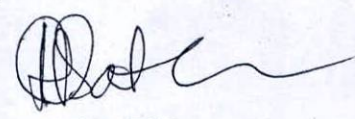

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Bengaluru - 560057

32	ISG19EC079	REVAYYA KABBURMATH
33	ISG19EC061	POORNIMA S
34	ISG19EC067	PREETI KULKARNI
35	ISG19EC071	RACHANA M
36	ISG19EC062	PRASHANTH K B
37	ISG19EC113	VIJAYAKUMAR S N
38	ISG19EC085	SANGEETH M
39	ISG19EC050	MANISH SHAH R
40	ISG19EC086	SANJAY K
41	ISG19EC083	SAGAR.A
42	ISG19EC019	BRUNDA P
43	ISG19EC007	ANIL KUMAR YADAV P
44	ISG19EC041	INCHARA V
45	ISG19EC035	HARSHAN GOWDA K H
46	ISG19EC114	VIKRAM P
47	ISG19EC049	LATHA T S
48	ISG19EC005	AMITOJE SINGH
49	ISG19EC099	SUBHASH BS
50	ISG20EC412	SUHAS S
51	ISG19EC082	S.RAVEESH KOTI
52	ISG19EC084	SAI GANESH CS
53	ISG19EC088	SHASHANK.R
54	ISG19EC102	SUMANTH C GOWDA
55	ISG19EC064	PRAVEEN A
56	ISG19EC077	RANJITH S G
57	ISG19EC044	C S KISHAN
58	ISG19EC057	NIRUPAMA G
59	ISG19EC031	GAGANA KUMARI N
60	ISG19EC016	BHUVANA KS
61	ISG19EC024	DARSHAN PATEL
62	ISG19EC022	CHANDRASHEKAR Y M
63	ISG19EC059	PK SHRIRAM
64	ISG20EC411	SHILPA S
65	ISG19EC034	HARISHGOWDA T R
66	ISG19EC032	GIRISH REDDY S
67	ISG19EC093	SHREYAS G RAJ
68	ISG19EC096	S M FARAZ HUSSAIN
69	ISG20EC405	NANDITHA G
70	ISG19EC070	R KISHORE
71	ISG20EC409	SACHIN MJ

72	ISG19EC095	SINDHU S
73	ISG19EC117	VISMAYA B V
74	ISG19EC116	VINUTHA MJ
75	ISG19EC009	ANUSHKA S
76	ISG19EC092	SHIVANI.V
77	ISG19EC100	SUCHARITHA M.G.
78	ISG19EC104	SUSHMA M M
79	ISG19EC008	ANUSHA C
80	ISG19EC056	MONICA VALENTINA M
81	ISG19EC039	HEMANTH KUMAR L
82	ISG19EC107	TARANUM BANU
83	ISG19EC048	KUSHAL BHARADWAJ BA
84	ISG19EC120	YASHASWINI S
85	ISG19EC040	HITAISHI S
86	ISG19EC006	ANANYA. P
87	ISG19EC112	VARSHA M
88	ISG19EC014	BHAVANA P S
89	ISG19EC017	BINDHU H C
90	ISG19EC111	VANDHANA.S
91	ISG19EC101	SUMANA M
92	ISG19EC109	V VARSHINI
93	ISG19EC026	DHANUSH G M
94	ISG19EC027	DHANUSH.V
95	ISG19EC013	BHAVANA N
96	ISG19EC023	CHANDRIKA
97	ISG19EC033	GOURIPRIYA R
98	ISG20EC404	MEGHANA HP
99	ISG19EC045	KOKILA A S
100	ISG20EC400	GOWTHAM S MAGAR
101	ISG19EC098	SRINIVAS N KAUSHIK
102	ISG19EC068	PRIYA
103	ISG19EC089	SHIVAM KUMAR O
104	ISG19EC052	MANOJ H
105	ISG19EC110	VAISHNAVI U S
106	ISG20EC408	PUSHPALATHA KR


Coordinators


Principal
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HOD, ECE

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Department of Electronics & Communication Engineering

