CRITERION: 1 CURRICULAR ASPECTS

KEY INDICATOR 1.2 ACADEMIC FLEXIBILITY

1.2.2.1 List of value added courses (beyond the curriculum) offered year wise during the Academic year 2021-2022.

S.No.	Branch	List of value added courses	Page No.
1	CIVIL	Certificate Course On Digital Land Surveying And Mapping (Dl&M)	2-24
		Add On Course On Risk Analysis And Mitigation Practice	25-47
		Certificate Course On Bar Bending Schedule For Commercial Buildings	48-73
		Add On Course On Tendering And Procurement In Construction	74-97
2	CSE	Block Chain Technology For Beginners	98-120
		Data Analysis Using Python & R	121-145
		Artificial Intelligence For Cyber Security	146-166
		Introduction To Relational Database & Sql	167-193
3	ECE	Introduction To Internet Of Things (Iot)	194-220
		Programmimg In Java	221-246
		Introduction To Deep Learning	247-273
		Crptography And Network Security	274-299
4	EEE	Design Of Industrial Power Distribution And Lighting System	300-325
		Pscad For System Design	326-348
		Star Labeling And Energy Conservation	349-374
		Embedded Based Hardware Design Development	375-401
5	MECH	3d Model Creation With Autodesk Fusion 360	402-424
		Sustainable Manufacturing In Industry 4.O	425-445
		Joining Of Tubes Using Soild State Welding	446-466
		Additive Manufacturing	467-487
6	S&H	Closed Circuit Television	488-512
7	MBA	Sap Hr Cetification	513-534

Dr. J.SUNDARARAJAN,
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

COURSE NAME: **DIGITAL LAND SURVEYING AND MAPPING (DLS&M)**

COURSE CODE: **21CECC01**

ACADEMIC YEAR: 2021-2022 SEMESTER: ODD DURATION: 30 HOURS

S.NO	PARTICULARS	PAGE NO
1	PERMISSION LETTER	2
2	CIRCULAR TO STUDENTS	3
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6	COURSE SCHEDULE	8
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8	QUIZ SAMPLE QUESTION PAPER WITH ANSWER	11
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12	COURSE MATERIAL/MANUAL	18
13	CERTIFICATES OF THE PROGRAM	19

COLLEGE OF ENGG. & TECHNOLOGY * NPRCET * NATHAM

PROGRAM COORDINATOR

C. Vijaya Kumar AP/Civil

HoD-CIVIL

Head of the Department
Department of Civil Engineering
NPR College of Engineering & Technology
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IQAC

Coordinator - IQAC
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

PERMISSION LETTER

From

Mr.C.Vijayakumar,
Assistant Professor-Civil,
Department of Civil Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Requesting permission to conduct Certificate Course for students – Reg

As we have planned to conduct a Certificate Course on "**DIGITAL LAND SURVEYING AND MAPPING (DLS&M)**" for our Civil Engineering students from 06.09.2021 to 08.10.2021- 30 Hours in our college. We have suggested Mr.Gunasekaran, Technical Assistant, TMC Engineering Private Ltd, Chennai as a External resource person for this Certificate Course program. Kindly, grant us permission for this program.

Thanking you.

Date: 20.08.2021
Place: Natham

Yours truly,

(C.Vijayakumar)

forwarded to Principal,

(Dr.A.Hema latha)

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

CIRCULAR

NPRCET/OFF/CIVIL/VAC/2021-2022 DATE:23.08.2021

We have planned to conduct a Certificate Course on **"DIGITAL LAND SURVEYING AND MAPPING (DLS&M)"** for the students during this Odd semester 2021-2022.Interested students can enroll their name to the coordinator on or before 27.08.2021.

The details of the training program are given below.

COURSE NAME	:	**DIGITAL LAND SURVEYING AND MAPPING (DLS&M)**
EXTERNAL INTERNAL RESOURCE PERSON	:	Mr.Gunasekaran, Technical Assistant, TMC Engineering Private Ltd,Chennai
VENUE	:	NPRCET Ground, NPR College of Engineering &Technology
DATE & DURATION	:	06.09.2021 to 08.10.2021- 30 Hours
PROGRAM COORDINATOR		Mr.C.Vijayakumar, Assistant Professor,NPRCET.

PRINCIPAL
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:
1. All the HoDs
2. All the Class Rooms
3. Notice Board
4. File

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THE MANAGEMENT, PRINCIPAL, STAFF AND STUDENTS

CORDIALLY INVITE YOU FOR THE INAUGURATION OF

CERTIFICATE COURSE ON

"DIGITAL LAND SURVEYING AND MAPPING (DLS&M)"

On 06.09.2021

Venue: NPRCET Ground at 4.00 p.m.

CHIEF GUEST

Mr.Gunasekaran,
Technical Assistant,
TMC Engineering Private Ltd,Chennai

Dr.J.Sundararajan,
Principal,
NPR College of Engineering & Technology,
Felicitates the function.

Organized by,

DEPARTMENT OF CIVIL ENGINEERING,

NPR COLLEGE OF ENGINEERING & TECHNOLOGY,

NPR NAGAR, NATHAM.

COLLEGE OF ENGG. & TECHNOLOGY * NPR * NATHAM

NPR College of Engineering & Technology

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

21CECC01- DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

COURSE CONTENT

CHAPTER	TOPICS
1	• Study of surveying methods and instruments • Concepts of surveying and data collection using Total Station • Theory of errors in observations • Field work
2	• Fundamental Concepts of GIS • GIS Data Models • Coordinate System and Maps Projections • Introduction to GPS
3	• Total Station Initial Settings • Setup station • Setting up back sight and Traverse • Topographic survey
4	• Construction stake out • Area and volume Calculation • Generating a map of site using survey data • Prepare a topographic Data Base of the site
5	• Geo-referencing aerial imagery and scanned maps • Digitizing • Raster Styling and Analysis

Criteria to get Certificate:

- Students should register their names for this course.
- Students must have 75% attendance.
- Student should secure 50% marks in the Exam.

Prepared by- Mr.C.Vijayakumar, Assistant Professor,Civil-

Approved by,

HoD-CIVIL

Head of the Department
Department of Civil Engineering
NPR College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

REGISTERED STUDENTS NAME LIST

Class – II-Civil (Sem-03)

S.No	Register Number	Name
1	920820103001	ALAGAR K
2	920820103002	ANANDHAN ALAGUVEL P
3	920820103003	CHANDIRA MOORTHI B
4	920820103004	GOWTHAM C
5	920820103005	HARISH M
6	920820103006	MOHANRAJ G
7	920820103007	NAVEEN KUMAR S
8	920820103008	PRANAVESHVAR J S
9	920820103009	SHARAN SAKTHIVEL J
10	920820103010	SUNDARAPRAKADEESWARAN B
11	920820103011	SURIYA M
12	920820103012	VIJAYA SRI HARI
13	920820103013	VIKNESHWARAN S
14	920820103014	YAZHINI.S
15	920820103301	ALEX PANDI.M
16	920820103302	ARUL MURUGAN.M
17	920820103303	GUNAPANDI T
18	920820103304	HARI PRASATH.M
19	920820103305	JEGAN.S
20	920820103306	JERRY AUGUSTINE DANIEL.J
21	920820103307	LOGESHWARAN
22	920820103308	NAVEEN PRASAD.R
23	920820103309	PARTHIBAN.R
24	920820103310	PRITHVIRAJ.T
25	920820103311	RAJVIGNESH.R
26	920820103312	SRILAKSHMI.S
27	920820103313	TATTA THAMIMUL ANSARI.M
28	920820103314	THIRAVIYAM S
29	920820103315	VIDESHWARAN.R
30	920820103316	VIGNESH.K
31	920820103317	DHANALAKSHMI P

Class-III-Civil(Sem-05)

Sl.No.	ROLL NO.	NAME
1	920819103001	ARUN KUMAR N
2	920819103002	JEEVITHA C
3	920819103003	NAVEENRAJ S
4	920819103004	SANJAY K
5	920819103005	SARANYA DEVI S
6	920819103007	SUBASH S
7	920819103008	SUDHARSAN K
8	920819103009	VENKATESAN R
9	920819103301	NITHISHKUMAR A R
10	920819103302	PURUSOTHAMAN K
11	920819103303	SACHIN R
12	920819103304	KISHORE S P

Class – IV-Civil (Sem-07)

SL. NO.	ROLL NO.	NAME
1	920818103001	AJAYKANNAN N
2	920818103002	HARINI S
3	920818103003	KALYANI K
4	920818103005	LAKSHMIDEVI K
5	920818103006	MANO BHARATHI T
6	920818103007	NAVEEN J
7	920818103008	RAMALAKSHMI M
8	920818103009	REVATHY A
9	920818103011	YUVASHREE S
10	920818103501	VETRIVEL A
11	920818103701	DEEPAN PANDI T

PROGRAM COORDINATOR

NPR COLLEGE OF ENGG & TECHNOLOGY NATHAM

HoD-CIVIL
Head of the Department
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

COURSE SCHEDULE

Date: 20.08.2021

Date	Time	Topics to Discuss& Internal Resource Person
06.09.2021	04.00 p.m. to 4.30 p.m.	Inauguration-Dr.J.Sundararajan,Principal,NPRCET
	04.30 p.m. to 6.00 p.m	Study of surveying methods and instruments, Concepts of surveying and data collection using Total Station Mr.Gunasekaran,Technical Assistant,TMC
08.09.2021	04.00 p.m to 6.00 p.m.	Theory of errors in observations Mr.C.Vijayakumar, AP-Civil,NPRCET
10.09.2021	04.00 p.m to 6.00 p.m.	Field work Mr.Gunasekaran,Technical Assistant,TMC
13.09.2021	04.00 p.m to 6.00 p.m.	Fundamental Concepts of GIS Mr.C.Vijayakumar, AP-Civil,NPRCET
15.09.2021	04.00 p.m to 6.00 p.m.	GIS Data Models- Mr.K.Selvam,AP-Civil,NPRCET
17.09.2021	04.00 p.m to 6.00 p.m.	Coordinate System and Maps Projections Mr.C.Vijayakumar, AP-Civil,NPRCET
20.09.2021	04.00 p.m to 6.00 p.m.	Introduction to GPS- Mr.K.Selvam,AP-Civil,NPRCET
22.09.2021	04.00 p.m to 6.00 p.m.	Total Station Initial Settings Mr.C.Vijayakumar, AP-Civil,NPRCET
24.09.2021	04.00 p.m to 6.00 p.m.	Setup station- Mr.K.Selvam,AP-Civil,NPRCET
27.09.2021	04.00 p.m to 6.00 p.m.	Setting up back sight and Traverse Mr.Gunasekaran,Technical Assistant,TMC
29.09.2021	04.00 p.m to 6.00 p.m.	Topographic survey- Mr.K.Selvam,AP-Civil,NPRCET
01.09.2021	04.00 p.m to 6.00 p.m.	Construction stake out Mr.C.Vijayakumar, AP-Civil,NPRCET
04.09.2021	04.00 p.m to 6.00 p.m.	Area and volume Calculation Mr.Gunasekaran,Technical Assistant,TMC
06.09.2021	04.00 p.m to 6.00 p.m.	Generating a map of site using survey data Mr.C.Vijayakumar, AP-Civil,NPRCET
08.09.2021	04.00 p.m to 5.30 p.m.	Prepare a topographic Data Base of the site Mr.K.Selvam,AP-Civil,NPRCET
	5.30 p.m. to 6.00 p.m.	Valedictory-Dr.A.Hemalatha, HoD-Civil, NPRCET

PROGRAM COORDINATOR

HoD-CIVIL
Head of the Department
Department of Civil Engineering
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IQAC
Coordinator - IQAC
NPR College of Engineering & Technology
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

STUDENT ATTENDANCE

S.No	Register Number	Name	6/9	8/9	10/9	13/9	15/9	17/9	20/9	22/9	24/9	27/9	29/9	01/10	04/10	06/10	08/10
1	920820103001	ALAGAR K	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P
2	920820103002	ANANDHAN ALAGUVEL P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	920820103003	CHANDIRA MOORTHI B	P	P	P	P	P	A	P	P	P	P	A	A	P	P	A
4	920820103004	GOWTHAM C	P	P	P	P	P	P	P	P	A	P	P	A	P	P	A
5	920820103005	HARISH M	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P
6	920820103006	MOHANRAJ G	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	920820103007	NAVEEN KUMAR S	P	A	P	P	A	P	P	P	P	P	P	P	P	P	P
8	920820103008	PRANAVESHVAR J S	P	P	P	A	P	A	A	A	P	P	A	P	P	P	P
9	920820103009	SHARAN SAKTHIVEL J	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	920820103010	SUNDARAPRAKADEESWARAN B	A	P	P	P	P	P	P	P	P	P	P	A	P	P	P
11	920820103011	SURIYA M	P	P	P	P	P	A	A	P	P	P	P	A	A	P	P
12	920820103012	VIJAYA SRI HARI	P	P	P	P	P	A	P	P	P	P	P	A	A	P	A
13	920820103013	VIKNESHWARAN S	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	920820103014	YAZHINI.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	920820103301	ALEX PANDI.M	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
16	920820103302	ARUL MURUGAN.M	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A
17	920820103303	GUNAPANDI T	P	P	P	P	P	P	P	A	P	P	A	A	P	P	P
18	920820103304	HARI PRASATH.M	P	A	P	P	P	P	P	P	P	P	A	P	P	P	A
19	920820103305	JEGAN.S	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P
20	920820103306	JERRY AUGUSTINE DANIEL.J	P	P	A	P	P	P	P	P	P	P	A	A	P	P	P
21	920820103307	LOGESHWARAN	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P
22	920820103308	NAVEEN PRASAD.R	P	P	P	P	P	P	P	P	P	P	P	A	P	P	A
23	920820103309	PARTHIBAN.R	P	P	P	P	P	P	P	P	A	P	P	A	A	P	A
24	920820103310	PRITHVIRAJ.T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25	920820103311	RAJVIGNESH.R	P	P	P	P	A	P	A	A	P	A	P	A	P	P	A
26	920820103312	SRILAKSHMI.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
27	920820103313	TATTA THAMIMUL ANSARI.M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
28	920820103314	THIRAVIYAM S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	920820103315	VIDESHWARAN.R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
30	920820103316	VIGNESH.K	A	P	P	P	P	P	P	P	P	P	P	A	P	P	P
31	920820103317	DHANALAKSHMI P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

32	920819103001	ARUN KUMAR N	1	1	1	1	1	a	a	a	1	1	1	1	1	1	1	
33	920819103002	JEEVITHA C	1	1	1	1	a	1	a	1	1	1	1	1	1	1	1	1
34	920819103003	NAVEENRAJ S	1	1	1	a	1	1	1	1	1	1	1	1	1	1	1	1
35	920819103004	SANJAY K	1	1	1	1	1	a	1	1	a	1	1	1	1	a	1	
36	920819103005	SARANYA DEVI S	1	1	1	1	1	a	1	1	1	1	1	1	a	1	1	
37	920819103007	SUBASH S	1	1	1	a	1	a	1	1	a	1	a	a	1	1	1	
38	920819103008	SUDHARSAN K	1	1	1	1	1	1	1	1	1	1	1	a	1	1	1	
39	920819103009	VENKATESAN R	1	1	1	a	a	a	a	a	a	1	1	a	a	1	1	
40	920819103301	NITHISHKUMAR A R	1	1	1	1	1	a	1	1	1	1	1	1	1	1	1	
41	920819103302	PURUSOTHAMAN K	1	1	1	1	1	a	1	1	a	a	1	a	a	1	1	
42	920819103303	SACHIN R	1	1	1	1	a	1	1	1	1	1	a	1	1	1	1	
43	920819103304	KISHORE S P	1	1	1	1	1	a	1	1	a	a	1	a	a	1	1	
44	920818103001	AJAYKANNAN N	1	1	1	1	a	1	1	1	1	1	a	a	1	1	1	
45	920818103002	HARINI S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
46	920818103003	KALYANI K	a	1	1	1	1	1	1	1	1	1	1	a	1	1	1	
47	920818103005	LAKSHMIDEVI K	1	1	1	1	1	1	a	1	1	1	1	1	1	1	1	
48	920818103006	MANO BHARATHI T	1	1	1	1	1	1	1	1	1	1	a	a	a	a	1	
49	920818103007	NAVEEN J	1	a	1	1	1	1	1	1	1	1	1	1	1	1	1	
50	920818103008	RAMALAKSHMI M	1	1	1	1	a	1	1	1	1	1	1	1	a	1	1	
51	920818103009	REVATHY A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
52	920818103011	YUVASHREE S	1	1	1	1	1	1	1	1	1	1	a	1	1	1	1	
53	920818103501	VETRIVEL A	1	1	1	1	1	1	1	1	1	1	1	a	1	1	1	
54	920818103701	DEEPAN PANDI T	1	1	1	1	1	1	1	1	1	a	1	1	1	1	1	
		Number of students Present	49	50	53	48	46	42	47	48	46	50	44	36	44	50	46	
		Number of students Absent	5	4	1	6	8	12	07	06	08	04	10	18	10	04	08	
		Program Co-ordinator																

HoD-CIVIL
Head of the Department
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COLLEGE OF ENGG. & TECHNOLOGY NATHAM

PRINCIPAL
Dr. J.SUNDARARAJAN,
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

