

KONGU ENGINEERING COLLEGE
PERUNDURAI ERODE-638060
(AUTONOMOUS)

DEPARTMENT OF INFORMATION TECHNOLOGY

Date: 17.11.2020

NOTE SUBMITTED TO PRINCIPAL FOR APPROVAL

Sub: Request for permission to conduct one/two credit course – reg.

1.	Academic Year	: 2020-21	Semester : ODD				
2.	Course Title	: Image and Video processing using Python	Credit(s): One / Two				
3.	Type of Course	: Already Offered Course / Updated Course / New Course					
	• If "Already offered course",	Course Code:		Version:			
4.	Course Coordinator(s)	: 1. Dr.R.Devi Priya 2. N. Anitha					
5.	Course offered by	: Internal faculty					
6.	Name and designation of external resource persons	: Mr. Hariharan M, Software Developer.					
7.	Details about external organization	: JCluster Software Solutions, Salem.					
8.	Course fee for external experts		Max. number of students/Batch		Course fee / student (Rs.)		
	Rs. 10000 (5000 * 2 batches)		Batch I - 50 Batch II - 50		100		
9.	No. of days	Period		No. of hours		Venue	
		From	To	Lecture	Practical		Total
	10	21.11.2020	05.12.2020	10	10		20
10.	Pre-requisites for offering the course	: Basics of Programming (C/C++/Python)					
11.	Course offered to	Programme		Branch	Year/Semester		
		BE/BTech		All	III / V		

18/11/20

KONGU ENGINEERING COLLEGE
PERUNDURAI ERODE-638060
(AUTONOMOUS)

DEPARTMENT OF INFORMATION TECHNOLOGY

Date: 17.11.2020

NOTE SUBMITTED TO PRINCIPAL FOR APPROVAL

Sub: Request for permission to conduct one/two credit course – reg.

1.	Academic Year	: 2020-21	Semester : ODD				
2.	Course Title	: Image and Video processing using Python	Credit(s): One / Two				
3.	Type of Course	: Already Offered Course / Updated Course / New Course					
	• If "Already offered course",	Course Code: Version:					
4.	Course Coordinator(s)	: 1. Dr.R.Devi Priya 2. N. Anitha					
5.	Course offered by	: Internal faculty					
6.	Name and designation of external resource persons	: Mr. Hariharan M, Software Developer.					
7.	Details about external organization	: JCluster Software Solutions, Salem.					
8.	Course fee for external experts		Max. number of students/Batch		Course fee / student (Rs.)		
	Rs. 10000 (5000 * 2 batches)		Batch I - 50 Batch II - 50		100		
9.	No. of days	Period		No. of hours		Venue	
		From	To	Lecture	Practical		Total
	10	21.11.2020	05.12.2020	10	10		20
10.	Pre-requisites for offering the course	: Basics of Programming (C/C++/Python)					
11.	Course offered to	Programme		Branch		Year/Semester	
		BE/BTech		All		III / V	

Handwritten signature and date
 18/11/20

12.	Course Main Contents	Day 1	Introduction to Image processing, Image Acquisition	
		Day 2	Image Enhancement, Image Restoration	
		Day 3	Color Image Processing, Multi-Resolution Processing	
		Day 4	Compression, Morphological Processing, Segmentation	
		Day 5	Representation and Description, Feature Matching, Recognition	
		Day 6	Video Analysis: Adaptive Threshold, Video Smoothing	
		Day 7	Edge and Motion Detection, Bitwise Operations	
		Day 8	Super Impose, Contour	
		Day 9	Face Detection	
		Day 10	Background Subtraction, Extraction of images from video	
		Assignment / Project / Case Study/ Others: Development of a computer vision project for real time application		
13.	Course Outcomes	After completing the course the student will be able to:		
		<ul style="list-style-type: none"> Understand basic properties of image and video Demonstrate image analysis using Python Implement python libraries for video analysis 		
14.	Course Assessment (Min. 2)	S. No.	Type	Max. Marks
		1	Objective Type Questions	50
		2	Descriptive Questions/ Programs	50
		Total		
		100 Marks		
15.	Verified that the content of this course is not offered to students partially/fully in regular curriculum of respective programme of the student. Certify that the course content, credits and grade are approved in the BOS meeting or approved by internal BOS members and will be ratified in the next BOS meeting			
16.	Any other details	(Signature of the HoD after verification)		

The above proposal may kindly be approved.

R. G. S. J. S. J.
Course co-ordinator(s)

HOD 8.11.2020

Chief Coordinator/Academic

21/11/20
Principal

Encl:

1. Copy of the syllabus of the course

18VAC10 – IMAGE AND VIDEO PROCESSING USING PYTHON

L	T	P	Credit
2	0	2	1

Preamble To provide basic insights of processing image and video using Python OpenCV.