Attendance for Certification Course

Implementation of Image Processing Algorithms using Matlab

Sl.No.	USN	NAME	16/5	16/5	17/5	17/5	18/5	18/5	19/5	19/5	20/5	20/5
1	1SG19EC028	DINESH B	P	P	P	P	P	P	P	P	P	P
2	1SG19EC042	JEEVAN T V	P	P	P	P	P	P	P	P	P	P
3	1SG19EC018	BRUNDA GP	P	P	P	P	P	P	P	P	P	P
4	1SG19EC055	MOHAMMED MOULANA	P	P	P	P	A	P	P	P	P	P
5	1SG19EC075	RAJAPU RISHIKESH	P	P	P	P	P	P	P	P	P	P
6	1SG19EC012	BHARGAV A	P	P	P	P	P	P	P	P	P	P
7	1SG19EC051	MANJUNATH.M	P	P	P	P	P	P	P	P	P	P
8	1SG19EC066	PREETAM HEGDE	P	P	P	P	P	P	P	P	P	P
9	1SG19EC015	BHOOMIKA N	P	P	P	P	P	P	P	P	P	P
10	1SG19EC087	SANKEERTH M	P	P	P	P	P	P	P	P	P	P
11	1SG19EC060	PAVAN K S	P	P	P	P	P	P	P	P	P	P
12	1SG20EC401	HARSHITH V	P	P	P	P	P	P	P	P	P	P
13	1SG19EC091	SHIVAM SHIVA	P	P	P	P	P	P	P	P	P	P
14	1SG19EC011	AVINASH HM	P	P	P	P	P	P	P	P	P	P
15	2SG19EC080	ROHITH DG	P	P	P	P	P	P	P	P	P	P
16	1SG19EC118	YAMUNA A C	P	P	P	P	P	P	P	P	P	P
17	1SG19EC103	SUSHMA BO	P	P	P	P	P	P	P	P	P	P
18	1SG19EC072	RAHUL N	P	P	P	P	P	P	P	P	P	P
19	1SG19EC108	THANUSHREE.G	P	P	P	P	P	P	P	P	P	P
20	1SG19EC097	SNEHARANI U	P	P	P	P	P	P	P	P	P	P
21	1SG19EC025	DEEPIKA P	P	P	P	P	P	P	P	P	P	P
22	1SG19EC105	SWAROOP S	P	P	P	P	P	P	P	P	P	P
23	1SG19EC065	PRAVEEN B R	P	P	P	P	P	P	P	P	P	P
24	1SG19EC037	HARSHITHA H G	P	P	P	P	P	P	P	P	P	P
25	1SG19EC047	KOUSHIK V	P	P	A	A	P	P	P	P	P	A
26	1SG19EC076	RAKESH L	P	P	P	P	P	P	P	P	P	P
27	1SG19EC115	VINUTHA H. V	P	P	P	P	P	P	P	P	P	P
28	1SG19EC030	DIVYA SHREE G K	P	P	P	P	P	P	P	P	P	P
29	1SG19EC029	DIPTHI N	P	P	P	P	P	P	P	P	P	P
30	1SG19EC038	HARSHITHA.N	P	P	P	P	P	P	P	P	P	P
31	1SG20EC406	NIKHIL SS	P	P	P	P	P	P	P	P	P	R