SAMPLE QUESTION PAPER & ANSWER

1. In total station, data is stored in _____
a) Pen drive
b) Data card
c) Micro processor
d) External hardware

2. Compensator can make complete adjustments in total station.
a) True
b) False

3. Vertical angle is measured in the total station as Zenith angle.
a) False
b) True

4. Which of the following indicates the formula for converting slope distance to horizontal distance?
a) S = H (sin z)
b) H = S* S (sin z)
c) H*H = S (sin z)
d) H = S (sin z)

5. When total station is sighted to the target, which of the operation acts first?
a) Rotation of optical axis
b) Rotation of vertical axis
c) Rotation of horizontal axis
d) Rotation of line of collimation

6. Which of the following indicates the correct set of the combination of total station?
a) Theodolite, compass
b) Theodolite, EDM
c) Electronic theodolite, EDM
d) EDM, GPS

7. Which among the following doesn't indicate the basic calculation of the total station?
a) Horizontal distance
b) Slope distance
c) Vertical distance
d) Co-ordinate calculations

8. The formula for difference in elevation can be given as_____
a) D = V + (I-R)
b) D = V + (I+R)
c) D = V – (I-R)

d) D = V * (I-R)

9. In which direction it is best to place the total station for obtaining the best output?
a) East
b) West
c) South
d) North

10. The data obtained from total station can be used in which among the following software directly?
a) Primavera
b) STAAD PRO
c) Autodesk Revit
d) Surfer

11. Calculation the elevation difference if the vertical distance is 14.89m, instrument height is 9.2m, ground is at 2.8m.
a) 21.29 m
b) 12.29 m
c) 21.92 m
d) 41.29 m

12. Find the vertical distance if the value of slope distance can be given as 12.98 and the angle is 1°23'.
a) 21.97m
b) 12.97m
c) 12.79m
d) 21.79m

13. Find the elevation of ground beneath the reflector, if the known elevation of instrument is 12.76m, slope distance = 3.76m, angle is about 3°43', instrument height = 2.93m, ground is at 0.987 m.
a) 18.54m
b) 81.54m
c) 18.45m
d) 18.97m

PROGRAM COORDINATOR

COLLEGE OF ENGG & TECHNOLOGY NATHAM NPR

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

STUDENT FEEDBACK

Name of the Student : ALAGAR.K	Year / Semester: II/03
Name of the Program: DIGITAL LAND SURVEYING AND MAPPING (DLS&M)	

S.NO	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1	Course Content	✓			
2	Way of exposed new knowledge and practices	✓			
3	Examples Provided during this course	✓			
4	Course delivered by Resource Person	✓			
5	Time Management		✓		
6	Overall rating of this course	✓			
7	Any Other Comments / Suggestions	—			

PROGRAM COORDINATOR

COLLEGE OF ENGG. & TECHNOLOGY NATHAM NPR

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

STUDENT FEEDBACK

Name of the Student : Jeevitha.c	Year / Semester: IV/VII
Name of the Program: DIGITAL LAND SURVEYING AND MAPPING (DLS&M)	

S.NO	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1	Course Content	✓			
2	Way of exposed new knowledge and practices	✓			
3	Examples Provided during this course	✓			
4	Course delivered by Resource Person		✓		
5	Time Management	✓			
6	Overall rating of this course	✓			
7	Any Other Comments / Suggestions	✓			

PROGRAM COORDINATOR

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

STUDENT FEEDBACK

Name of the Student : REVATHY. A	Year / Semester: IV/07
Name of the Program: DIGITAL LAND SURVEYING AND MAPPING (DLS&M)	

S.NO	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1	Course Content	✓			
2	Way of exposed new knowledge and practices	✓			
3	Examples Provided during this course	✓			
4	Course delivered by Resource Person	✓			
5	Time Management	✓			
6	Overall rating of this course	✓			
7	Any Other Comments / Suggestions	GOOD & USEFUL SESSION.			

PROGRAM COORDINATOR

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

STUDENT FEEDBACK SUMMARY REPORT

TOTAL STRENGTH:54 **DATE: 09.10.2021**

CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
Course Content	41	3	4	2
Way of exposed new knowledge and practices	45	3	0	2
Examples Provided during this course	42	3	3	2
Course delivered by Resource Person	46	2	1	1
Time Management	44	3	3	0
Overall rating of this course	44	4	1	1
Average	43.66	3	2	1.33

NUMBER OF STUDENTS SUCCESSFULLY COMPLETED: 53



PROGRAM COORDINATOR **HoD-CIVIL** **PRINCIPAL**

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

SUMMARY REPORT

The Department of Civil Engineering organized Certificate course on "Digital Land Surveying and Mapping (DLS&M)" from 06.09.2021 to 08.09.2021- 30 hours at our NPRCET Ground.

During the Inauguration Ms.S.Srilaxmi.,II-Civil has delivered the welcome address. Dr.J.Sundararajan, Principal inaugurated the program delivered the inaugural address. External Resource person Mr.Gunasekaran,Technical Assistant,TMC has shared their knowledge with our students. Mr.C.Vijayakumar,Assistant Professor, Department of Civil Engineering have organized the function.This 30 hours course gives over view about "Digital Land Surveying and Mapping (DLS&M)" and provides adequate knowledge about the Total Station Instruments & GPS surveying.

Among the 54 students registered, 50 students successfully completed the program and were awarded certificates.

Mr.N.Arunkumar, III Civil was delivered vote of thanks address.

NPR COLLEGE OF ENGG & TECHNOLOGY NATHAM

PROGRAM COORDINATOR **HoD-CIVIL** **PRINCIPAL**

Dr. J.SUNDARAR... B.E., M.Tech.
Principal
N.P.R. College of Engineering
Natham, Dindigul (Dt) - 624...

Head of the Department
Department of Civil Engineering
NPR College of Engineering
Natham, Dindigul (Dt)

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE-DIGITAL LAND SURVEYING AND MAPPING (DLS&M)

COURSE MATERIAL

1. https://www.gisresources.com/total-station-and-its-applications-in-surveying/
2. https://www.southalabama.edu/geography/allison/GY301/Total%20Station%20Setup%20and%20Operation.pdf
3. https://theconstructor.org/surveying/total-station-operation-uses-advantage/6605/
4. https://www.gps.gov/applications/survey/
5. https://www.jurovichsurveying.com.au/faq/what-is-gps

PROGRAM COORDINATOR

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DEPARTMENT OF CIVIL ENGINEERING

This certificate is presented to

Mr./Ms. VIDESHWARAN.R - 920820103315 - II - CIVIL ENGINEERING who has successfully completed the certificate course " DIGITAL LAND SURVEYING AND MAPPING (DLS&M)" organized by Department of Civil Engineering from 06.09.2021 to 08.10.2021- 30 Hours.

HOD-CIVIL

COLLEGE OF ENGG. & TECHNOLOGY * NPR * NATHAM

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DEPARTMENT OF CIVIL ENGINEERING

This certificate is presented to

Mr./Ms. YAZHINI.S - 920820103014 - II - CIVIL ENGINEERING who has successfully completed the certificate course " DIGITAL LAND SURVEYING AND MAPPING (DLS&M)" organized by Department of Civil Engineering from 06.09.2021 to 08.10.2021- 30 Hours.

HOD-CIVIL

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DEPARTMENT OF CIVIL ENGINEERING

This certificate is presented to

Mr./Ms. JEGAN.S - 920820103305 - II - CIVIL ENGINEERING who has successfully completed the certificate course " DIGITAL LAND SURVEYING AND MAPPING (DLS&M)" organized by Department of Civil Engineering from 06.09.2021 to 08.10.2021- 30 Hours.

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DEPARTMENT OF CIVIL ENGINEERING

This certificate is presented to

Mr./Ms. NITHISH KUMAR.A.R – 912081910330I – III – CIVIL ENGINEERING who has successfully completed the certificate course " **DIGITAL LAND SURVEYING AND MAPPING (DLS&M)**" organized by Department of Civil Engineering from 06.09.2021 to 08.10.2021- 30 Hours.

HOD-CIVIL

COLLEGE OF ENGG. & TECHNOLOGY NPR NATHAM

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DEPARTMENT OF CIVIL ENGINEERING

This certificate is presented to

Mr./Ms. DEEPAN PANDI.T - 920818103401 - IV - CIVIL ENGINEERING who has successfully completed the certificate course " **DIGITAL LAND SURVEYING AND MAPPING (DLS&M)**" organized by Department of Civil Engineering from 06.09.2021 to 08.10.2021- 30 Hours.

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

COURSE NAME: **RISK ANALYSIS AND MITIGATION PRACTICE**

COURSE CODE: **21CEAO02**

ACADEMIC YEAR: 2021-2022 SEMESTER: ODD DURATION: 35 HOURS

S.NO	PARTICULARS	PAGE NO
1	PERMISSION LETTER	2
2	CIRCULAR TO STUDENTS	3
3	INVITATION	4
4	COURSE CONTENT	5
5	REGISTERED STUDENTS NAME LIST	6
6	COURSE SCHEDULE	7
7	STUDENTS ATTENDANCE	10
8	QUIZ SAMPLE QUESTION PAPER WITH ANSWER	11
9	STUDENT FEEDBACK	15
10	FEEDBACK ANALYSIS REPORT	16
11	SUMMARY REPORT	17
12	COURSE MATERIAL/MANUAL	18
13	CERTIFICATES OF THE PROGRAM	19

PROGRAM COORDINATOR

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Department of CIVIL Engineering
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IQAC
Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

PERMISSION LETTER

From

Mr.K.Shanthakumar,
Head of the Department,
Department Civil Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: We Request permission to conduct certificate program for Civil & M.E-Structural Engineering students – Reg

As we are planning to conduct a certificate program on "**RISK ANALYSIS AND MITIGATION PRACTICE**" to our M.E-Structural & Civil Engineering students from 06.11.2021 to 11.12.2021-35 Hours in our college. We have suggested Mr.N.Karthic, Assistant Professor Department of Civil Engineering, NPR College of Engineering & Technology as a Internal resource person for this Add on Course. Kindly, allow us to conduct this program.

Thanking you.

Yours truthfully,

Date: 17.10.2016
Place:Natham

forwarded to Principal,

(Dr.A. Hemalatha)

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

CIRCULAR

NPRCET/OFF/CIVIL/VAC/2021-2022 DATE: 20.10.2021

We notify that Department of Civil Engineering is planned to conduct an Add on Course on **"RISK ANALYSIS AND MITIGATION PRACTICE"** for students during this odd semester 2021-2022.Interested students can register their name to coordinator of this program on or before 25.10.2021.

The details of the training program are given below.

COURSE NAME	:	**RISK ANALYSIS AND MITIGATION PRACTICE**
INTERNAL RESOURCE PERSON	:	Mr.N.Karthic, Assistant Professor , Department of Civil Engineering, NPR College of Engineering & Technology.
VENUE	:	Computer Aided Design & Drafting Laboratory, NPR College of Engineering &Technology
DATE & DURATION	:	06.11.2021 to 11.12.2021-35 Hours
PROGRAM COORDINATOR		Mr.K.Shanthakumar, Assistant Professor, Department of Civil Engineering, NPR College of Engineering & Technology

PRINCIPAL
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:
1. All the HoDs
2. All the Class Rooms
3. Notice Board
4. File

COLLEGE OF ENGG. & TECHNOLOGY NATHAM 3

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The Management, Principal, Staff and Students

Warm welcome you for the inauguration of

ADD ON COURSE ON

"RISK ANALYSIS AND MITIGATION PRACTICE"

On 06.11.2021

Venue: Computer Aided Design & Drafting Laboratory at 9.00 A.M.

INTERNAL RESOURCE PERSON

Mr.N.KARTHIC,

Assistant Professor,

Department of Civil Engineering,

NPR College of Engineering & Technology

Dr.J.SUNDARARAJAN,

Principal,

NPR College of Engineering & Technology

Felicitates the function

Arranged by

Department of Civil Engineering,

NPR College of Engineering & Technology

NPR Nagar, Natham.

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

REGISTERED STUDENTS NAME LIST

Class-III-Civil(Sem-05)

Sl.No.	ROLL NO.	NAME
1	920819103001	ARUN KUMAR N
2	920819103002	JEEVITHA C
3	920819103003	NAVEENRAJ S
4	920819103004	SANJAY K
5	920819103005	SARANYA DEVI S
6	920819103007	SUBASH S
7	920819103008	SUDHARSAN K
8	920819103009	VENKATESAN R
9	920819103301	NITHISHKUMAR A R
10	920819103302	PURUSOTHAMAN K
11	920819103303	SACHIN R
12	920819103304	KISHORE S P

Class – IV-Civil (Sem-07)

SL. NO.	ROLL NO.	NAME
1	920818103001	AJAYKANNAN N
2	920818103002	HARINI S
3	920818103003	KALYANI K
4	920818103005	LAKSHMIDEVI K
5	920818103006	MANO BHARATHI T
6	920818103007	NAVEEN J
7	920818103008	RAMALAKSHMI M
8	920818103009	REVATHY A
9	920818103011	YUVASHREE S
10	920818103501	VETRIVEL A
11	920818103701	DEEPAN PANDI T

PROGRAM COORDINATOR

HoD-CIVIL

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3	920819103003	NAVEENRAJ S
4	920819103004	SANJAY K
5	920819103005	SARANYA DEVI S
6	920819103007	SUBASH S
7	920819103008	SUDHARSAN K
8	920819103009	VENKATESAN R
9	920819103301	NITHISHKUMAR A R
10	920819103302	PURUSOTHAMAN K
11	920819103303	SACHIN R
12	920819103304	KISHORE S P

Class – IV-Civil (Sem-07)

SL. NO.	ROLL NO.	NAME
1	920818103001	AJAYKANNAN N
2	920818103002	HARINI S
3	920818103003	KALYANI K
4	920818103005	LAKSHMIDEVI K
5	920818103006	MANO BHARATHI T
6	920818103007	NAVEEN J
7	920818103008	RAMALAKSHMI M
8	920818103009	REVATHY A
9	920818103011	YUVASHREE S
10	920818103501	VETRIVEL A
11	920818103701	DEEPAN PANDI T

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

COURSE SCHEDULE

Date:18.10.2021

Day 1 06.11.2021	09.00 a.m. – 09.30 a.m.	Inauguration-Dr.J.Sundararajan,Principal,NPRCET	
	10. 00 a.m-11.30 a.m.	Session 1	Course Introduction Mr.N.Karthic,AP-Civil,NPRCET
	11.30 a.m to 11.45 a.m.	*Tea Break*	
	11.45 a.m to 1.15 p.m	Session 2	Introduction to Risk Management Mr.K.Shanthakumar,AP-Civil,NPRCET
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	Risk Management and the Greater Emergency Mr.N.Karthic,AP-Civil,NPRCET
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	Management Discipline Mr.K.Shanthakumar,AP-Civil,NPRCET

Day 2 13.11.2021	09. 00 a.m-11.30 a.m.	Session 1	Hazards Risk Management in the United States Mr.N.Karthic,AP-Civil,NPRCET
	11.30 a.m to 11.45 a.m.		*Tea Break*
	11.45 a.m to 1.15 p.m	Session 2	Risk Management Lessons from the Private Sector Mr.K.Shanthakumar,AP-Civil,NPRCET
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	Identifying Hazards Mr.N.Karthic,AP-Civil,NPRCET
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	Scope Vulnerability and Understand Capacity Mr.K.Shanthakumar,AP-Civil,NPRCET

Day 3 20.11.2021	09. 00 a.m-11.30 a.m.	Session 1	Risk Management Lessons from Outside the United States Mr.N.Karthic,AP-Civil,NPRCET
	11.30 a.m to 11.45 a.m.		*Tea Break*
	11.45 a.m to 1.15 p.m	Session 2	A Hazards Risk Management Approach Mr.K.Shanthakumar,AP-Civil,NPRCET
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	The Mitigation Plan Mr.N.Karthic,AP-Civil,NPRCET
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	Identify and Assess Risk Reduction Measures Mr.K.Shanthakumar,AP-Civil,NPRCET

Day 4 27.11.2021	09. 00 a.m-11.30 a.m.	Session 1	Building Support, Forming Partnerships, and Involving the Public Mr.N.Karthic,AP-Civil,NPRCET
	11.30 a.m to 11.45 a.m.		*Tea Break*
	11.45 a.m to 1.15 p.m	Session 2	Building Support, Forming Partnerships, and Involving the Public Mr.K.Shanthakumar,AP-Civil,NPRCET
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	Establishing a Context for Risk Management Mr.N.Karthic,AP-Civil,NPRCET
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	Scope Vulnerability and Understand Capacity Analyze Risk Mr.K.Shanthakumar,AP-Civil,NPRCET

Day 5 04.12.2021	09. 00 a.m-11.30 a.m.	Session 1	Financing Risk Reduction Mr.N.Karthic,AP-Civil,NPRCET
	11.30 a.m to 11.45 a.m.		*Tea Break*
	11.45 a.m to 1.15 p.m	Session 2	The Mitigation Plan: Implementing, Marketing, and Mr.K.Shanthakumar,AP-Civil,NPRCET
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	Supporting Risk Reduction Efforts Mr.N.Karthic,AP-Civil,NPRCET
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	Supporting Risk Reduction Efforts Mr.K.Shanthakumar,AP-Civil,NPRCET