Unit I Image Analysis: 5
Introduction to Image processing, Image Acquisition, Image Enhancement, Image Restoration, Color Image Processing, Multi-Resolution Processing, Compression, Morphological Processing, Segmentation, Representation and Description, Feature Matching, Recognition.

Unit II Video Analysis: 5
Adaptive Threshold, Video Smoothing, Edge and Motion Detection, Bitwise Operations, Super Impose, Contour, Face Detection, Background Subtraction, Extraction of images from video.

Lecture: 10, Practical: 10, Total: 20

REFERENCES:

1. Sandipan Dey, "Hands-On Image Processing with Python", 1st Edition, Packt Publishing, 2018.
2. Jan Erik Solem, "Programming Computer Vision with Python", 2nd Edition, O'Reilly Publishers, 2012.

COURSE OUTCOMES:

On completion of the course, the students will be able to.

		BT Mapped (Highest Level)
CO1	understand basic properties of image and video	Understanding(K2), Precision (S3)
CO2	demonstrate image analysis using Python	Applying (K3), Precision (S3)
CO3	implement python libraries for video analysis	Applying (K3), Precision (S3)

Mapping of COs with POs and PSOs

COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	1	1	1									
CO2	3	2	1	1	1									
CO3	3	2	1	1	1									

1 – Slight, 2 – Moderate, 3 – Substantial, BT- Bloom's Taxonomy

ASSESSMENT PATTERN

Test / Bloom's Category*	Remembering (K1) %	Understanding (K2) %	Applying (K3) %	Analyzing (K4) %	Evaluating (K5) %	Creating (K6) %	Total %
Assessment Test 1- MCQ (50 marks)	20	30	50				100
Assessment Test 2- Descriptive Questions/Programs (50 marks)	20	30	50				100

Signature of the Chairman
Board of Studies - JT



R. Dey
N. S. S.

KONGU ENGINEERING COLLEGE, PERUNDURAI, ERODE - 638060
DEPARTMENT OF INFORMATION TECHNOLOGY
One Credit Course - Mark Statement

Course Code and Name: 18VAC10 & Image and Video Processing using Python
Branch & Semester : III IT & V Semester
Faculty Incharges: Dr.R.Devi Priya & Ms.N.Anitha

S.No	Roll Number	Name of the Student	Test 1 (50)	Test 2 (50)	Total (100)
1	18ITR062	Niranjan R	40	38	78
2	18ITR072	Poongothai M	41	40	81
3	18ITR074	Praveen.E	40	40	80
4	18ITR078	Pushpaletha M	38	38	76
5	18ITR083	Rokith Dhayal N	38	34	72
6	18ITR084	Saireventh T	40	36	76
7	18ITR086	Saranraj V	38	36	74
8	18ITR093	Siddarth M	38	38	76
9	18ITR097	Soundarajan C	40	38	78
10	18ITR102	Supreetha S M	38	36	74
11	18ITR103	Swathi V	40	38	78
12	18ITR111	Vigasini R	40	40	80
13	18ITR112	Vinothini.D	40	38	78
14	18ITR109	Vaishnavi N	42	34	76
15	18ITR110	Venkataprasanna R	34	26	60
16	18ITR113	Vishva Bharathi C	42	38	80
17	18ITR114	Yamuna.S	40	36	76
18	18EIR098	Gowtham. K	26	25	51
19	18EIR003	Arthi.G.S	40	40	80
20	18EIR014	Dhivakar T V	35	26	61
21	18EIR016	Dhivyadharshini K	38	30	68
22	18EIR017	Divyadharshini E	40	36	76
23	18EIR018	Ganesh K	42	44	86
24	18EIR020	Gokula Priya K	40	38	78
25	18EIR025	Harini K K	38	42	80
26	18EIR026	Harini R	40	38	78
27	18EIR033	Jasodhasree C	38	40	78
28	18EIR035	Kaaveeyaa S K	38	36	74
29	18EIR038	Kodimalar T	37	36	73
30	18EIR041	Manikandan.K	30	28	58
31	18EIR043	Monika S	41	36	77
32	18EIR044	Mounesa P	35	38	73
33	18EIR047	Narmatha T	40	38	78
34	18EIR050	Nithyashri.S	37	34	71
35	18EIR051	Padma Priya K	31	32	63
36	18EIR052	Poojashri V	40	38	78
37	18EIR054	Pradeep.C	43	42	85
38	18EIR058	Prithivika P	40	30	70
39	18EIR063	Ramya P	39	34	73
40	18EIR064	Ranjani.M	37	26	63
41	18EIR066	Rathish P	38	36	74
42	18EIR067	Renugadevi M	37	36	73
43	18EIR068	Reshnuvi R V	38	36	74
44	18EIR071	Sanjay Kumar S	38	38	76
45	18EIR072	Santhosh.R	40	38	78
46	18EIR079	Snega R	40	38	78
47	18EIR084	Sulitha	39	40	79
48	18EIR087	Swetha.V.S	40	36	76
49	18EIR091	Vasuki.P	43	40	83
50	18EIR095	Vishali R	39	38	77