16/5 17/5 18/5 19/5 20/5 21/5 22/5 23/5 24/5 25/5 26/5 27/5 28/5 29/5 30/5 31/5

32	ISG19EC079	REVAYYA KABBURMATH	P	P	P	P	P	P	P	P	P	P	P	P	P
33	ISG19EC061	POORNIMA S	P	P	P	P	P	P	P	P	P	P	P	P	P
34	ISG19EC067	PREETI KULKARNI	P	P	P	P	P	P	P	P	P	P	P	P	P
35	ISG19EC071	RACHANA M	P	P	P	P	P	P	P	P	P	P	P	P	P
36	ISG19EC062	PRASHANTH K B	P	P	P	P	P	P	P	P	P	P	P	P	P
37	ISG19EC113	VIJAYAKUMAR S N	P	P	P	P	P	P	P	P	P	P	P	P	P
38	ISG19EC085	SANGEETH M	P	P	P	P	P	P	P	P	P	P	P	P	P
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41	ISG19EC083	SAGAR.A	P	P	P	P	P	P	P	P	P	P	P	P	P
42	ISG19EC019	BRUNDA P	P	P	P	P	P	P	P	P	P	P	P	P	P
43	ISG19EC007	ANIL KUMAR YADAV P	P	P	P	P	P	P	P	P	P	P	P	P	P
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46	ISG19EC114	VIKRAM P	P	P	P	P	P	P	P	P	P	P	P	P	P
47	ISG19EC049	LATHA T S	P	P	P	P	P	P	P	P	P	P	P	P	P
48	ISG19EC005	AMITOJE SINGH	P	P	P	P	P	P	P	P	P	P	P	P	P
49	ISG19EC099	SUBHASH BS	P	P	P	P	P	P	P	P	P	P	P	P	P
50	ISG20EC412	SUHAS S	P	P	P	P	P	P	P	P	P	P	P	P	P
51	ISG19EC082	S.RAVEESH KOTI	P	P	P	P	P	P	P	P	P	P	P	P	P
52	ISG19EC084	SAI GANESH CS	P	P	P	P	P	P	P	P	P	P	P	P	P
53	ISG19EC088	SHASHANK.R	P	P	P	P	P	P	P	P	P	P	P	P	P
54	ISG19EC102	SUMANTH C GOWDA	P	P	P	P	P	P	P	P	P	P	P	P	P
55	ISG19EC064	PRAVEEN A	P	P	P	P	P	P	P	P	P	P	P	P	P
56	ISG19EC077	RANJITH S G	P	P	P	P	P	P	P	P	P	P	P	P	P
57	ISG19EC044	C S KISHAN	P	P	P	P	P	P	P	P	P	P	P	P	P
58	ISG19EC057	NIRUPAMA G	P	P	P	P	P	P	P	P	P	P	P	P	P
59	ISG19EC031	GAGANA KUMARI N	P	P	P	P	P	P	P	P	P	P	P	P	P
60	ISG19EC016	BHUVANA KS	P	P	P	P	P	P	P	P	P	P	P	P	P
61	ISG19EC024	DARSHAN PATEL	P	P	P	P	P	P	P	P	P	P	P	P	P
62	ISG19EC022	CHANDRASHEKAR Y M	P	P	P	P	P	P	P	P	P	P	P	P	P
63	ISG19EC059	PK SHRIRAM	P	P	P	P	P	P	P	P	P	P	P	P	P
64	ISG20EC411	SHILPA S	P	P	P	P	P	P	P	P	P	P	P	P	P
65	ISG19EC034	HARISHGOWDA T R	P	P	P	P	P	P	P	P	P	P	P	P	P
66	ISG19EC032	GIRISH REDDY S	P	A	P	P	P	P	P	P	P	P	P	A	P
67	ISG19EC093	SHREYAS G RAJ	P	P	P	P	P	P	P	P	P	P	P	P	P
68	ISG19EC096	S M FARAZ HUSSAIN	P	P	P	P	P	P	P	P	P	P	P	P	P
69	ISG20EC405	NANDITHA G	P	P	P	P	P	P	P	P	P	P	P	P	P
70	ISG19EC070	R KISHORE	P	P	P	P	P	P	P	P	P	P	P	P	P
71	ISG20EC409	SACHIN MJ	P	P	P	P	P	P	P	P	P	P	P	P	P