Day 6 11.12.2021	09. 00 a.m-11.30 a.m.	Session 1	FEMA Mitigation Grant Programs Mr.N.Karthic,AP-Civil,NPRCET
	11.30 a.m to 11.45 a.m.		*Tea Break*
	11.45 a.m to 1.15 p.m	Session 2	Risk Prioritization and Ranking Mr.K.Shanthakumar,AP-Civil,NPRCET
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	Risk Assessment Methods Mr.N.Karthic,AP-Civil,NPRCET
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 3.45 p.m.	Session 4	Case Studies Mr.K.Shanthakumar,AP-Civil,NPRCET
	3.45 p.m. to 4.15 p.m.	Valedictory-Dr.A.Hemalatha,HOD-Civil,NPRCET	

PROGRAM COORDINATOR

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IQAC
Coordinator - IQAC
NPR College of Engineering & Technology
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DEPARTMENT OF CIVIL ENGINEERING
ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE
STUDENT ATTENDANCE

.No	Register Number	Name	6/11	13/11	20/11	27/11	4/12	11/12
1	920819103001	ARUN KUMAR N	/	/	/	A	a	/
2	920819103002	JEEVITHA C	/	/	/	A	a	/
3	920819103003	NAVEENRAJ S	/	/	a	/	/	/
4	920819103004	SANJAY K	/	/	a	/	/	/
5	920819103005	SARANYA DEVI S	a	/	/	/	/	/
6	920819103007	SUBASH S	/	/	a	/	/	/
7	920819103008	SUDHARSAN K	/	/	/	/	a	/
8	920819103009	VENKATESAN R	/	a	/	/	/	/
9	920819103301	NITHISHKUMAR A R	/	/	a	/	/	/
10	920819103302	PURUSOTHAMAN K	/	/	/	/	a	/
11	920819103303	SACHIN R	/	/	/	/	a	/
12	920819103304	KISHORE S P	/	/	/	/	a	/
13	920818103001	AJAYKANNAN N	/	/	a	/	/	/
14	920818103002	HARINI S	/	/	/	/	/	/
15	920818103003	KALYANI K	a	/	/	/	/	/
16	920818103005	LAKSHMIDEVI K	/	/	/	/	/	/
17	920818103006	MANO BHARATHI T	/	/	a	/	/	/
18	920818103007	NAVEEN J	/	/	/	/	/	/
19	920818103008	RAMALAKSHMI M	/	/	a	/	/	/
20	920818103009	REVATHY A	/	/	/	a	/	/
21	920818103011	YUVASHREE S	/	/	/	/	/	/
22	920818103501	VETRIVEL A	/	/	a	/	a	/
23	920818103701	DEEPAN PANDI T	/	/	a	/	a	/
		Number of students Present	21	22	15	22	15	23
		Number of students Absent	02	01	08	01	08	-
		Program Co-ordinator	K.S.Y	K.S.Y	K.S.Y	K.S.Y	K.S.Y	K.S.Y

HoD-CIVIL

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

SAMPLE QUESTION PAPER & ANSWER

1. Risk management is one of the most important jobs for a

a) Client

b) Investor

c) Production team

d) Project manager

2. Which of the following risk is the failure of a purchased component to perform as expected?

a) Product risk

b) Project risk

c) Business risk

d) Programming risk

3. Which of the following term is best defined by the statement: "There will be a change of organizational management with different priorities."?

a) Staff turnover

b) Technology change

c) Management change

d) Product competition

4. Which of the following term is best defined by the statement: "The underlying technology on which the system is built is superseded by new technology."?

a) Technology change

b) Product competition

c) Requirements change

5. What assess the risk and your plans for risk mitigation and revise these when you learn more about the risk?

a) Risk monitoring

b) Risk planning

c) Risk analysis

d) Risk identification

6. Which of the following risks are derived from the organizational environment where the software is being developed?

a) People risks

b) Technology risks

c) Estimation risks

d) Organizational risks

7. Which of the following risks are derived from the software or hardware technologies that are used to develop the system?

a) Managerial risks

b) Technology risks

c) Estimation risks

d) Organizational risks

8. Which of the following term is best defined by the statement: "Derive traceability information to maximize information hiding in the design."?

a) Underestimated development time

b) Organizational restructuring

c) Requirements changes

d) None of the mentioned

9. Which of the following strategies means that the impact of the risk will be reduced?

a) Avoidance strategies

b) Minimization strategies

c) Contingency plans

d) All of the mentioned

10. Risk management is now recognized as one of the most important project management tasks.

a) True

b) False

PROGRAM COORDINATOR

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

STUDENT FEEDBACK

Name of the Student : S. SUBASH			**Year / Semester:** III / V		
Name of the Program: RISK ANALYSIS AND MITIGATION PRACTICE					
S.NO	**CONTENT**	**EXCELLENT**	**GOOD**	**FAIR**	**SATISFACTORY**
1	Course Content	✓			
2	Way of exposed new knowledge and practices		✓		
3	Examples Provided during this course	✓			
4	Course delivered by Resource Person		✓		
5	Time Management		✓		
6	Overall rating of this course	✓			
7	Any Other Comments / Suggestions	INFORMATIVE			

K.Sasi
PROGRAM COORDINATOR

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

STUDENT FEEDBACK

Name of the Student : Sachin. R	Year / Semester: III/05
Name of the Program: RISK ANALYSIS AND MITIGATION PRACTICE	

S.NO	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1	Course Content	✓			
2	Way of exposed new knowledge and practices		✓		
3	Examples Provided during this course	✓			
4	Course delivered by Resource Person	✓			
5	Time Management	✓			
6	Overall rating of this course	✓			
7	Any Other Comments / Suggestions	Good & useful session.			

PROGRAM COORDINATOR

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ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

STUDENT FEEDBACK

Name of the Student : Manobharathi T	Year / Semester: IV / 07.
Name of the Program: RISK ANALYSIS AND MITIGATION PRACTICE	

S.NO	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1	Course Content	✓			
2	Way of exposed new knowledge and practices	✓			
3	Examples Provided during this course	✓			
4	Course delivered by Resource Person	✓			
5	Time Management	✓			
6	Overall rating of this course	✓			
7	Any Other Comments / Suggestions	As per my suggestion, I want training about advanced surveying instruments.			

PROGRAM COORDINATOR

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

STUDENT FEEDBACK SUMMARY REPORT

TOTAL STRENGTH:23 **DATE: 13.12.2021**

CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
Course Content	20	2	1	0
Way of exposed new knowledge and practices	18	3	2	0
Examples Provided during this course	17	4	2	0
Course delivered by Resource Person	19	2	1	1
Time Management	20	1	1	1
Overall rating of this course	17	2	2	2
Average	18.5	2.33	1.5	0.67

NUMBER OF STUDENTS SUCCESSFULLY COMPLETED:23



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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

SUMMARY REPORT

The Department of Civil Engineering organized Add on course for "Risk Analysis and Mitigation Practice" from 06.11.2021 to 11.12.2021-35 Hours at Computer aided Design & Drafting Laboratory.

During the inauguration Ms.S.Yuvashree,IV-Civil has delivered the welcome address. Dr.J.Sundararajan, Principal of our college inaugurated the program delivered the inaugural address. Internal Resource person Mr.N.Karthic , Assistant Professor, Department of Civil Engineering has shared their knowledge with our students. This 35 hours course gives over view about "Risk Analysis and Mitigation Practice" and provides overview of Building Design and Drafting.

They also shared their knowledge of Course Introduction, Introduction to Risk Management & Emergency Management Discipline, Hazards Risk Management in the United States ,Risk Management Lessons from the Private Sector & Identifying Hazards , Risk Management Lessons from Outside the United States ,A Hazards Risk Management Approach The Mitigation Plan ,Identify and Assess Risk Reduction Measures, Building Support, Forming Partnerships, and Involving the Public ,Establishing a Context for Risk Management ,Scope Vulnerability and Understand Capacity. So that students enable to have skills that will help them to design own construction by using Risk Analysis and Mitigation Practice.

Among the 23 students registered, 23 students successfully completed the program and were awarded certificates.

Ms.S.Saranya Devi, III Civil was delivered vote of thanks address.

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON RISK ANALYSIS AND MITIGATION PRACTICE

COURSE MATERIAL

1. *Business and Industry Crisis Management*http://training.fema.gov/EMIWeb/edu/busind.asp
2. *Comparative Emergency Management*
   http://training.fema.gov/EMIWeb/edu/compEmMgmt/index.asp
3. *National Incident Management Systems*
   http://training.fema.gov/EMIWeb/edu/docs/nimsc2/index.asp
4. https://mcqslearn.com/study/global-warming/quiz/quiz-questions-and-answers.php?page=114
5. https://www.mitre.org/publications/systems-engineering-guide/acquisition-systems-engineering/risk-management/risk-mitigation-planning-implementation-and-progress-monitoring
6. https://www.indeed.com/career-advice/career-development/risk-mitigation-strategies

Further Study:

- https://industrialaudit.com/risk-mitigation/
- https://www.nap.edu/read/11183/chapter/7

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DEPARTMENT of CIVIL ENGINEERING

Add on Course on

"RISK ANALYSIS AND MITIGATION PRACTICE"

Certificate of participation

This is certify that AJAYKANNAN N -920818103001 - IV- CIVIL ENGG has completed the Add on Course on "RISK ANALYSIS AND MITIGATION PRACTICE "held on 06.11.2021 to 11.12.2021 - 35 Hrs.

HOD
(Dr.A.Hemalatha)

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DEPARTMENT of CIVIL ENGINEERING

Add on Course on

"RISK ANALYSIS AND MITIGATION PRACTICE"

Certificate of participation

This is certify that VETRIVEL A - 920818103501 - IV- CIVIL ENGG has completed the Add on Course on "RISK ANALYSIS AND MITIGATION PRACTICE "held on 06.11.2021 to 11.12.2021 - 35 Hrs.

HOD
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DEPARTMENT of CIVIL ENGINEERING

Add on Course on

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Certificate of participation

This is certify that MANO BHARATHI T -920818103006 - IV- CIVIL has completed the Add on Course on "RISK ANALYSIS AND MITIGATION PRACTICE "held on 06.11.2021 to 11.12.2021 - 35 Hrs.

HOD
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Add on Course on

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Certificate of participation

This is certify that SUDHARSAN K - 920819103008 - III- CIVIL has completed the Add on Course on "RISK ANALYSIS AND MITIGATION PRACTICE "held on 06.11.2021 to 11.12.2021 - 35 Hrs.

HOD
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DEPARTMENT of CIVIL ENGINEERING

Add on Course on

"RISK ANALYSIS AND MITIGATION PRACTICE"

Certificate of participation

This is certify that NAVEENRAJ S - 920819103003 - III- CIVIL has completed the Add on Course on "RISK ANALYSIS AND MITIGATION PRACTICE "held on 06.11.2021 to 11.12.2021 - 35 Hrs.

HOD
(Dr.A.Hemalatha)

COLLEGE OF ENGG. & TECHNOLOGY NATHAM

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

PRINCIPAL
(Dr.J.Sundararajan)

NPR
College of Engineering & Technology
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Natham, Dindigul - 624 401. Web: www.nprcet.org

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

INDEX

COURSE NAME: **BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS**

COURSE CODE: **21CECC03**

ACADEMIC YEAR: 2021-2022 SEMESTER: EVEN DURATION: 32 HOURS

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P. Manikandan
PROGRAM COORDINATOR
P.MANIKANDAN
AP - CIVIL

HoD-CIVIL
Head of the Department
Department of Civil Engineering
NPR College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401

IQAC
Coordinator - IQAC
NPR College of Engineering & Technology

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P. Manoharan
PROGRAM COORDINATOR
P. MANIKANDAN
AP - CIVIL

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Date: 24.05.2022

From

Mr.P.Manikandan,
Assistant Professor,
Department of Civil Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Requesting permission to conduct Certificate course for Civil Engg. students – Reg.

We have planned to conduct a Certificate Course on "Bar Bending Schedule for Commercial Buildings" to our B.E-Civil Engineering & M.E- Structural Engineering students from 18.7.2022 to 23.07.2022 for 32 hours in our college premises. We have proposed Er.P.Senthil Kumar, Sona Builders, RM Colony, Dindigul as an external resource person for this certificate course . Kindly, permit us to conduct the same.

Thanking you.

Yours truly,

P. Manikandan

(P.MANIKANDAN)

NPR COLLEGE OF ENGG & TECHNOLOGY * NATHAM

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Department of Civil Engineering
NPR College of Engineering & Technology
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

CIRCULAR

NPRCET/OFF/CIVIL/VAC/2021-2022 Date: 01.06.2022

We are glad to inform you that our Department of Civil Engineering has planned to conduct a certificate course on **"BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS"** for our students during this end of even semester after University Examinations 2021-2022. Interested students can enroll their names to program coordinator on or before 06.06.2022.

The details of the Certificate course are given below:

Course Name	:	Bar Bending Schedule for Commercial Buildings
Resource Person	:	Er.P.Senthil Kumar, Sona Builders, RM Colony, Dindigul.
Venue	:	Open Air Auditorium, NPR College of Engineering &Technology.
Date & Duration	:	18.7.2022 to 23.07.2022 & 32 hours
Program Coordinator	:	P.Manikandan, AP/Civil, NPRCET

PRINCIPAL

Dr. J.SUNDARARAJAN,
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Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. IQAC
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3. All the Class Rooms
4. Notice Board
5. File

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The Management, Principal, Staff and Students

heartly welcome you for the inauguration of

CERTIFICATE COURSE on

"BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS"

on 18th July ,2022

Venue: Open Air Auditorium, at 9.00 A.M.

CHIEF GUEST

Er.P.Senthil Kumar,

Sona Builders,

RM Colony, Dindigul

Dr.J.SUNDARARAJAN

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Civil Engineering,

NPR College of Engineering &Technology,

NPR Nagar, Natham.

CERTIFICATE COURSE
21CECC03- BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS
COURSE CONTENT

CHAPTER-1

General safety Rules-Basic knowledge of Unit-measurement Basic knowledge of arithmetic calculation-Role of a Assistant Bar Bender-Fixer Job opportunities for a Assistant Bar Bender-Fixer.

CHAPTER-2

Need & importance of the safety on the job site-Safety precaution at site- Knowledge of first aid & basic dressing material -Do's And Don'ts while working at height-Demonstration & use of Personal Protective Equipment (PPE) like safety helmet, safety belts, shoes, hand gloves, face mask etc-Demonstration of safe working procedure for cutting & handling of steel rods Standards Housekeeping procedure.

CHAPTER-3

Loading, unloading & shifting of reinforcement material in a proper sequence as per methodology - Correct procedure for storage & maintenance of reinforcement steel - Staking of rods as per different diameter of bars & length -Understand, identify and demonstrate the use of hooks, rings and shackles.

CHAPTER-4

Types of scaffolds - Brick layers scaffold, Needle scaffold, Mason's scaffold, tubular scaffold - Hand Tools required for erection & dismantle of 3.6 m temporary scaffold - Basic component required for erection of different types of temporary scaffold- Process of erecting & dismantle of 3.6 m temporary scaffold- Shifting of tools & material from bottom level to higher level of scaffold- Standard safety procedure while working at height - Demonstration of erection of 3.6 m temporary scaffold .

CHAPTER-5

Identification of different types of stirrups and cranks/ shear bars-Use of cranks and stirrups in RCC works and method of their preparation-Selection of tools, pin plate for bending of stirrups Use of crank/shear bars-Calculation of cutting length for the stirrups-Tolerance for stirrups & shear/crank bars- Demonstration of making different types of stirrups-General Discipline in the class room-General safety Rules-Basic knowledge of Unit & measurement - Basic knowledge of arithmetic calculation - Role of a Assistant Bar Bender & Fixer - Job opportunities for a Assistant Bar Bender & Fixer.

Criteria to get Certificate:

- Students should register their names for this course.
- Students must have 75% attendance.