R. Devi Priya
Faculty Incharge (s)
Dr.R.Devi Priya
Ms.N.Anitha

[Signature]
HoD/IT
27/11/21

D. J. S. ENGINEERING COLLEGE, PERUNDURAI
DEPARTMENT OF INFORMATION TECHNOLOGY
Consolidated Attendance Report
1 CREDIT COURSE 2020-21 (Odd Sem)
18VAC10-IMAGE AND VIDEO PROCESSING USING PYTHON
CLASS : III yr IT -B (V Sem) and III yr E&I
Faculty Incharge: Dr.R.Devi priya,
Ms.N.Anitha

S. No	Roll No	Student Name	Total no of Hrs	No of hrs Absent	No of hrs Present	% of Attendance
1	18ITR062	Niranjan R	20	3	17	85.00
2	18ITR072	Poongothai M	20	3	17	85.00
3	18ITR074	Praveen.E	20	1	19	95.00
4	18ITR078	Pushpalatha M	20	1	19	95.00
5	18ITR083	Rokith Dhayal. N	20	3	17	85.00
6	18ITR084	Saireventh T	20	3	17	85.00
7	18ITR086	Saranraj V	20	3	17	85.00
8	18ITR093	Siddarth M	20	0	20	100.00
9	18ITR097	Soundarajan.C	20	2	18	90.00
10	18ITR102	Supreetha S M	20	2	18	90.00
11	18ITR103	Swathi V	20	2	18	90.00
12	18ITR111	Vigasini R	20	1	19	95.00
13	18ITR112	Vinothini.D	20	3	17	85.00
14	18ITR109	Valshnavi N	20	3	17	85.00
15	18ITR110	Venkataprasanna R	20	0	20	100.00
16	18ITR113	Vishva Bharathi C	20	3	17	85.00
17	18ITR114	Yamuna.S	20	3	17	85.00
18	18EIO098	Gowtham. K	20	6	14	70.00
19	18EIO003	Arthi.G.S	20	1	19	95.00
20	18EIO014	Dhivakar T V	20	4	16	80.00
21	18EIO016	Dhivyadharshini K	20	4	16	80.00
22	18EIO017	Dhivyadharshini E	20	4	16	80.00
23	18EIO018	Ganesh K	20	4	16	80.00
24	18EIO020	Gokula Priya K	20	1	19	95.00
25	18EIO025	Harini K K	20	0	20	100.00
26	18EIO026	Harini R	20	2	18	90.00
27	18EIO033	Jasodhasree C	20	0	20	100.00
28	18EIO035	Kaaveeyaa S K	20	1	19	95.00
29	18EIO038	Kodimalar T	20	3	17	85.00
30	18EIO041	Manikandan.K	20	3	17	85.00
31	18EIO043	Monika S	20	0	20	100.00
32	18EIO044	Mounesa P	20	0	20	100.00
33	18EIO047	Narmatha T	20	0	20	100.00
34	18EIO050	Nithyashri.S	20	0	20	100.00
35	18EIO051	Padma Priya K	20	0	20	100.00
36	18EIO052	Poojashri V	20	2	18	90.00
37	18EIO054	Pradeep.C	20	4	16	80.00
38	18EIO058	Prithivika P	20	0	20	100.00
39	18EIO063	Ramya P	20	0	20	100.00
40	18EIO064	Ranjani.M	20	2	18	90.00
41	18EIO066	Rathish P	20	0	20	100.00
42	18EIO067	Renugadevi M	20	4	16	80.00
43	18EIO068	Reshnuvi R V	20	0	20	100.00
44	18EIO071	Sanjay Kumar S	20	0	20	100.00
45	18EIO072	Santhosh.R	20	2	18	90.00
46	18EIO079	Snega R	20	0	20	100.00
47	18EIO084	Suhitha	20	0	20	100.00
48	18EIO087	Swetha.V.S	20	0	20	100.00
49	18EIO091	Vasuki.P	20	2	18	90.00
50	18EIO095	Vishali.R	20	0	20	100.00

Faculty Incharge 24/1/21

HoD / IT 24/1/21