72	ISG19EC095	SINDHU S	P	P	P	P	P	P	P	P	P	P	P
73	ISG19EC117	VISMAYA B V	P	P	P	P	P	P	P	P	P	P	P
74	ISG19EC116	VINUTHA MJ	P	P	P	P	P	P	P	P	P	P	P
75	ISG19EC009	ANUSHKA S	P	P	P	P	P	P	P	P	P	P	P
76	ISG19EC092	SHIVANI.V	P	P	P	P	P	P	P	P	P	P	P
77	ISG19EC100	SUCHARITHA M.G.	P	P	P	P	P	P	P	P	P	P	P
78	ISG19EC104	SUSHMA M M	P	P	P	P	P	P	P	P	P	P	P
79	ISG19EC008	ANUSHA C	P	P	P	P	P	P	P	P	P	P	P
80	ISG19EC056	MONICA VALENTINA M	P	P	P	P	P	P	P	P	P	P	P
81	ISG19EC039	HEMANTH KUMAR L	P	P	P	P	P	P	P	P	P	P	P
82	ISG19EC107	TARANUM BANU	P	P	P	P	P	P	P	P	P	P	P
83	ISG19EC048	KUSHAL BHARADWAJ BA	P	P	P	P	P	P	P	P	P	P	P
84	ISG19EC120	YASHASWINI S	P	P	P	P	P	P	P	P	P	P	P
85	ISG19EC040	HITAISHI S	P	P	P	P	P	P	P	P	P	P	P
86	ISG19EC006	ANANYA. P	P	P	P	P	P	P	P	P	P	P	P
87	ISG19EC112	VARSHA M	P	P	P	P	P	P	P	P	P	P	P
88	ISG19EC014	BHAVANA P S	P	P	P	P	P	P	P	P	P	P	P
89	ISG19EC017	BINDHU H C	P	P	P	P	P	P	P	P	P	P	P
90	ISG19EC111	VANDHANA.S	P	P	P	P	P	P	P	P	P	P	P
91	ISG19EC101	SUMANA M	P	P	P	P	P	P	P	P	P	P	P
92	ISG19EC109	V VARSHINI	P	P	P	P	P	P	P	P	P	P	P
93	ISG19EC026	DHANUSH G M	P	P	P	P	P	P	P	P	P	P	P
94	ISG19EC027	DHANUSH.V	P	P	P	P	P	P	P	P	P	P	P
95	ISG19EC013	BHAVANA N	P	P	P	P	P	P	P	P	P	P	P
96	ISG19EC023	CHANDRIKA	P	P	P	P	P	P	P	P	P	P	P
97	ISG19EC033	GOURIPRIYA R	P	P	P	P	P	P	P	P	P	P	P
98	ISG20EC404	MEGHANA HP	P	P	P	P	P	P	P	P	P	P	P
99	ISG19EC045	KOKILA A S	P	P	P	P	P	P	P	P	P	P	P
100	ISG20EC400	GOWTHAM S MAGAR	P	P	P	P	P	P	P	P	P	P	P
101	ISG19EC098	SRINIVAS N KAUSHIK	P	P	P	P	P	P	P	P	P	P	P
102	ISG19EC068	PRIYA	P	P	P	P	P	P	P	P	P	P	P
103	ISG19EC089	SHIVAM KUMAR O	P	P	P	P	P	P	P	P	P	P	P
104	ISG19EC052	MANOJ H	P	P	P	P	P	P	P	P	P	P	P
105	ISG19EC110	VAISHNAVI U S	P	P	P	P	P	P	P	P	P	P	P
106	ISG20EC408	PUSHPALATHA KR	P	P	P	P	P	P	P	P	P	P	P

Coordinators

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**5 days Certification Course on "Implementation of
Image Processing Algorithms using Matlab"**

Test Time Table

Sl. No.	DATE	DAY	TIMINGS
1	27-05-2022	Friday	3:00PM-4:30PM

HOD

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5 days Certification Course on "Implementation of Image Processing Algorithms using Matlab" Question Paper

1. Which of the following is the first and foremost step in Image Processing?

- a) Image acquisition
- b) Segmentation
- c) Image enhancement
- d) Image restoration

Ans: a)

2. _____ determines the quality of a digital image.

- a) The discrete gray levels
- b) The number of samples
- c) discrete gray levels & number of samples
- d) None of the mentioned

Ans: c)

3. What is meant by Region of Interest (ROI) operations?

- a) Dilation
- b) Masking
- c) Shading correction
- d) Shading correction

Ans: b)

4. Which of the following is the abbreviation of JPEG?

- a) Joint Photographic Experts Group
- b) Joint Photographs Expansion Group
- c) Joint Photographic Expanded Group
- d) Joint Photographic Expansion Group

Ans: a)