COLLEGE OF ENGG. & TECHNOLOGY NATHAM NPR

Prepared by- Mr.P.Manikandan, AP/Civil, NPRCET – P.Manikandan

Approved by,

HoD-CIVIL

Head of the Department
Department of Civil Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

PRINCIPAL

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

LIST OF REGISTERED STUDENTS

S.No.	Register Number	Student Name	Year/dep
1	920818103001	Ajaykannan N	IV-Civil
2	920818103002	Harini S	IV-Civil
3	920818103003	Kalyani K	IV-Civil
4	920818103005	Lakshmidevi K	IV-Civil
5	920818103006	Mano Bharathi T	IV-Civil
6	920818103007	Naveen J	IV-Civil
7	920818103008	Ramalakshmi M	IV-Civil
8	920818103009	Revathy A	IV-Civil
9	920818103011	Yuvashree S	IV-Civil
10	920818103301	Vetrivel A	IV-Civil
11	920818103701	Deepan Pandi T	IV-Civil
12	920818103502	Raja K	IV-Civil
13	920819103001	Arun Kumar N	III-Civil
14	920819103002	Jeevitha C	III-Civil
15	920819103003	Naveenraj S	III-Civil
16	920819103004	Sanjay K	III-Civil
17	920819103005	Saranya Devi S	III-Civil
18	920819103007	Subash S	III-Civil
19	920819103008	Sudharsan K	III-Civil
20	920819103009	Venkatesan R	III-Civil
21	920819103301	Nithishkumar A R	III-Civil
22	920819103302	Purusothaman K	III-Civil
23	920819103303	Sachin R	III-Civil
24	920819103304	Kishore S P	III-Civil
25	920820103001	Alagar K	II-Civil
26	920820103002	Anandhan Alaguvel P	II-Civil
27	920820103003	Chandira Moorthi B	II-Civil
28	920820103004	Gowtham C	II-Civil
29	920820103005	Harish M	II-Civil
30	920820103006	Mohanraj G	II-Civil
31	920820103007	Naveen Kumar S	II-Civil

NATHAM

S.No.	Register Number	Student Name	Year/dep
32	920820103008	Pranaveshvar J S	II-Civil
33	920820103009	Sharan Sakthivel J	II-Civil
34	920820103010	Sundaraprakadeeswaran B	II-Civil
35	920820103011	Suriya M	II-Civil
36	920820103012	Vijaya Sri Hari I	II-Civil
37	920820103013	Vikneshwaran S	II-Civil
38	920820103014	Yazhini.S	II-Civil
39	920820103301	Alex Pandi.M	II-Civil
40	920820103302	Arul Murugan M	II-Civil
41	920820103303	Gunapandi T	II-Civil
42	920820103304	Hari Prasath M	II-Civil
43	920820103305	Jegan.S	II-Civil
44	920820103307	Logeshwaran	II-Civil
45	920820103308	Naveen Prasad R	II-Civil
46	920820103309	Parthiban R	II-Civil
47	920820103310	Prithviraj T	II-Civil
48	920820103311	Rajvignesh R	II-Civil
49	920820103312	Srilakshmi S	II-Civil
50	920820103313	Tatta Thamimul Ansari M	II-Civil
51	920820103314	Thiraviyam S	II-Civil
52	920820103315	Videshwaran R	II-Civil
53	920820103316	Vignesh K	II-Civil
54	920820103317	Dhanalakshmi P	II-Civil
55	920820413001	Jeyadharani J	I-M.E
56	920820413002	Ponnu A	I-M.E
57	920820413001	Kirthikha S	II-M.E

HoD-CIVIL

Head of the Department
Department of Civil Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

PRINCIPAL

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

Course Schedule Date:24.05.2022

Day 1 18.07.2022 (Monday)	09.00 a.m. – 09.30 a.m.	Inauguration-Dr.J.Sundararajan,Principal,NPRCET	
	09.30 a.m-11.30 a.m.	Session 1	General Discipline in the class room, General safety Rules,Basic knowledge of Unit Er.P.Senthilkumar
	11.30 a.m to 11.45 a.m.	*Tea Break*	
	11.45 a.m to 1.15 p.m	Session 2	Measurement Basic knowledge of arithmetic calculation,Role of a Assistant Bar Bender Mr.P.Manikandan, AP/Civil
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	Fixer Job opportunities for a Assistant Bar Bender& Fixer Er.P.Senthilkumar
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	Fixer Job opportunities for a Assistant Bar Bender& Fixer Mr.P.Manikandan, AP/Civil

Day 2 19.07.2022 (Tuesday)	09. 00 a.m-11.30 a.m.	Session 1	**Importance of the safety on the job site Safety precaution at site, Knowledge of first aid& basic dressing material** Er.P.Senthilkumar
	11.30 a.m to 11.45 a.m.	*Tea Break*	
	11.45 a.m to 1.15 p.m	Session 2	**Loading, unloading & shifting of reinforcement material in a proper sequence as per methodology Correct procedure for storage** Mr.P.Manikandan, AP/Civil
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	**Maintenance of reinforcement steel Staking of rods as per different diameter of bars & length** Er.P.Senthilkumar
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	**Understand, identify and demonstrate the use of hooks, rings and shackles** Mr.P.Manikandan, AP/Civil

Day 3 20.07.2022 (Wednesday)	09. 00 a.m-11.30 a.m.	Session 1	**Types of scaffolds - Brick layers scaffold, Needle scaffold, Mason's scaffold, tubular scaffold Hand** Er.P.Senthilkumar
	11.30 a.m to 11.45 a.m.	*Tea Break*	
	11.45 a.m to 1.15 p.m	Session 2	**Basic component required for erection ofdifferent types of temporary scaffold.** Mr.P.Manikandan, AP/Civil
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	**Shifting of tools& material from bottom level to higher level of scaffold.** Er.P.Senthilkumar
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	**Demonstration of erection of 3.6 m temporary scaffold** Mr.P.Manikandan, AP/Civil

Day 4 21.07.2022 (Thursday)	09. 00 a.m-11.30 a.m.	Session 1	**Tools required for erection,dismantle of 3.6 m temporary scaffold.** Er.P.Senthilkumar
	11.30 a.m to 11.45 a.m.	*Tea Break*	
	11.45 a.m to 1.15 p.m	Session 2	**Process of erecting& dismantle of 3.6 m temporary scaffold.** Mr.P.Manikandan, AP/Civil
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	**Standard safety procedure while working at height.** Er.P.Senthilkumar
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	**Practice** Mr.P.Manikandan, AP/Civil



Day 5 22.07.2022 (Friday)	09. 00 a.m-11.30 a.m.	Session 1	**Identification of different types of stirrups and cranks/ shear bars** Er.P.Senthilkumar
	11.30 a.m to 11.45 a.m.	*Tea Break*	
	11.45 a.m to 1.15 p.m	Session 2	**Use of cranks and stirrups in RCC works and method of their preparation.** Mr.P.Manikandan, AP/Civil
	1.15 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.00 p.m.	Session 3	**Use of crank/shear bars Calculation of cutting length for the stirrups** Er.P.Senthilkumarr
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	**Tolerance for stirrups& shear/crank bars** Mr.P.Manikandan, AP/Civil

Day 6 23.07.2022 (Saturday)	10.00 a.m. to 11.00 a.m.	Session 1	**Demonstration of making different types of stirrups** Er.P.Senthilkumar
	11.00 a.m. to 11.15 a.m.	*Tea Break*	
	11.15 a.m. to 12.15 p.m.	Session 2	**Selection of tools, pin plate for bending of stirrups** Mr.P.Manikandan, AP/Civil
	12.15 p.m. to 12.45 p.m.	Valedictory-Dr.A.Hemalatha,HoD-Civil,NPRCET	

PROGRAM COORDINATOR **HoD-CIVIL** **IQAC** **PRINCIPAL**

P. MANIKANDAN AP-CIVIL

Head of the Department, Department of Civil Engineering, NPR College of Engineering & Technology, Natham, Dindigul (DT) - 624 401.

Coordinator - IQAC, NPR College of Engineering & Technology

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

STUDENT'S ATTENDANCE

S.No.	Register Number	Student Name	Year/dep	18/7/22	19/7/22	20/7/22	21/7/22	22/7/22	23/7/22
1	21CECC0301	Ajaykannan N	IV-Civil	/	/	a	/	/	/
2	21CECC0302	Harini S	IV-Civil	/	/	/	/	/	/
3	21CECC0303	Kalyani K	IV-Civil	/	/	/	/	/	/
4	21CECC0304	Lakshmidevi K	IV-Civil	/	a	/	/	/	/
5	21CECC0305	Mano Bharathi T	IV-Civil	/	/	/	/	/	/
6	21CECC0306	Naveen J	IV-Civil	/	/	/	a	/	/
7	21CECC0307	Ramalakshmi M	IV-Civil	a	/	/	/	/	/
8	21CECC0308	Revathy A	IV-Civil	/	/	/	/	/	/
9	21CECC0309	Yuvashree S	IV-Civil	a	/	/	/	/	/
10	21CECC0310	Vetrivel A	IV-Civil	/	/	/	/	/	/
11	21CECC0311	Deepan Pandi T	IV-Civil	/	/	a	/	/	/
12	21CECC0312	Raja K	IV-Civil	/	/	/	/	a	/
13	21CECC0313	Arun Kumar N	III-Civil	/	/	/	/	/	/
14	21CECC0314	Jeevitha C	III-Civil	/	/	/	a	/	/
15	21CECC0315	Naveenraj S	III-Civil	/	/	/	/	/	/
16	21CECC0316	Sanjay K	III-Civil	a	/	/	/	/	/
17	21CECC0317	Saranya Devi S	III-Civil	/	/	/	/	/	/
18	21CECC0318	Subash S	III-Civil	/	/	/	/	a	/
19	21CECC0319	Sudharsan K	III-Civil	a	/	/	/	/	/
20	21CECC0320	Venkatesan R	III-Civil	/	/	/	/	/	/
21	21CECC0321	Nithishkumar A R	III-Civil	/	/	/	a	/	/
22	21CECC0322	Purusothaman K	III-Civil	/	/	/	/	/	/
23	21CECC0323	Sachin R	III-Civil	/	/	/	/	/	/
24	21CECC0324	Kishore S P	III-Civil	a	a	a	/	/	/
25	21CECC0325	Alagar K	II-Civil	/	/	/	/	/	/
26	21CECC0326	Anandhan Alaguvel P	II-Civil	/	/	/	/	/	/
27	21CECC0327	Chandira Moorthi B	II-Civil	/	/	/	a	/	/
28	21CECC0328	Gowtham C	II-Civil	/	/	/	/	/	/
29	21CECC0329	Harish M	II-Civil	/	/	/	/	/	/
30	21CECC0330	Mohanraj G	II-Civil	/	/	/	/	/	/
31	21CECC0331	Naveen Kumar S	II-Civil	/	/	/	/	a	/
32	21CECC0332	Pranaveshvar J S	II-Civil	/	/	a	/	/	/
33	21CECC0333	Sharan Sakthivel J	II-Civil	/	/	/	/	/	/
34	21CECC0334	Sundaraprakadeeswaran B	II-Civil	a	/	/	/	/	/

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S.No.	Register Number	Student Name	Year/dep	18/7/22	19/7/22	20/7/22	21/7/22	22/7/22	23/7/22
35	21CECC0335	Suriya M	II-Civil	/	/	/	/	/	/
36	21CECC0336	Vijaya Sri Hari	II-Civil	/	/	a	/	/	/
37	21CECC0337	Vikneshwaran S	II-Civil	/	/	/	/	/	/
38	21CECC0338	Yazhini.S	II-Civil	/	/	/	/	/	/
39	21CECC0339	Alex Pandi.M	II-Civil	/	/	/	/	/	/
40	21CECC0340	Arul Murugan.M	II-Civil	/	/	a	/	/	/
41	21CECC0341	Gunapandi T	II-Civil	/	/	a	/	/	/
42	21CECC0342	Hari Prasath.M	II-Civil	/	/	/	/	/	/
43	21CECC0343	Jegan.S	II-Civil	/	/	/	/	/	/
44	21CECC0344	Logeshwaran	II-Civil	/	/	/	/	/	/
45	21CECC0345	Naveen Prasad R	II-Civil	/	/	/	/	/	/
46	21CECC0346	Parthiban R	II-Civil	a	a	/	a	a	/
47	21CECC0347	Prithviraj T	II-Civil	/	/	/	/	/	/
48	21CECC0348	Rajvignesh R	II-Civil	/	/	/	/	/	/
49	21CECC0349	Srilakshmi S	II-Civil	/	/	/	/	/	/
50	21CECC0350	Tatta Thamimul Ansari M	II-Civil	/	/	/	/	/	/
51	21CECC0351	Thiraviyam S	II-Civil	/	/	/	/	/	/
52	21CECC0352	Videshwaran.R	II-Civil	/	/	/	/	/	/
53	21CECC0353	Vignesh.K	II-Civil	/	/	/	/	/	/
54	21CECC0354	Dhanalakshmi P	II-Civil	a	/	a	a	/	/
55	21CECC0355	Jeyadharani J	I-M.E	/	/	/	/	/	/
56	21CECC0356	Ponnu A	I-M.E	a	a	a	a	a	a
57	21CECC0357	Kirthikha. S	II-M.E	/	/	/	/	/	/
		Total number of students Present		48	53	48	50	52	56
		Total number of students Absent		09	04	09	07	05	01
		Program Co-ordinator							

HoD-CIVIL

Head of the Department
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Natham, Dindigul (DT) - 624 401.

PRINCIPAL
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

SAMPLE QUESTION PAPER & ANSWER

1. What does R.C.C. stand for?

a) Reinforced Cement Concrete b) Reinforced Concrete Cement

c) Reinforced Combined Cement d) Reinforced Constituent Cement

2. The maximum area of tension reinforcement in beams shall not exceed _____

a) 2% b) 4% c) 0.15% d) 1.5%

3. The diameter of longitudinal bars of a column should never be less than _____

a) 6 mm b) 8 mm c) 10 mm d) 12 mm

4. Thickened part of a flat slab over its supporting column, is technically known as _____

a) drop panel b) capital c) column head d) cannot be determined

5. The minimum cube strength of concrete used for a prestressed member, is _____

a) 50 kg/cm^2 b) 150 kg/cm^2 c) 350 kg/cm^2 d) 100 kg/cm^2

6. The number of treads in a flight is equal to _____

a) risers in the flight b) risers plus one c) risers minus one d) risers plus three

7. For initial estimate for a beam design, the width is assumed _____

a) 1/15th of span b) 1/10th of span c) 1/20th of span d) 1/30th of span

8. A foundation rests on _____

a) base of the foundation b) subgrade c) foundation soil

d) base of the foundation, subgrade and foundation soil

9.The formula $d=a\times\sqrt{(3q)}/m$ is used to calculate _____

a) Depth of soil b) Height of column c) Depth of concrete bed block

d) Height of footing

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10. If the wall or column under construction is near some other property, it will not be possible to spread the footing to both the sides of War or column. In search case which footing is used?

a) Simple pad footing

b) Eccentric footing

c) Isolated footing

d) Reinforced footing

Answers:

1. a) Reinforced Cement Concrete
2. b) 4%
3. d) 12 mm
4. a) drop panel
5. c) 350 kg/cm^2
6. c) risers minus one
7. d) 1/30th of span
8. d) base of the foundation, subgrade and foundation soil
9. c) Depth of concrete bed block
10. b) Eccentric footing

P. Manikandan

PROGRAM COORDINATOR

P. MANIKANDAN
AP-CIVIL

HoD-Civil

Head of the Department
Department of Civil Engineering
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

STUDENT FEEDBACK

Name of the Student : Revathy	Year / Semester: IV/08
Name of the Program: Bar Bending Schedule for Commercial Buildings	

S.No.	Content	Excellent	Good	Fair	Satisfactory	Poor
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples Provided during this course		✓			
4	Course delivered by Resource Person	✓				
5	Time Management				✓	
6	Overall rating of this course				✓	
7	Any Other Comments / Suggestions	This course is very useful for me.				

P. Manikandan
PROGRAM COORDINATOR
P. MANIKANDAN
AP-CIVIL

HOD/CIVIL

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

STUDENT FEEDBACK

Name of the Student : K. Vignesh	Year / Semester: II / IV
Name of the Program: Bar Bending Schedule for Commercial Buildings	

S.No.	Content	Excellent	Good	Fair	Satisfactory	Poor
1	Course Content	✓				
2	Way of exposed new knowledge and practices		✓			
3	Examples Provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this course	✓				
7	Any Other Comments / Suggestions	Really Nice, Need more Number of courses				

P. Manikandan
PROGRAM COORDINATOR
P. MANIKANDAN
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CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

STUDENT FEEDBACK

Name of the Student : C. Jeevitha	Year / Semester: III / VI
Name of the Program: Bar Bending Schedule for Commercial Buildings	

S.No.	Content	Excellent	Good	Fair	Satisfactory	Poor
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples Provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this course	✓				
7	Any Other Comments / Suggestions	Learnt different types of bar bending Schedule, which is very useful to Sustain in the field as Site Supervisor. Thanks for arranging this Course.				

P. Manoby
PROGRAM COORDINATOR
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

STUDENT FEEDBACK SUMMARY REPORT

TOTAL STRENGTH:57 **DATE: 25.07.2022**

Content	Excellent	Good	Fair	Satisfactory	Poor
Course Content	41	4	2	5	2
Way of exposed new knowledge and practices	43	3	3	4	1
Examples Provided during this course	43	2	5	3	1
Course delivered by Resource Person	42	4	5	1	2
Time Management	46	2	3	2	1
Overall rating of this course	45	1	5	2	1
Average	43.33	2.67	3.83	2.83	1.33

NUMBER OF STUDENTS SUCCESSFULLY COMPLETED:54



PROGRAM COORDINATOR **HoD-Civil** **PRINCIPAL**

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Dr. J. SUNDARARAJAN, B.E., M.Tech., Ph.D.,
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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

SUMMARY REPORT

The Department of Civil Engineering organized a Certificate Course on "Bar Bending Schedule for Commercial Buildings" from 18.07.2022 to 23.07.2022 for 32 hours in open air auditorium Mr.N.Ajaykannan,II-Year Civil has delivered the welcome address.

Dr.J.Sundararajan, Principal of our college inaugurated the program and delivered the opening address. External Resource person Er.P.Senthil Kumar, Sona Builders, RM Colony, Dindigul shared his knowledge with our students. This 32 hours course gives an over view about "Bar Bending Schedule for Commercial Buildings".

They also shared their knowledge of Loading, unloading & shifting of reinforcement material in a proper sequence as per methodology, Correct procedure for storage, maintenance of reinforcement steel Staking of rods as per different diameter of bars & length, Understand, identify and demonstrate the use of hooks, rings and shackles. So that students enable to have skills that will help them to design and detailing of beam, column, footing for our own building by using Bar Bending Schedule for Commercial Buildings.

57 Students were attended from Civil Students, 54 Students those participated and successfully completed the Quiz program were awarded with certificates.

Ms.Srilaxmi.S, III Civil was delivered the vote of thanks.

P. Manikandan

PROGRAM COORDINATOR

P. MANIKANDAN
AP - CIVIL

HoD-Civil

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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE COURSE ON BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS

COURSE MATERIAL

Material Link:

1. https://www.scme.co.in/wp-content/uploads/2016/11/BBS_BPCC.pdf
2. https://www.ensoftsystems.com/slideshow/BarBeQueIntroduction.pdf
3. https://www.scribd.com/document/184107069/Preparation-of-bar-bending-schedule-pdf
4. https://civilread.com/bar-bending-schedule-bbs/
5. https://civildigital.com/bar-bending-schedule-bbs-bbs-step-step-preparation-sample-excel-sheet/

P. Manikandan

PROGRAM COORDINATOR

P. MANIKANDAN
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CERTIFICATE COURSE on

"BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS"

Certificate of Participation

This is certify that Mr. RAJA.K - IV - YEAR. has successfully completed the Certificate Course on **"BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS"** held from 18.07.2022 to 23.07.2022 for 32 hours in our College.

HOD

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CERTIFICATE COURSE on

"BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS"

Certificate of Participation

This is certify that Ms. YAZHINI. S - III-YEAR has successfully completed the Certificate Course on "**BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS**" held from 18.07.2022 to 23.07.2022 for 32 hours in our College.

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Certificate of Participation

This is certify that M.S. HARINI.S - IV-YEAR has successfully completed the Certificate Course on **"BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS"** held from 18.07.2022 to 23.07.2022 for 32 hours in our College.

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"BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS"

Certificate of Participation

This is certify that Mr. ALAGAR.K - II-YEAR has successfully completed the Certificate Course on **"BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS"** held from 18.07.2022 to 23.07.2022 for 32 hours in our College.

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CERTIFICATE COURSE on

"BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS"

Certificate of Participation

This is certify that Mr. VIGNESH.K - II - CIVIL has successfully completed the Certificate Course on "**BAR BENDING SCHEDULE FOR COMMERCIAL BUILDINGS**" held from 18.07.2022 to 23.07.2022 for 32 hours in our College.

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

INDEX

COURSE NAME: **TENDERING AND PROCUREMENT IN CONSTRUCTION**

COURSE CODE: **21CEAO04**

ACADEMIC YEAR: 2021-2022 SEMESTER: EVEN DURATION: 36 HOURS

S.NO.	PARTICULARS	PAGE NO.
1	PERMISSION LETTER	02
2	CIRCULAR TO STUDENTS	03
3	INVITATION	04
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PROGRAM COORDINATOR (K. Selvam Apl/civil)

HoD-CIVIL

Head of the Department
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IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt) 624 401.

PRINCIPAL

Dr. J. [illegible]RAJAN, B.E., M.Tech., Ph.D.,
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Date: 24.05.2022

From

Mr.K.Selvam,
Assistant Professor
Department of Civil Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Requesting permission to conduct add on course – Reg

We have planned to conduct a add on course on "Tendering and Procurement in Construction" for our Civil & M.E-Structural Engineering students from 25.07.2022 to 30.07.2022 for 36 hours in our college premises. We had proposed Er.R.Sutheesh, R3S Construction, Trichy as a resource person for this add on course. Kindly, permit us to conduct the same .

Thanking you.

Yours truly,

(K. Selvam
AP/Civil)

Head of the Department
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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

CIRCULAR

NPRCET/OFF/CIVIL/VAC/2021-2022 Date: 03.06.2022

We are glad to inform you that our Department of Civil Engineering has planned to conduct a add on course on "Tendering and Procurement of in Construction" for the students during this Even semester 2021-2022.If interested, students can enroll their name to the coordinator of this program on or before 10.06.2022.

The details of the training program are given below.

Course Name	:	Tendering And Procurement in Construction
Resource Persons	:	Er.R.Sudeesh, R3S Constructions, Trichy.
Venue	:	Computer aided design & drafting laboratory, NPR College of Engineering & Technology, Dindigul
Date & Duration	:	25.07.2022 to 30.07.2022 & 36 Hours
Program Coordinator		Mr.K.Selvam,Assistant Professor

PRINCIPAL
Dr. J.SUNDARARAJAN,
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Principal
N.P.R. College of Engineering & Technology
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Copy to:
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2.All the HoDs
3.All the Class Rooms
4.Notice Board
5.File

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

ADD ON COURSE on

"TENDERING AND PROCUREMENT OF IN CONSTRUCTION"

CHIEF GUEST

Er.R.SUDEESH,

R3S Constructions,

Trichy

On 25th, July 2022

@ 9.00 a.m..

VENUE:

CADD LAB

Dr.J.SUNDARARAJAN

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Civil Engineering,

NPR College of Engineering & Technology

NPR Nagar, Natham.

NPR COLLEGE OF ENGG & TECHNOLOGY NATHAM

DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

21CEAO04- TENDERING AND PROCUREMENT IN CONSTRUCTION

COURSE CONTENT

CHAPTER	TOPICS
1	**Procurement Course** • Material identification • Supplier identification • Price Negotiating
2	**Procurement Course** • Contract awards • Purchasing and sourcing • Technical documentation • Vendor Management
3	**Tender** • Key terms in a tender document • Bidding and stages of bidding • Types of tender enquiries and bidding systems • Different types of tender enquiries-I • Different types of tender enquiries -II
4	• Reverse auction and its advantages • Procurement of services and engagement of consultants by central government • Different consultants and service providers • Different types of contracts
5	• Procurement Reservation for Specific Products and SMEs • Incentives for government procurement from MSMEs tendering process • What is a Swiss challenge? • Constitution of India in relation to government contracts

Criteria to get Certificate:

- Students should register their names for this course.
- Students must have 85% attendance.
- Student should secure 60% marks in the Exam.

Prepared by- Mr.K.Selvam,AP/Civil-

Approved by,

HoD-CIVIL

Head of the Department
Department of Civil Engineering
NPR College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

REGISTERED STUDENT'S NAME LIST

S.No.	Register Number	Student Name	Year/ Department
1	920818103001	Ajaykannan N	IV-Civil
2	920818103002	Harini S	IV-Civil
3	920818103003	Kalyani K	IV-Civil
4	920818103005	Lakshmidevi K	IV-Civil
5	920818103006	Mano Bharathi T	IV-Civil
6	920818103007	Naveen J	IV-Civil
7	920818103008	Ramalakshmi M	IV-Civil
8	920818103009	Revathy A	IV-Civil
9	920818103011	Yuvashree S	IV-Civil
10	920818103301	Vetrivel A	IV-Civil
11	920818103701	Deepan Pandi T	IV-Civil
12	920818103502	Raja K	IV-Civil
13	920819103001	Arun Kumar N	III-Civil
14	920819103002	Jeevitha C	III-Civil
15	920819103003	Naveenraj S	III-Civil
16	920819103004	Sanjay K	III-Civil
17	920819103005	Saranya Devi S	III-Civil
18	920819103007	Subash S	III-Civil
19	920819103008	Sudharsan K	III-Civil
20	920819103009	Venkatesan R	III-Civil
21	920819103301	Nithishkumar A R	III-Civil
22	920819103302	Purusothaman K	III-Civil
23	920819103303	Sachin R	III-Civil
24	920819103304	Kishore S P	III-Civil
25	920820103001	Alagar K	II-Civil
26	920820103002	Anandhan Alaguvel P	II-Civil
27	920820103003	Chandira Moorthi B	II-Civil
28	920820103004	Gowtham C	II-Civil
29	920820103005	Harish M	II-Civil
30	920820103006	Mohanraj G	II-Civil
31	920820103007	Naveen Kumar S	II-Civil
32	920820103008	Pranaveshvar J S	II-Civil

NATHAM

S.No.	Register Number	Student Name	Year/ Department
33	920820103009	Sharan Sakthivel J	II-Civil
34	920820103010	Sundaraprakadeeswaran B	II-Civil
35	920820103011	Suriya M	II-Civil
36	920820103012	Vijaya Sri Hari I	II-Civil
37	920820103013	Vikneshwaran S	II-Civil
38	920820103014	Yazhini.S	II-Civil
39	920820103301	Alex Pandi M	II-Civil
40	920820103302	Arul Muruganm	II-Civil
41	920820103303	Gunapandi T	II-Civil
42	920820103304	Hari Prasathm	II-Civil
43	920820103305	Jegan S	II-Civil
44	920820103307	Logeshwaran	II-Civil
45	920820103308	Naveen Prasad R	II-Civil
46	920820103309	Parthiban R	II-Civil
47	920820103310	Prithviraj T	II-Civil
48	920820103311	Rajvignesh R	II-Civil
49	920820103312	Srilakshmi S	II-Civil
50	920820103313	Tatta Thamimul Ansari M	II-Civil
51	920820103314	Thiraviyam S	II-Civil
52	920820103315	Videshwaran R	II-Civil
53	920820103316	Vignesh K	II-Civil
54	920820103317	Dhanalakshmi P	II-Civil
55	920820413001	Jeyadharani J	I-M.E
56	920820413002	Ponnu A	I-M.E
57	920820413001	Kirthikha S	II-M.E

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

Course Schedule

Date:05.07.2022

Day 1 25.07.2022 Monday	9.00 a.m. to 9.30 a.m.	Inauguration-Dr.J.Sundararajan,Principal,NPRCET	
	9. 30 a.m. to 11.00 a.m.	Session 1	**Procurement Course** Er.R.Sudeesh,R3S Constructions,Trichy.
	11.00 a.m. to 11.15 a.m.	*Tea Break*	
	11.15 a.m.. to 12.45 p.m.	Session 2	**Material identification** Mr.K.Selvam,Assistant Professor,NPRCET.
	12.45 p.m. to 1.30 p.m.	*Lunch Break*	
	1.30 p.m. to 3.00 p.m.	Session 3	**Supplier identification** Mr.K.Selvam,Assistant Professor,NPRCET.
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	**Price Negotiating** Er.R.Sudeesh,R3S Constructions,Trichy.
Day 2 26.07.2022 Tuesday	9. 30 a.m. to 11.00 a.m.	Session 1	**Contract awards** Mr.K.Selvam,Assistant Professor,NPRCET.
	11.00 a.m.. to 11.15 a.m.	*Tea Break*	
	11 a.m. to 12.45 p.m.	Session 2	**Purchasing and sourcing** Er.R.Sudeesh,R3S Constructions,Trichy.
	12.45 p.m. to 1.30 p.m.	*Lunch Break*	
	1.30 p.m. to 3.00 p.m.	Session 3	**Technical documentation** Mr.K.Selvam,Assistant Professor,NPRCET.
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	**Vendor Management** Er.R.Sudeesh,R3S Constructions,Trichy.
Day 3 27.07.2022 Wednesday	9. 30 a.m. to 11.00 a.m.	Session 1	**Key terms in a tender document** Er.R.Sudeesh,R3S Constructions,Trichy.
	11.00 a.m.. to 11.15 a.m.	*Tea Break*	
	11.15 a.m. to 12.45 p.m.	Session 2	**Bidding and stages of bidding** Mr.K.Selvam,Assistant Professor,NPRCET.
	12.45 p.m. to 1.30 p.m.	*Lunch Break*	
	1.30 p.m. to 3.00 p.m.	Session 3	**Types of tender enquiries and bidding**

			systems Er.R.Sudeesh,R3S Constructions,Trichy.
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	**Types of tender enquiries and bidding systems** Mr.K.Selvam,Assistant Professor,NPRCET.
Day 4 28.07.2022 Thursday	9. 30 a.m. to 11.00 a.m.	Session 1	**Different types of tender enquiries-I** Mr.K.Selvam,Assistant Professor,NPRCET.
	11.00 a.m. to 11.15 a.m.	*Tea Break*	
	11.15 a.m. to 12.45 p.m.	Session 2	**Different types of tender enquiries –II** Er.R.Sudeesh,R3S Constructions,Trichy.
	12.45 p.m. to 1.30 p.m.	*Lunch Break*	
	1.30 p.m. to 3.00 p.m.	Session 3	**Reverse auction and its advantages** Mr.K.Selvam,Assistant Professor,NPRCET.
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	**Procurement of services and engagement of consultants by central government** Er.R.Sudeesh,R3S Constructions,Trichy.
Day 5 29.07.2022 Friday	9. 30 a.m. to 11.00 a.m.	Session 1	**Different types of tender enquiries-I** Mr.K.Selvam,Assistant Professor,NPRCET.
	11.00 a.m. to 11.15 a.m.	*Tea Break*	
	11.15 a.m. to 12.45 p.m.	Session 2	**Different types of tender enquiries –II** Er.R.Sudeesh,R3S Constructions,Trichy.
	12.45 p.m. to 1.30 p.m.	*Lunch Break*	
	1.30 p.m. to 3.00 p.m.	Session 3	**Reverse auction and its advantages** Mr.K.Selvam,Assistant Professor,NPRCET.
	3.00 p.m. to 3.15 p.m.	*Tea Break*	
	3.15 p.m. to 4.15 p.m.	Session 4	**Procurement of services and engagement of consultants by central government** Er.R.Sudeesh,R3S Constructions,Trichy.
Day 6 30.07.2022 Saturday	9. 30 a.m. to 11.00 a.m.	Session 1	**Different types of contracts** Mr.K.Selvam,Assistant Professor,NPRCET.
	11.00 a.m. to 11.15 a.m.	*Tea Break*	
	11.15 a.m. to 12.45 p.m.	Session 2	**Procurement Reservation for Specific Products and SMEs,Incentives for government procurement from MSMEs** Er.R.Sudeesh,R3S Constructions,Trichy.

12.45 p.m. to 1.30 p.m.	*Lunch Break*	
1.30 p.m. to 3.00 p.m.	Session 3	What is a Swiss challenge? Mr.K.Selvam,Assistant Professor,NPRCET.
3.00 p.m. to 3.15 p.m.	*Tea Break*	
3.15 p.m. to 3.45 p.m.	Session 4	**Constitution of India in relation to government contracts** Er.R.Sudeesh,R3S Constructions,Trichy.
3.45 p.m. to 4.15 p.m.	Valedictory-Dr.A.Hemalatha,HOD-Civil,NPRCET	

PROGRAM COORDINATOR

(K.Selvam AP(Civil)

HoD-Civil

Head of the Department
Department of Civil Engineering
NPR College of Engineering & Technology
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IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

PRINCIPAL

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
Principal
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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

STUDENT'S ATTENDANCE

S.No.	Register Number	Student Name	Year/dep	25/7/22	26/7/22	27/7/22	28/7/22	29/7/22	30/7/22
1	21CECC0401	Ajaykannan N	IV-Civil	✓	✓	✓	✓	✓	✓
2	21CECC0402	Harini S	IV-Civil	✓	✓	✓	✓	✓	✓
3	21CECC0403	Kalyani K	IV-Civil	✓	✓	✓	✓	✓	✓
4	21CECC0404	Lakshmidevi K	IV-Civil	✓	a	✓	✓	✓	✓
5	21CECC0405	Mano Bharathi T	IV-Civil	✓	✓	✓	✓	✓	✓
6	21CECC0406	Naveen J	IV-Civil	✓	✓	✓	✓	✓	✓
7	21CECC0407	Ramalakshmi M	IV-Civil	✓	✓	✓	✓	✓	✓
8	21CECC0408	Revathy A	IV-Civil	✓	✓	✓	✓	✓	✓
9	21CECC0409	Yuvashree S	IV-Civil	✓	✓	✓	✓	✓	✓
10	21CECC0410	Vetrivel A	IV-Civil	✓	✓	✓	✓	✓	✓
11	21CECC0411	Deepan Pandi T	IV-Civil	✓	✓	✓	✓	✓	✓
12	21CECC0412	Raja K	IV-Civil	a	✓	a	✓	a	✓
13	21CECC0413	Arun Kumar N	III-Civil	✓	✓	✓	✓	✓	✓
14	21CECC0414	Jeevitha C	III-Civil	✓	✓	✓	✓	✓	✓
15	21CECC0415	Naveenraj S	III-Civil	✓	✓	✓	✓	✓	✓
16	21CECC0416	Sanjay K	III-Civil	✓	✓	✓	✓	✓	✓
17	21CECC0417	Saranya Devi S	III-Civil	✓	✓	✓	✓	✓	✓
18	21CECC0418	Subash S	III-Civil	✓	✓	✓	✓	✓	✓
19	21CECC0419	Sudharsan K	III-Civil	✓	✓	✓	✓	✓	✓
20	21CECC0420	Venkatesan R	III-Civil	✓	a	✓	✓	a	✓
21	21CECC0421	Nithishkumar A R	III-Civil	✓	✓	✓	✓	✓	✓
22	21CECC0422	Purusothaman K	III-Civil	✓	✓	✓	✓	✓	✓
23	21CECC0423	Sachin R	III-Civil	a	✓	a	a	✓	✓
24	21CECC0424	Kishore S P	III-Civil	✓	✓	✓	✓	✓	✓
25	21CECC0425	Alagar K	II-Civil	✓	✓	✓	✓	✓	✓
26	21CECC0426	Anandhan Alaguvel P	II-Civil	✓	✓	✓	✓	✓	✓
27	21CECC0427	Chandira Moorthi B	II-Civil	✓	a	✓	a	✓	✓
28	21CECC0428	Gowtham C	II-Civil	✓	✓	✓	✓	✓	✓
29	21CECC0429	Harish M	II-Civil	a	✓	✓	✓	a	✓
30	21CECC0430	Mohanraj G	II-Civil	✓	✓	✓	✓	✓	✓
31	21CECC0431	Naveen Kumar S	II-Civil	a	✓	✓	✓	✓	✓
32	21CECC0432	Pranaveshvar J S	II-Civil	✓	✓	✓	✓	✓	✓
33	21CECC0433	Sharan Sakthivel J	II-Civil	✓	✓	✓	✓	✓	✓
34	21CECC0434	Sundaraprakadeeswaran B	II-Civil	✓	✓	✓	✓	✓	✓