5. Which of the following tool is used in tasks such as zooming, shrinking, rotating, etc.?

- a) Filters
- b) Sampling
- c) Interpolation
- d) None of the above

Ans: c)

6. Blurring an image with the help of a smoothing filter may lead to noise reduction.

- a) True
- b) False


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Ans: a)

7. What is the output of a smoothing, linear spatial filter?

- a) Median of pixels
- b) Maximum of pixels
- c) Minimum of pixels
- d) Average of pixels

Ans: d)

8. A smoothing filter can also be called a median filter.

- a) True
- b) False

Ans: b)

9. Median filters belong to which category of filter?

- a) Frequency Domain Filter
- b) Order Static Filter
- c) Linear Spatial Filter
- d) Sharpening Filter

Ans: b)

10. Median filters belong to which category of filter?

- a) Frequency Domain Filter
- b) Order Static Filter
- c) Linear Spatial Filter
- d) Linear Spatial Filter

Ans: b)

11. Which of the following filter possess lower frequency?

- a) High pass filter
- b) Bandpass filter
- c) Low pass filter
- d) None of the above

Ans: c)

12. Which of the following filter's responses is based on the pixels ranking?

- a) Sharpening filters
- b) Nonlinear smoothing filters



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- c) Geometric mean filter
- d) Linear smoothing filters

Ans: b)

13. Which of the following is the primary objective of sharpening of an image?

- a) Decrease the brightness of the image
- b) Increase the brightness of the image
- c) Highlight fine details in the image
- d) Blurring the image

Ans: c)

14. Which side of the greyscale is the components of the histogram concentrated in a dark image?

- a) Medium
- b) Low
- c) Evenly distributed
- d) High

Ans: b)

15. What are the characteristics that are used to distinguish one color from the other?

- a) Brightness, Hue and Saturation
- b) Hue, Brightness and Intensity
- c) Saturation, Hue
- d) Brightness, Saturation and Intensity

Ans: a)


16. What are the characteristics that are used to distinguish one color from the other?

- a) It is the number of bits used to represent each pixel in RGB space
- b) It is the number of bytes used to represent each pixel in RGB space
- c) It is the number of units used to represent each pixel in RGB space
- d) It is the number of mm used to represent each pixel in RGB space

Ans: a)

17. How many bit RGB color image is represented by full-color image?

- a) 32-bit RGB color image
- b) 24-bit RGB color image
- c) 16-bit RGB color image
- d) 8-bit RGB color image


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Ans: b)

18. What is the equation used to obtain I(Intensity) component of each RGB pixel in RGB color format?

- a) $I = 1/2(R+G+B)$
- b) $I = 1/3(R+G+B)$
- c) $I = 1/3(R-G-B)$
- d) $I = 1/3(R-G+B)$

Ans: b)

19. Which of the following color models are used for color printing?

- a) RGB
- b) CMY
- c) CMYK
- d) CMY and CMYK

Ans: d)

20. The digitization process i.e. the digital image has M rows and N columns, requires decisions about values for M, N, and for the number, L, of gray levels allowed for each pixel. The value M and N have to be:

- a) M and N have to be positive integer
- b) M and N have to be negative integer
- c) M have to be negative and N have to be positive integer
- d) M have to be positive and N have to be negative integer

Ans: a)

21. What is the technique for a gray-level transformation function called, if the transformation would be to produce an image of higher contrast than the original by darkening the levels below some gray-level m and brightening the levels above m in the original image.

- a) Contouring
- b) Contrast stretching
- c) Mask processing
- d) Point processing

Ans: b)

22. What is the sum of all components of a normalized histogram?

- a) 1
- b) -1
- c) 0
- d) None of the mentioned

Ans: a)



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23. If the histogram of same images, with different contrast, are different, then what is the relation between the histogram equalized images?