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S.No.	Register Number	Student Name	Year/dep	25/7/22	26/7/22	27/7/22	28/7/22	29/7/22	30/7/22
35	21CECC0435	Suriya M	II-Civil	/	/	/	/	/	/
36	21CECC0436	Vijaya Sri Hari	II-Civil	/	/	/	/	/	/
37	21CECC0437	Vikneshwaran S	II-Civil	/	/	/	/	/	/
38	21CECC0438	Yazhini.S	II-Civil	/	/	/	/	/	/
39	21CECC0439	Alex Pandi.M	II-Civil	/	/	a	/	a	/
40	21CECC0440	Arul Murugan.M	II-Civil	/	/	/	/	/	/
41	21CECC0441	Gunapandi T	II-Civil	/	/	/	/	/	/
42	21CECC0442	Hari Prasath.M	II-Civil	/	/	/	/	/	/
43	21CECC0443	Jegan.S	II-Civil	/	/	/	/	/	/
44	21CECC0444	Logeshwaran	II-Civil	/	/	/	/	/	/
45	21CECC0445	Naveen Prasad.R	II-Civil	/	/	/	/	/	/
46	21CECC0446	Parthiban.R	II-Civil	a		a	/	a	/
47	21CECC0447	Prithviraj.T	II-Civil	/	/	/	/	/	/
48	21CECC0448	Rajvignesh.R	II-Civil	/	/	/	/	/	/
49	21CECC0449	Srilakshmi.S	II-Civil	/	/	/	/	/	/
50	21CECC0450	Tatta Thamimul Ansari.M	II-Civil	/	/	/	/	/	/
51	21CECC0451	Thiraviyam S	II-Civil	/	/	/	/	/	/
52	21CECC0452	Videshwaran.R	II-Civil	/	/	/	/	/	/
53	21CECC0453	Vignesh.K	II-Civil	/	/	/	/	/	/
54	21CECC0454	Dhanalakshmi P	II-Civil	/	/	/	/	/	/
55	21CECC0455	Jeyadharani J	I-M.E	/	/	/	/	/	/
56	21CECC0456	Ponnu A	I-M.E	a	a	a	a	a	a
57	21CECC0457	Kirthikha. S	II-M.E	/	/	/	/	/	/
		Total number of students Present		51	53	52	54	51	56
		Total number of students Absent		06	04	05	03	06	01
		Program Co-ordinator		CAS	CAS	CAS	CAS	CAS	CAS

HoD-CIVIL

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

QUIZ SAMPLE QUESTION PAPER WITH ANSWERS

1.Where is the name of the company inviting mentioned in an invitation of quotation?

a) Top left corner b) Bottom left corner

c) Top right corner d) Bottom right corner

2. Where is the name of the company which is invited mentioned?

a) Top left corner b) Top right corner c) Bottom left corner d) Bottom right corner

3. Where is the courteous leave-taking mentioned in an invitation of quotation?

a) Top left b) Bottom right c) Top right d) Bottom left

4. A tender is advertised in _____

a) newspapers b) business environment c) domestic markets d) sellers

5. Which of these is not mentioned in a tender?

a) Date b) Notice number c) Sign d) Designation

6. Where is the designation of the authority giving the tender mentioned?

a) Top center b) Bottom left c) Bottom right d) Top left

7. Where is the name of the organization mentioned in the tender?

a) Top left b) Top center c) Top right d) Bottom center

8. Which of these is mentioned in a tender?

a) Notice number b) Signature

c) Address of the tenderer d) Courteous leave-taking

9. Critical path method

(A) Is an improvement upon bar chart method

(B) Provides a realistic approach to daily problems

(C) Avoids delays which are very common in bar charts

(D) All the above

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10. At a work site, statistical quality control of concrete means

(A) Measurement of risks to eliminate failures

(B) Applying the theory' of probability to sample testing or inspection

(C) Reduction in wastage of inspection costs

(D) Reduction in costs for the removal of defects

Answer:

1.c) Top right corner

2.a) Top left corner

3.b) Bottom right

4.a) newspapers

5.c) Sign

6.c) Bottom right

7.b) Top center

8.a) Notice number

9.(D) All the above

10.(B) Applying the theory' of probability to sample testing or inspection

PROGRAM COORDINATOR

(K. Selvam AP/Civil)

HoD-Civil

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

STUDENT'S FEEDBACK

Name of the Student : Lakshmi Devi. K	Year / Semester: IV / 08
Name of the Program: Tendering and Procurement in Construction	

S.No.	Content	Excellent	Good	Fair	Satisfactory	Poor
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples Provided during this course		✓			
4	Course delivered by Resource Person			✓		
5	Time Management	✓				
6	Overall rating of this course		✓			
7	Any Other Comments / Suggestions	The session going good manner				

PROGRAM COORDINATOR
K. Selvam
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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

STUDENT'S FEEDBACK

Name of the Student : Sanjay.K	Year / Semester: III/05
Name of the Program: Tendering and Procurement in Construction	

S.No.	Content	Excellent	Good	Fair	Satisfactory	Poor
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples Provided during this course		✓			
4	Course delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this course		✓			
7	Any Other Comments / Suggestions	The session going very good manner. I want tekla structure software to gain knowledge.				

PROGRAM COORDINATOR
(K. Selvam)
AP(Civil)

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ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

STUDENT'S FEEDBACK

Name of the Student : Shriya.M	Year / Semester: IV/IV
Name of the Program: Tendering and Procurement in Construction	

S.No.	Content	Excellent	Good	Fair	Satisfactory	Poor
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples Provided during this course		✓			
4	Course delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this course	✓				
7	Any Other Comments / Suggestions	Now I know to make tenders, how to take contract. And learn the basic challenge.				

CAS

PROGRAM COORDINATOR

(K. Selvam
AP/Civil)

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ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

STUDENT FEEDBACK SUMMARY REPORT

TOTAL STRENGTH:57 **DATE:04.08.2022**

NUMBER OF STUDENTS SUCCESSFULLY COMPLETED:52

Content	Excellent	Good	Fair	Satisfactory	Poor
Course Content	42	2	3	3	2
Way of exposed new knowledge and practices	43	3	3	2	1
Examples Provided during this course	44	2	3	2	1
Course delivered by Resource Person	41	2	4	3	2
Time Management	44	2	2	3	1
Overall rating of this course	42	3	3	3	1
Average	42.67	2.33	3.00	2.67	1.33



PROGRAM COORDINATOR

K. selvam (AP/Civil)

HoD-Civil

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE ON TENDERING AND PROCUREMENT IN CONSTRUCTION

SUMMARY REPORT

The Department of Civil Engineering organized a add on course "Tendering and Procurement in Construction" from 25.07.2022 to 30.07.2022 for 36 hours in Computer aided design and drafting laboratory.

During the inauguration ,Ms.Jeevitha C,III-Civil has delivered the welcome address. Dr.J.Sundararajan, Principal inaugurated the program and delivered the inaugural address. Resources persons Er.R.Sudeesh, R3S Constructions, Trichy. has shared his knowledge with our students. This 36 hourse course gives over view about "Tendering and Procurement in Construction".

They also shared their knowledge of Material identification, Supplier identification, Price Negotiating, Contract awards, Purchasing and sourcing, Technical documentation, Vendor Management, Bidding and stages of bidding, Types of tender enquiries and bidding systems, Different types of tender enquiries-I, Different types of tender enquiries –II, Reverse auction and its advantages, Procurement of services and engagement of consultants by central government, Different consultants and service providers ,Different types of contracts ,Procurement Reservation for Specific Products and SMEs, Incentives for government procurement from MSMEs. So that students enable to have skills that will help them to design and detailing of beam, column, footing for our own building by using tendering and procurement of civil students.

57 Students were attended from Civil & M.E-Structural Engineering Students, 52 Students those participated and successfully completed the Quiz program were awarded with certificates.

Finally Mr.Jegan.S, IV Civil was delivered the vote of thanks .

PROGRAM COORDINATOR
(K. Selvam, AP(Civil))

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DEPARTMENT OF CIVIL ENGINEERING

ADD ONTENDERING AND PROCUREMENT OF CIVIL STUDENTS

COURSE MATERIAL

Material Link:

1. https://www.tender247.com/keyword/Civil+Engineering+Tenders
2. https://bidassist.com/all-tenders/civil-works-buildings-category/active
3. https://basiccivilengineering.com/2016/05/tendering-methods-procedures-construction.html
4. https://www.designingbuildings.co.uk/wiki/Tender_processes_for_construction_contracts
5. http://www.billingengineer.com/tendering-and-procurement-management-course-training.html
6. http://www.bcclweb.in/RTI/MANUAL%20FOR%20CIVIL%20ENGINEERINGWORKS.pdf

PROGRAM COORDINATOR (K. Selvam AP(Civil))

HoD-Civil

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PRINCIPAL

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE on

"TENDERING AND PROCUREMENT IN CONSTRUCTION"

Certificate of Participation

This is certify that Ms. SARANYA DEVI. S - III-YEAR. has successfully completed the Add on Course on **"TENDERING AND PROCUREMENT IN CONSTRUCTION"** held from 25.07.2022 to 30.07.2022 for 36 hours in our College.

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE on

"TENDERING AND PROCUREMENT IN CONSTRUCTION"

Certificate of Participation

This is certify that Mr. SUBASH. S - III-YEAR has successfully completed the Add on Course on **"TENDERING AND PROCUREMENT IN CONSTRUCTION"** held from 25.07.2022 to 30.07.2022 for 36 hours in our College.

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Natham, Dindigul - 624 401. Web: www.nprcet.org

DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE on

"TENDERING AND PROCUREMENT IN CONSTRUCTION"

Certificate of Participation

This is certify that Mr. NAVEEN. J - IV - YEAR. has successfully completed the Add on Course on **"TENDERING AND PROCUREMENT IN CONSTRUCTION"** held from 25.07.2022 to 30.07.2022 for 36 hours in our College.

COLLEGE OF ENGG. & TECHNOLOGY * NPR NATHAM

HOD

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham - 624 401.

PRINCIPAL

NPR

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DEPARTMENT OF CIVIL ENGINEERING

ADD ON COURSE on

"TENDERING AND PROCUREMENT IN CONSTRUCTION"

Certificate of Participation

This is certify that Mr. NAVEEN KUMAR - II - YEAR has successfully completed the Add on Course on **"TENDERING AND PROCUREMENT IN CONSTRUCTION"** held from 25.07.2022 to 30.07.2022 for 36 hours in our College.

NPR COLLEGE OF ENGG. & TECHNOLOGY NATHAM

HOD

PRINCIPAL

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NPR College of Engineering & Technology
NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
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An ISO 9001:2015 Certified Institution.
Phone No: 04544- 246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

INDEX

COURSE CODE & NAME:**21CSAO01 & BLOCKCHAIN TECHNOLOGY FOR BEGINNERS**

ACADEMIC YEAR: 2021 -2022 SEMESTER: ODD DURATION: 35 HOURS

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PROGRAM COORDINATOR

HoD/CSE

IQAC

PRINCIPAL

C. KALPANA
AP/CSE

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401.

Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401

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PERMISSION LETTER

1.11.2021

From

Dr.K.Ramanan,
Head of the Department,
Computer Science and Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Requisition to conduct Add-on Course for CSE students – Regarding.

We have planned to conduct an Add-on Course on **"Blockchain Technology for Beginners"** to our students from 15.11.2021 to 19.11.2021 (5 Days) in our college premises. We suggest **Mr.P.Saravanakumar, Project Manager, Iconix Software Solutions, Tirunelveli** as a resource person for this Add-on Course program. Kindly permit us to conduct the same.

Thanking you.

Yours truly,

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCK CHAIN TECHNOLOGY FOR BEGINNERS"

RESOURCE PERSON'S PROFILE

Name : Mr.P.Saravanakumar

Designation : Project Manager

Company Name : Iconix Software Solutions, Tirunelveli.

About Resource Person : An expertise in project management, blockchain technology, cybersecurity and cloud computing. He is a detail-oriented and self-motivated IT project manager, who owns and leads a variety of projects concurrently applying a structured methodology and project management approach. He drives initiatives that contribute to business priorities, ensuring key projects have clear success measures and operational plans. He is also an experienced person in developing collaborative thought partnerships with the leaders.

PROGRAM COORDINATOR
C. KALPANA
AP/CSE

HoD/CSE
Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
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NPRCET/OFF/CSE/VAC/2021– 2022

Date: 8.1.2021

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

CIRCULAR

This is to inform that Department of Computer Science and Engineering has planned to conduct an Add-on Course on **"BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"** for the students from 15.11.2021 to 19.11.2021 (5 Days) during the odd semester of 2021 – 2022. Interested students can enroll their name to the program coordinator on or before 11.10.2021. The details of the Add-on Course are given below:

RESOURCE PERSON	:	Mr.P.Saravanakumar, Project Manager, Iconix Software Solutions, Tirunelveli.
VENUE	:	NPRCET Seminar Hall
DATE & DURATION	:	15.11.2021 to 19.11.2021 (5 Days)
PROGRAM COORDINATOR	:	Mrs.C.Kalpana, AP/CSE.

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. All the HoDs
2. Notice Board
3. File
4. Program Coordinator
5. IQAC

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INVITATION

The Management, Principal, Staff and Students
Cordially invite you for the inauguration of

ADD-ON COURSE on

"BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

On 15th November, 2021

Venue: NPRCET Seminar Hall at 9:30 a.m.

Chief Guest

Mr.P.SaravanaKumar

Project Manager,
Iconix Software Solutions, Tirunelveli

Dr.J.Sundararajan

Principal,
NPR College of Engineering & Technology

felicitates the function

Organized By

Department of Computer Science and Engineering,
NPR College of Engineering &Technology,
NPR Nagar, Natham.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

AGENDA

- Inauguration on 6th June, 2022.
- Prayer Song
- Welcome address by Ms.Kamali.B, Final Year Student.
- Felicitation address by Dr.J.Sundararajan, Principal, NPRCET.
- Chief Guest Honoring
- Chief Guest Introduction
- Chief Guest Address

- Valedictory on 11th June, 2022
- Introduction
- Certificate Distribution
- Feedback Session
- Vote of thanks by Mr.G.Srivaths Karthick, Third Year Student.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

REGISTERED STUDENTS NAME LIST

S. No.	Register Number	Name of the Student	Year
1.	920820104004	Dharshanapriya K	II Year
2.	920820104006	Geethanjali S	II Year
3.	920820104008	Jeron Robinson T	II Year
4.	920820104009	Joshuva Baskaran M	II Year
5.	920820104014	Kaviarasan C	II Year
6.	920820104015	Keerthi S	II Year
7.	920820104021	Nafeela Nasrin S	II Year
8.	920820104022	Naveen K	II Year
9.	920820104023	Nivetha K	II Year
10.	920820104031	Sabarishan S	II Year
11.	920820104032	Salini S	II Year
12.	920820104033	Sanjay H	II Year
13.	920820104034	Saravanakumar T	II Year
14.	920820104036	Shabarikanth Gk	II Year
15.	920820104037	Shajitha Yasmin N	II Year
16.	920820104038	Shrinidhi G	II Year
17.	920820104040	Sowmiya T	II Year
18.	920820104042	Subbulakshmi T	II Year
19.	920820104046	Tharvinraja S	II Year
20.	920820104049	Vinoth A	II Year
21.	920820104701	K.Dhandeeswaran	II Year
22.	920819104002	Afhrannisha A	III Year
23.	920819104004	Akash T	III Year
24.	920819104005	Anandakumar A	III Year
25.	920819104006	Bavithra C	III Year
26.	920819104008	Deva Dharshini N	III Year
27.	920819104009	Divya S	III Year
28.	920819104012	Gunasekar J	III Year
29.	920819104014	Hifayathaqfeen M	III Year
30.	920819104015	Indhumathi V	III Year
31.	920819104016	Janani R	III Year
32.	920819104018	Mangaladharsini R	III Year
33.	920819104021	Monica R	III Year
34.	920819104022	Muthu Kumar P	III Year
35.	920819104024	Nandhini S	III Year
36.	920819104025	Naveen Kumar S	III Year
37.	920819104027	Poornima Devi P	III Year
38.	920819104031	Santhoshprakash M	III Year
39.	920819104032	Saranya R	III Year
40.	920819104033	Sathya M	III Year
41.	920819104034	Selvambikai N	III Year
42.	920819104035	Selvanjali P	III Year
43.	920819104036	Shajitha Begum M	III Year

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S. No.	Register Number	Name of the Student	Year
44.	920819104037	Sharumathi P	III Year
45.	920818104002	Aravind B	IV Year
46.	920818104003	Bhavithra R	IV Year
47.	920818104005	Chithra B	IV Year
48.	920818104007	Guna Devi I	IV Year
49.	920818104009	Hemapriya M	IV Year
50.	920818104010	Kamali B	IV Year
51.	920818104019	Naveen Raja B	IV Year
52.	920818104020	Nivedha R	IV Year
53.	920818104021	Nivetha A	IV Year
54.	920818104026	Ramya R	IV Year
55.	920818104027	Roobika N	IV Year
56.	920818104028	Ruthra A	IV Year
57.	920818104030	Santhoshini V	IV Year
58.	920818104033	Saraniya M	IV Year
59.	920818104034	Sathana S	IV Year
60.	920818104038	Vijayabharathi P	IV Year

PROGRAM COORDINATOR
C. KALPANA
AP/CSE

HoD/CSE

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Department of Computer Science & Engineering
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

COURSE SCHEDULE

Venue: NPRCET Seminar Hall **Date: 8.11.2021**

External Resource Person:
Mr.P.Saravana Kumar

Internal Resource Person:
Mrs.C.Kalpana,AP/CSE

Day 1 25.10.2021	9.30 a.m. to 10.00 a.m.	Inauguration	
	10. 00 a.m. to 11.10 a.m.	Session 1	Introduction: Overview of Block chain Mr.P.Saravana Kumar
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Peer to Peer Network - Mrs.C.Kalpana
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Smart Contract, Wallet, Digital Currency & Ledgers Mr.P.Saravana Kumar
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Types of Blockchain Platform Mrs.C.Kalpana
Day 2 26.10.2021	9.30 a.m. to 11.10 a.m.	Session 1	Permissioned Blockchain Mr.P.Saravana Kumar
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Permisionless Blockchain Mr.P.Saravana Kumar
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Different Consensus Mechanism Mrs.C.Kalpana
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Different Consensus Mechanism Mrs.C.Kalpana
Day 3 27.10.2021	9.30 a.m. to 11.10 a.m.	Session 1	Types of Wallet - Mr.P.Saravana Kumar
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Metamask - Creating a account in Metamask - Mrs.C.Kalpana
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Use of faucet to fund wallet Mr.P.Saravana Kumar
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Transfer of cryptocurrency in metamask Mrs.C.Kalpana

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Day 4 28.10.2021	9.30 a.m. to 11.10 a.m.	Session 1	Overview of Ethereum Mr.P.Saravana Kumar
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Writing Smart Contract in Solidity Mrs.C.Kalpana
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Different networks of Ethereum Mr.P.Saravana Kumar
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Understanding blocks Mrs.C.Kalpana
Day 5 29.10.2021	9.30 a.m. to 11.10 a.m.	Session 1	Enterprise application of Block chain Mr.P.Saravana Kumar
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Supply Chain Financing Mrs.C.Kalpana
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Blockchain in energy sector Mr.P.Saravana Kumar
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Blockchain in governance Mrs.C.Kalpana

PROGRAM COORDINATOR

C. KALPANA
AP/CSE

HoD/CSE

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON"BLOCKCHAIN CHAIN TECHNOLOGY FOR BEGINNERS"

STUDENT'S ATTENDANCE

S. No.	Regiaster Number	Name of the Student	Year	15.11.2021		16.11.2021		17.11.2021		18.11.2021		19.11.2021	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	920820104004	Dharshanapriya K	II Year	/	/	/	/	/	/	/	/	/	/
2.	920820104006	Geethanjali S	II Year	/	/	/	/	/	/	/	/	/	/
3.	920820104008	Jeron Robinson T	II Year	/	/	/	/	/	/	/	/	/	/
4.	920820104009	Joshuva Baskaran M	II Year	/	/	/	/	/	/	/	/	a	a
5.	920820104014	Kaviarasan C	II Year	/	/	/	/	/	/	/	/	/	/
6.	920820104015	Keerthi S	II Year	/	/	/	/	/	/	/	/	/	/
7.	920820104021	Nafeela Nasrin S	II Year	/	/	/	/	/	/	/	/	/	/
8.	920820104022	Naveen K	II Year	/	/	/	/	/	/	/	/	/	/
9.	920820104023	Nivetha K	II Year	/	/	/	/	/	/	/	/	/	/
10.	920820104031	Sabarishan S	II Year	/	/	/	/	/	/	/	/	/	/
11.	920820104032	Salini S	II Year	/	/	/	/	/	/	/	/	/	/
12.	920820104033	Sanjay H	II Year	a	a	/	/	/	/	/	/	/	/
13.	920820104034	Saravanakumar T	II Year	a	a	/	/	/	/	/	/	/	/
14.	920820104036	Shabarikanth G K	II Year	/	/	/	/	/	/	/	/	/	/
15.	920820104037	Shajitha Yasmin N	II Year	/	/	/	/	/	/	/	/	/	/
16.	920820104038	Shrinidhi G	II Year	a	a	a	a	/	/	/	/	/	/
17.	920820104040	Sowmiya T	II Year	/	/	/	/	/	/	/	/	/	/
18.	920820104042	Subbulakshmi T	II Year	/	/	/	/	/	/	/	/	a	a
19.	920820104046	Tharvinraja S	II Year	/	/	/	/	/	/	/	/	/	/
20.	920820104049	Vinoth A	II Year	/	/	/	/	/	/	/	/	/	/
21.	920820104701	Dhandeeswaran K	II Year	/	/	/	/	/	/	/	/	/	/
22.	920819104002	Afhrannisha A	III Year	a	a	/	/	/	/	/	/	/	/
23.	920819104004	Akash T	III Year	/	/	/	/	/	/	/	/	/	/
24.	920819104005	Anandakumar A	III Year	/	/	/	/	/	/	/	/	/	/
25.	920819104006	Bavithra C	III Year	/	/	/	/	/	/	/	/	/	/
26.	920819104008	Deva Dharshini N	III Year	a	a	/	/	/	/	/	/	a	a

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S.No.	Register Number	Name of the student	Year	15.11.2021		16.11.2021		17.11.2021		18.11.2021		19.11.2021	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
27.	920819104009	Divya S	III Year	/	/	/	/	/	/	/	/	/	/
28.	920819104012	Gunasekar J	III Year	/	/	/	/	/	/	/	/	/	/
29.	920819104014	Hifayathaqfeen M	III Year	/	/	/	/	/	/	/	/	/	/
30.	920819104015	Indhumathi V	III Year	/	/	/	/	/	/	/	/	/	/
31.	920819104016	Janani R	III Year	/	/	/	/	/	/	/	/	/	/
32.	920819104018	Mangaladharsini R	III Year	/	/	/	/	/	/	/	/	/	/
33.	920819104021	Monica R	III Year	a	a	a	a	/	/	/	/	a	a
34.	920819104022	Muthu Kumar P	III Year	/	/	/	/	a	a	/	/	/	/
35.	920819104024	Nandhini S	III Year	/	/	/	/	/	/	/	/	/	/
36.	920819104025	Naveen Kumar S	III Year	a	a	a	a	/	/	/	/	/	/
37.	920819104027	Poornima Devi P	III Year	/	/	/	/	/	/	/	/	/	/
38.	920819104031	Santhosh prakash M	III Year	/	/	/	/	/	/	/	/	/	/
39.	920819104032	Saranya R	III Year	/	/	/	/	/	/	/	/	/	/
40.	920819104033	Sathya M	III Year	a	a	/	/	/	/	/	/	/	/
41.	920819104034	Selvambikai N	III Year	a	a	/	/	/	/	/	/	/	/
42.	920819104035	Selvanjali P	III Year	/	/	/	/	/	/	/	/	/	/
43.	920819104036	Shajitha Begum M	III Year	/	/	/	/	/	/	/	/	/	/
44.	920819104037	Sharumathi P	III Year	/	/	/	/	/	/	/	/	/	/
45.	920818104002	Aravind B	IV Year	/	/	/	/	/	/	/	/	/	/
46.	920818104003	Bhavithra R	IV Year	/	/	/	/	a	a	/	/	a	a
47.	920818104005	Chithra B	IV Year	/	/	/	/	/	/	/	/	a	a
48.	920818104007	Guna Devi I	IV Year	/	/	/	/	/	/	/	/	/	/
49.	920818104009	Hemapriya M	IV Year	a	a	/	/	/	/	/	/	/	/
50.	920818104010	Kamali B	IV Year	/	/	/	/	/	/	/	/	/	/
51.	920818104019	Naveen Raja B	IV Year	/	/	/	/	/	/	/	/	/	/
52.	920818104020	Nivedha R	IV Year	/	/	/	/	/	/	/	/	/	/
53.	920818104021	Nivetha A	IV Year	/	/	/	/	a	a	/	/	/	/
54.	920818104026	Ramya R	IV Year	/	/	/	/	/	/	/	/	/	/
55.	920818104027	Roobika N	IV Year	/	/	/	/	/	/	/	/	/	/

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S.No.	Register Number	Name of the student	Year	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
				/	/	/	/	/	/	/	/	/	/
56.	920818104028	Ruthra A	IV Year	/	/	/	/	/	/	/	/	/	/
57.	920818104030	Santhoshini V	IV Year	/	/	/	/	/	/	/	/	/	/
58.	920818104033	Saraniya M	IV Year	/	/	/	/	/	/	/	/	/	/
59.	920818104034	Sathana S	IV Year	/	/	/	/	/	/	/	/	/	/
60.	920818104038	Vijayabharathi P	IV Year	/	/	/	/	/	/	/	/	/	/
Present				50	50	57	57	57	57	60	60	54	54
Absentees				10	10	03	03	02	03	60	60	06	06
Coordinator Signature													

PROGRAM COORDINATOR

C. KALPANA
AP/CSE

HoD/CSE

Dr. K. Ramkumar
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PRINCIPAL

Principal
N.P.R. College of Engineering & Technology
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

SAMPLE QUESTION PAPER WITH ANSWER KEY

1. Blockchain is a peer-to-peer _____ distributed ledger technology that makes the records of any digital asset transparent and unchangeable.

A. Decentralized
B. Demanding
C. Secure
D. Popular

2. Blockchain networks are much _____ and deal with no real single point of failure.

A. Simpler
B. Easier to scale
C. Convenient
D. Faster

3. Bitcoin is a cryptocurrency, which is an application of Blockchain.

A. True
B. False

4. Blockchain can perform user transactions without involving any third-party intermediaries.

A. With the help of the third party
B. Without involving any third party
C. Without involving any owned
D. Without involving any authenticated

5. What does P2P stand for?

A. Peer to Peer
B. Product to Product
C. Password to Password
D. None of the above

6. Blockchain has ____ versions.

A. 2
B. 3
C. 4
D. 5

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7. Who introduced the digital online cryptocurrency known as Bitcoin?

A. Satoshi Nakamoto
B. Nick Szabo
C. Wei Dai
D. Hal Finney

8. What does a block in a Blockchain have?

A. Header & Digital ledger
B. Bitcoins & Input
C. Transactions & Bitcoins
D. Header & Transaction

9. What can an IT leader use enterprise blockchain for?

A. Streamline supply chains
B. Improve financial transactions
C. Provide identity management
D. All of the above

10. True or false: Smart contracts are legally binding contracts.

A. True

B. False

11. What feature about enterprise blockchain is accurate?

A. Lowers Transactional settlement times.
B. Has Trust Problems
C. Requires no time management
D. Is energy efficient

12. What is a blockchain?

A. Currency
B. Centralized Ledger
C. Type of Cryptocurrency
D. Distributed Ledger on a peer to peer network

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13. When a record is submitted in a blockchain, how can you alter it?

A. You need the public and private key to modify the record
B. Once submitted, records cannot be altered
C. Only a miner has the right to modify a record in a certain timeframe
D. Only smart contracts have the right to modify the record

14. What is Ethereum?

A. The name of a public blockchain
B. The name of a peer to peer network
C. A commercial blockchain-based protocol featuring a smart contract manager
D. An open-source blockchain-based distributed computing platform featuring smart contract functionality.

15. **When is there a consensus?**

A. When, in a smart contract, the private key and the public key matche
B. When the value of a bitcoin proposed by a seller is accepted by a buyer
C. When several nodes (usually most nodes on the network) all have the same blocks in their locally- validated best blockchain.
D. When a smart contract executes the rules agreed by all parties

Answers:

1. A 2. B 3. A 4. B 5. A 6. B 7. A 8. D 9. D 10. B

11. B 12. D 13. B 14. D 15. C

PROGRAM COORDINATOR
C. KALPANA
AP/CSE

HoD/CSE

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Department of Computer Science & Engin...
NPR College of Engineering & Technolo...
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DATE: 1.12.2021

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

STUDENT'S FEEDBACK FORM

Name of the Student : NIVETHA K	**Year / Semester:** II
Name of the Program: BLOCKCHAIN TECHNOLOGY FOR BEGINNERS	

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	✓			
2.	Way of exposed new knowledge and practices		✓		
3.	Examples Provided during this course	✓			
4.	Course delivered by Resource Person		✓		
5.	Time Management	✓			
6.	Overall rating of this course		✓		
7.	Any Other Comments / Suggestions	Need this kind of course in Furture.			

PROGRAM COORDINATOR

C. KALPANA
AP/CSE

HoD/CSE

Dr. K

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DATE: 1.12.2021

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN CHAIN TECHNOLOGY FOR BEGINNERS"

STUDENT'S FEEDBACK FORM

Name of the Student : Divya .S	Year / Semester: III
Name of the Program: BLOCKCHAIN TECHNOLOGY FOR BEGINNERS	

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	✓			
2.	Way of exposed new knowledge and practices		✓		
3.	Examples Provided during this course	✓			
4.	Course delivered by Resource Person		✓		
5.	Time Management	✓			
6.	Overall rating of this course	✓			
7.	Any Other Comments / Suggestions	Good			

PROGRAM COORDINATOR

C. KALPANA
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HoD/CSE

Dr. K

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DATE: 1.12.2021

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

STUDENT'S FEEDBACK FORM

Name of the Student : Ruthra . A	Year / Semester: IV
Name of the Program: BLOCKCHAIN TECHNOLOGY FOR BEGINNERS	

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	✓			
2.	Way of exposed new knowledge and practices		✓		
3.	Examples Provided during this course	✓			
4.	Course delivered by Resource Person	✓			
5.	Time Management	✓			
6.	Overall rating of this course	✓			
7.	Any Other Comments / Suggestions	Good .			

PROGRAM COORDINATOR

C. KALPANA
AP/CSE

HoD/CSE

Dr. L. [illegible]

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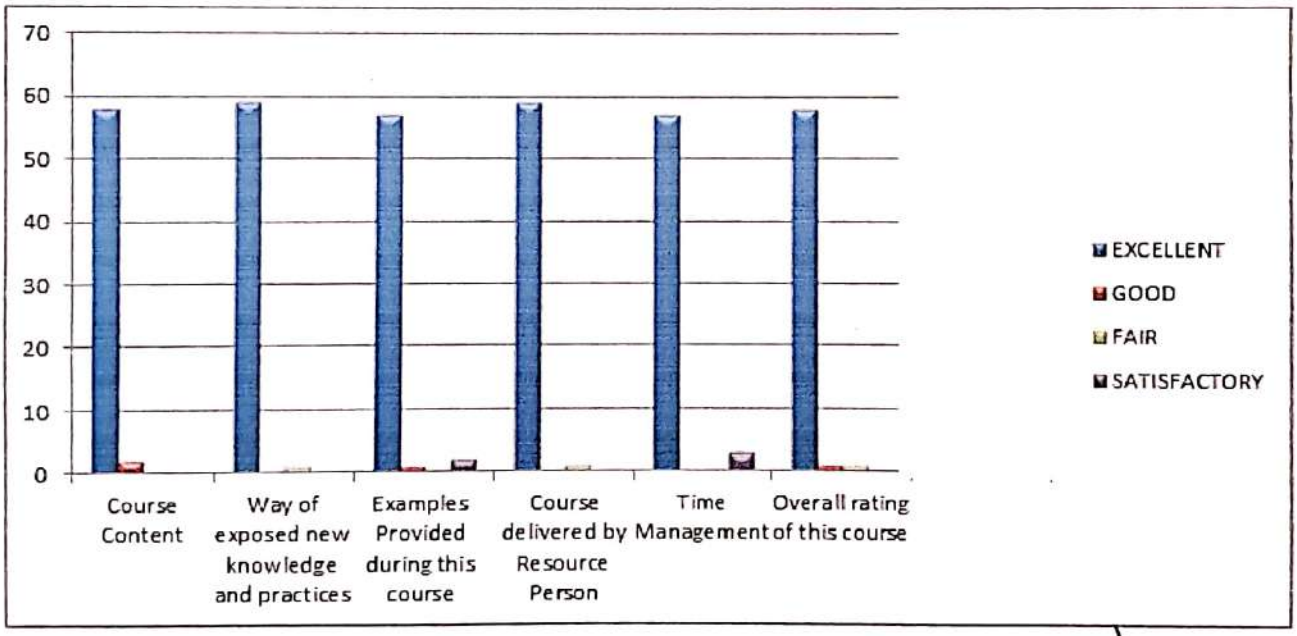
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

STUDENT'S FEEDBACK ANALYSISREPORT

REGISTERED STUDENTS: 60 **DATE: 1.12.2021**

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	58	2	0	0
2.	Way of exposed new knowledge and practices	59	0	1	0
3.	Examples Provided during this course	57	1	0	2
4.	Course delivered by Resource Person	59	0	1	0
5.	Time Management	57	0	0	3
6.	Overall rating of this course	58	1	1	0
	Average	58	0.67	0.5	0.83



PROGRAM COORDINATOR **HoD/CSE** **PRINCIPAL**

C. KALPANA
AP/CSE

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DATE: 1.12.2021

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"
SUMMARY REPORT

The Department of Computer Science and Engineering organized an Add-on Course on **"BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"** from 15.11.2021 to 19.11.2021 **(5 Days)** in our college premises.