- a) They look visually very different from one another
- b) They look visually very similar to one another
- c) They look visually different from one another just like the input images
- d) None of the mentioned

Ans: b)

24. Which of the following is the application of Histogram Equalisation?

- a) Blurring
- b) Contrast adjustment
- c) Image enhancement
- d) None of the Mentioned

Ans: c)

25. A continuous image is digitised at _____ points.

- a) Random
- b) Vertex
- c) Contour
- d) Sampling

Ans: d)


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CERTIFICATE

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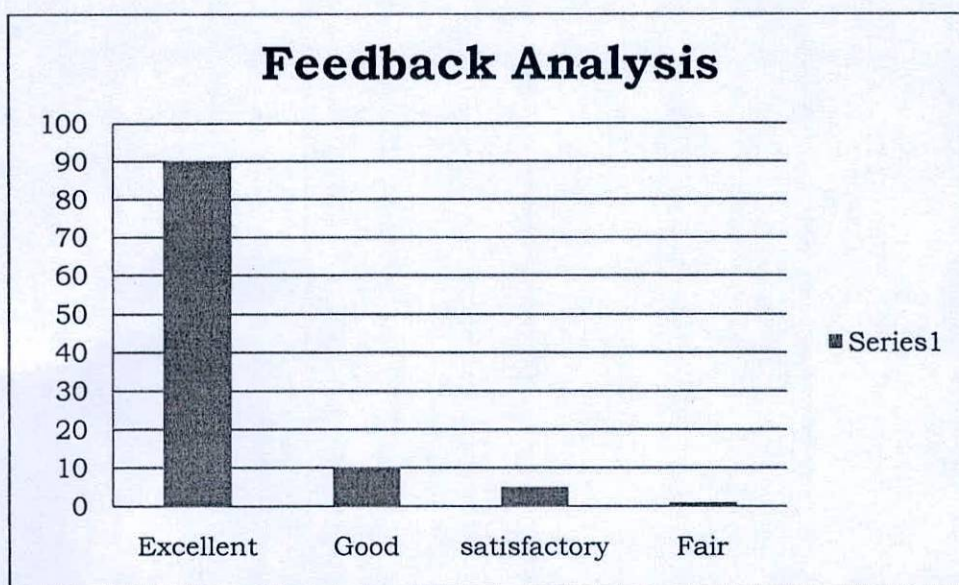

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FEEDBACK ANALYSIS

Certification Program: "Implementation of Image Processing Algorithms using Matlab"

No. of students	Student Feedback (in %)			
	Excellent	Good	satisfactory	Fair
106	90	10	5	1



Analysis Report:

90 % of students were completely happy with the certification program and 10 % of students felt it was a good program and remaining 5 % students were satisfied with the program.

Action Taken:

The Feedback report which was collected from the students and sent to the principal and he would take necessary actions based on the comments and conduct more programs for the benefit of students.


Program Coordinator

 
HOD **Principal**
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Certification Course Report on Implementation of
Image Processing Algorithms using Matlab

Department of ECE conducted Certificate Course on Implementation of Image Processing Algorithms.

- **Resource Person:** Prof. Agalya P. & Prof. Shobha S.
- **Duration of the course:** 5 days from 16.05.2022 to 20.05.2022
- **Course detail:**
- **Objective of the Course:** The five day course is to make the students to be familiar with the major concepts in Image Processing Algorithms and its implementation which is a main platform for their career in multimedia communication. Certificate Course can be a vital step to improve the knowledge of students.

Course Report:

Date	Outcome of the course
16.05.2022	Students were introduced to Image processing toolbox, Display of Gray Scale Images, Read different attributes and display of color images with hands on session.
17.05.2022	Students had a practical session on spatial domain filters and histogram Equalisation
18.05.2022	Students had a practical implementation of different image transformations used in compression.
19.05.2022	Students learnt different edge detection techniques with Hands on session
20.05.2022	Speaker learnt different segmentation techniques with Hands on session



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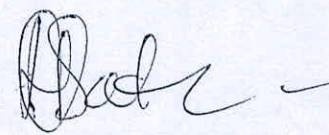
Students attending the course

Conclusion:

Certificate course made them comfortable with the concepts of Implementation of Image Processing Algorithms. Learning style adopted by students, which eventually is developed into a skill of their forte. Through this course, an ecstatic learning background paved way to a positive learning environment in the class where active participation was seen from every end. A sense of satisfaction was also seen from students. Faculty members were also equally benefited with the course. This Course helped the student to improve their knowledge in Digital Image Processing Applications.


(Coordinator)


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