Mr.Santhosh Prakash.M of III year CSE has delivered the welcome address. **Dr. J. Sundararajan, Principal** of our college inaugurated the program and delivered the inaugural address. The Resource person **Mr.P.SaravanaKumar,** Project Manager, Iconix Software Solutions, Tirunelveli has shared his knowledge and experience in **"Block Chain Technology"** with our students.

The resource person provided a high-level summary of how blockchain technology works. He also discussed current applications of blockchain technology and possible future applications – in both the context of private transactions and public records. He addressed some of the possible economic opportunities connected with blockchain technology as well as risks associated with both the technology and its uses. The resource person explained in detail about security of the blockchain which is heavily dependent on its protocols– how it verifies transactions, what encryption algorithms are used, and more. He added the fact that without proper implementation, as with any tool or technology, the efficacy of the blockchain will be compromised.

60 Students attended from CSE II, III and IV year classes. Students those who have participated and successfully completed the quiz program on **"Block Chain Technology for Beginners"** has been awarded with certificates.

Mr.Naveen K from II year CSE delivered the vote of thanks.

PROGRAM COORDINATOR | **HoD/CSE** | **IQAC** | **PRINCIPAL**

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Department of Computer Science & Engineering
NPR College of Engineering & Technology
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Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "BLOCKCHAIN TECHNOLOGY FOR BEGINNERS"

COURSE MATERIALS

Books and references:

1) Blockchain: Blueprint for a New Economy by Melanie Swan

2) Mastering Blockchain: Deeper insights into decentralization, cryptography, Bitcoin, and popular Blockchain frameworks by Imran Bashier

3) Mastering Ethereum: Building Smart Contracts and DApps by Andrews

Course Link:

1. https://www.coursera.org/specializations/blockchain
2. https://onlinecourses.swayam2.ac.in/aic21_ge01/preview
3. https://www.edureka.co/blockchain-training

PROGRAM COORDINATOR
C. KALPANA
AP/CSE

HoD/CSE
Head of the Department
Department of Computer Science & Engg.
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PRINCIPAL
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate of Completion

This certificate is presented to

Ms. BAVITHRA R - IV Year CSE

*for completing Add-on Course on "**BLOCKCHAIN TECHNOLOGY FOR BEGINNERS**" from 15.11.2021 to 19.11.2021 (5 Days).*

HoD/CSE
Dr.K.Ramanan

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATECOURSE ON "DATA ANALYSIS USING PYTHON AND R"

INDEX

COURSE CODE & NAME: **21CSCC01 & DATA ANALYSIS USING PYTHON AND R**

ACADEMIC YEAR: 2021 -2022 SEMESTER: ODD DURATION: 35 HOURS

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PROGRAM COORDINATOR

HoD/CSE

IQAC

PRINCIPAL

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PERMISSION LETTER

2.12.2021

From

Dr.K.Ramanan,
Head of the Department,
Computer Science and Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Requisition to conduct Certificate Course for CSE students – Regarding.

We have planned to conduct a Certificate Course on **"DATA ANALYSIS USING PYTHON AND R"** to our students from 14.12.2021 to 18.12.2022 (5 Days) through Online mode - Google Meet (Due to Covid pandemic situation). We suggest **Dr.KarthiyaBanu, Founder&CEO, Inspire Softech Solution, Chennai** as the resource person for this Certificate Course. Kindly permit us to conduct the same.

REGISTRATION FORM LINK: https://forms.gle/7SEVEYsFD9MV1ZE99

GOOGLE MEET LINK: https://meet.google.com/ytk-pnxx-wnm

Join Meeting on 14.12.2022 at 9.00 a.m.

Thanking You.

Yours truly,

Dr.K.

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

RESOURCE PERSON'S PROFILE

Name : Dr.R.KarthiyaBanu

Designation : Founder & CEO

Company Name : Inspire Softech Solutions,Chennai.

About Resource Person : Dr.S. Karthiya Banu is the Founder and CEO of Inspire Softech Solutions, Chennai. She is currently heading Training and development team. She is having more than 17 years of teaching experience in the field of computer science and along with 12 years' experience in the field of Communication, soft skills and technical training. She handled Workshops on various concepts such as leadership skills, Team management and Presentation skills to make employees to realize their potentiality.

PROGRAM COORDINATOR
R. PRISCA MARY

HoD/CSE
Dr.K

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NPRCET/OFF/CSE/VAC/2021–2022 **Date: 6.12.2021**

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

CIRCULAR

This is to inform that Department of Computer Science and Engineering has planned to conduct a Certificate Course on **"DATA ANALYSIS USING PYTHON AND R"** for the students from 14.12.2021 to 18.12.2021 (5 Days) through Online mode - Google Meet (Due to Covid pandemic situation). Interested students can enroll their name to the program coordinator on or before 11.01.2021 through WhatsApp.

REGISTRATION FORM LINK: https://forms.gle/rAB9Bqn3RopdyPBV7

The details of the Certificate course are given below.

RESOURCE PERSON	:	**Dr.R.Karthiya Banu,** Founder & CEO, Inspire Softech Solution, Chennai.
MODE	:	Virtual Mode (Google Meet)
GOOGLE MEET LINK	:	**https://meet.google.com/ytk-pnxx-wnm** Join Meeting on 14.12.2021 at 9.00 a.m.
DATE & DURATION	:	14.12.2021 to 18.12.2021 (5 Days) &35 Hours
PROGRAM COORDINATOR	:	Mrs. J. Prisca Mary, AP/CSE.

PRINCIPAL

Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. All the HoDs
2. Notice Board
3. File
4. Program Coordinator
5. IQAC

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INVITATION

The Management, Principal, Staff and Students
Cordially invite you for the inauguration of

CERTIFICATE COURSE on
"DATA ANALYSIS USING PYTHON AND R"

On 14th December 9.30 a.m.

Google Meet Link: https://meet.google.com/vtk-pnxx-wnm

Chief Guest

Dr.R.KarthiyaBanu,
Founder & CEO,
Inspire Softech Solution, Chennai.

Dr.J.Sundararajan
Principal,
NPR College of Engineering & Technology

Felicitates the function

Organized By

Department of Computer Science and Engineering,
NPR College of Engineering & Technology,
NPR Nagar, Natham.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

AGENDA

- Inauguration on 14th Deccember,2021.
- Prayer Song
- Welcome address by Ms.C.Bavithra, Third Year Student.
- Felicitation address by Dr.J.Sundararajan, Principal, NPRCET.
- Chief Guest Honoring
- Chief Guest Introduction
- Chief Guest Address

- Valedictory on 18th Deccember,2021.
- Introduction
- Certificate Distribution
- Feedback Session
- Vote of thanks by Ms.S.Safrine Banu, Final Year Student.
- National Anthem

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

REGISTERED STUDENTS NAME LIST

S.No.	Register Number	Name of the student	Year
1.	920820104001	Abinaya A	II Year
2.	920820104003	Deepika V	II Year
3.	920820104004	Dharshanapriya K	II Year
4.	920820104006	Geethanjali S	II Year
5.	920820104008	Jeron Robinson T	II Year
6.	920820104009	Joshuva Baskaran M	II Year
7.	920820104015	Keerthi S	II Year
8.	920820104021	Nafeela Nasrin S	II Year
9.	920820104022	Naveen K	II Year
10.	920820104023	Nivetha K	II Year
11.	920820104025	Ponnalagu N	II Year
12.	920820104028	Priyadharshini M	II Year
13.	920820104030	Rampriya A	II Year
14.	920820104031	Sabarishan S	II Year
15.	920820104032	Salini S	II Year
16.	920820104033	Sanjay H	II Year
17.	920820104036	Shabarikanth Gk	II Year
18.	920820104037	Shajitha Yasmin N	II Year
19.	920820104038	Shrinidhi G	II Year
20.	920820104039	Sivamani Vignesh D	II Year
21.	920820104040	Sowmiya T	II Year
22.	920820104042	Subbulakshmi T	II Year
23.	920820104045	Swathi M	II Year
24.	920820104046	Tharvinraja S	II Year
25.	920820104049	Vinoth A	II Year
26.	920819104004	Akash T	III Year
27.	920819104006	Bavithra C	III Year
28.	920819104007	Bramma S(Hostel)	III Year
29.	920819104008	Deva Dharshini N	III Year
30.	920819104011	Guhan P	III Year
31.	920819104012	Guna Sekar J	III Year
32.	920819104013	Hari Deevagan M	III Year
33.	920819104014	Hifaya Thaqfeen M	III Year
34.	920819104015	Indhumathi V	III Year
35.	920819104016	Janani R	III Year
36.	920819104020	Mohamed Ribak B	III Year
37.	920819104021	Monica R	III Year
38.	920819104022	Muthu Kumar P	III Year
39.	920819104024	Nandhini S	III Year

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S.No.	Register Number	Name of the student	Year
40.	920819104025	Naveen Kumar S	III Year
41.	920818104002	Aravind B	IV Year
42.	920818104003	Bhavithra R	IV Year
43.	920818104004	Chandru R	IV Year
44.	920818104012	Karthiga Jothi S	IV Year
45.	920818104017	Muneeshwaran N	IV Year
46.	920818104019	Naveen Raja B	IV Year
47.	920818104022	Palpandi R	IV Year
48.	920818104023	Pradap S	IV Year
49.	920818104024	Prakash P	IV Year
50.	920818104026	Ramya R	IV Year
51.	920818104027	Roobika N	IV Year
52.	920818104028	Ruthra A	IV Year
53.	920818104029	Safrine Banu S	IV Year
54.	920818104037	Sridhar K	IV Year
55.	920818104039	Vineeth Pandian S	IV Year
56.	920818104040	Yogeshwaran V	IV Year

PROGRAM COORDINATOR

T. PRISCA MARY

HoD/CSE

Dr. K [illegible]
Head of the Department
Department of Computer Science & Engineering
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

COURSE SCHEDULE

Venue: Virtual Mode **Date: 6.12.2021**

Google Meet - https://meet.google.com/ytk-pnxx-wnm

External Resource Person:

Dr.R.Karthiya Banu

Internal Resource Person:

Mrs.J.PriscaMary, AP/CSE.

Day 1 17.01.2022	9.30 a.m. to 10.00 a.m.	Inauguration	
	10. 00 a.m. to 11.10 a.m.	Session 1	Introduction Dr.R.Karthiya Banu
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Python Data types Dr.R.Karthiya Banu
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Control Structure in Python Mrs.J.PriscaMary
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Python Numpy& Pandas Mrs.J.PriscaMary
Day 2 18.01.2022	9.30 a.m. to 11.10 a.m.	Session 1	Introduction Mrs.J.PriscaMary
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Reading Delimited files and RDBMS data Dr.R.Karthiya Banu
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Scrapping Websites Dr.R.Karthiya Banu
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Imputing Missing Values Techniques Dr.R.Karthiya Banu
Day 3 19.01.2022	9.30 a.m. to 11.10 a.m.	Session 1	Data Frames in R - Mrs.J.PriscaMary
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Constructs in R Programming Mrs.J.PriscaMary
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Visualizations in R – Dr.R.Karthiya Banu
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Case Study Dr.R.Karthiya Banu

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Day 4 20.01.2022	9.30 a.m. to 11.10 a.m.	Session 1	SQL Python-Upload Market Data Mrs.J.PriscaMary
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Write SQL in Python Mrs.J.PriscaMary
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Visualizations in Python- Seaborn and Pandas Dr.R.Karthiya Banu
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	MySQL Database Connection with Python Dr.R.Karthiya Banu
Day 5 21.01.2022	9.30 a.m. to 11.10 a.m.	Session 1	Upload CSV files in R and SQL Queries Dr.R.Karthiya Banu
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m.to 1.10 p.m.	Session 2	Data Visualizations in R Mrs.J.PriscaMary
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Connecting MySQL with R and DML operations Dr.R.Karthiya Banu
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Connecting MySQL with R and DDL operations. Dr.R.Karthiya Banu

PROGRAM COORDINATOR

HoD/CSE

IQAC

PRINCIPAL

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Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

STUDENT'S ATTENDANCE

S. No.	Register Number	Name of the Student	Year	14.12.21		15.12.21		16.12.21		17.12.21		18.12.21	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	920820104001	Abinaya A	II Year	/	/	/	/	/	/	/	/	/	/
2.	920820104003	Deepika V	II Year	/	/	/	/	/	/	/	/	/	/
3.	920820104004	Dharshanapriya K	II Year	/	/	/	/	/	/	/	/	/	/
4.	920820104006	Geethanjali S	II Year	/	/	/	/	/	/	/	/	/	/
5.	920820104008	Jeron Robinson T	II Year	a	a	a	a	/	/	/	/	a	a
6.	920820104009	Joshuva Baskaran M	II Year	/	/	/	/	/	/	/	/	/	/
7.	920820104015	Keerthi S	II Year	/	/	/	/	/	/	/	/	/	/
8.	920820104021	Nafeela Nasrin S	II Year	/	/	/	/	/	/	/	/	/	/
9.	920820104022	Naveen K	II Year	/	/	/	/	/	/	/	/	/	/
10.	920820104023	Nivetha K	II Year	a	a	/	/	/	/	/	/	/	/
11.	920820104025	Ponnalagu N	II Year	/	/	/	/	/	/	/	/	/	/
12.	920820104028	Priyadharshini M	II Year	/	/	/	/	/	/	/	/	/	/
13.	920820104030	Rampriya A	II Year	/	/	a	a	/	/	/	/	/	/
14.	920820104031	Sabarishan S	II Year	/	/	/	/	/	/	/	/	a	a
15.	920820104032	Salini S	II Year	/	/	/	/	/	/	/	/	a	a
16.	920820104033	Sanjay H	II Year	/	/	/	/	/	/	/	/	/	/
17.	920820104036	Shabarikanth Gk	II Year	/	/	/	/	/	/	/	/	a	a
18.	920820104037	Shajitha Yasmin N	II Year	/	/	/	/	/	/	/	/	/	/
19.	920820104038	Shrinidhi G	II Year	a	a	a	a	/	/	/	/	/	/
20.	920820104039	Sivamani Vignesh D	II Year	/	/	/	/	/	/	/	/	a	a
21.	920820104040	Sowmiya T	II Year	/	/	/	/	/	/	/	/	/	/
22.	920820104042	Subbulakshmi T	II Year	/	/	/	/	/	/	/	/	/	/
23.	920820104045	Swathi M	II Year	/	/	/	/	/	/	/	/	/	/
24.	920820104046	Tharvinraja S	II Year	/	/	/	/	/	/	/	/	a	a
25.	920820104049	Vinoth A	II Year	/	/	/	/	/	/	/	/	/	/
26.	920819104004	Akash T	III Year	a	a	/	/	/	/	/	/	/	/
27.	920819104006	Bavithra C	III Year	/	/	/	/	/	/	/	/	/	/
28.	920819104007	Bramma S	III Year	/	/	a	a	a	a	/	/	/	/
29.	920819104008	Deva Dharshini N	III Year	/	/	/	/	/	/	/	/	a	a
30.	920819104011	Guhan P	III Year	/	/	a	a	/	/	/	/	a	a
31.	920819104012	Guna Sekar J	III Year	/	/	/	/	a	a	/	/	/	/

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S. No.	Register Number	Name of the Student	Year	14.12.21		15.12.21		16.12.21		17.12.21		18.12.21	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
32	920819104013	Hari Deevagan M	III	/	/	a	a	a	a	/	/	/	/
33.	920819104014	Hifaya Thaqfeen M	III	a	a	/	/	/	/	/	/	/	/
34.	920819104015	Indhumathi V	III	/	/	/	/	/	/	/	/	/	/
35.	920819104016	Janani R	III	a	a	/	/	/	/	/	/	/	/
36.	920819104020	Mohamed Ribak B	III	/	/	/	/	a	a	/	/	/	/
37.	920819104021	Monica R	III	/	/	/	/	/	/	/	/	a	a
38.	920819104022	Muthu Kumar P	III	a	a	/	/	/	/	/	/	/	/
39.	920819104024	Nandhini S	III	/	/	/	/	/	/	/	/	/	/
40.	920819104025	Naveen Kumar S	III	a	a	/	/	/	/	/	/	a	a
41.	920818104002	Aravind B	IV	/	/	/	/	/	/	/	/	/	/
42.	920818104003	Bhavithra R	IV	a	a	/	/	/	/	a	a	a	a
43.	920818104004	Chandru R	IV	a	a	/	/	a	a	/	/	/	/
44.	920818104012	Karthiga Jothi S	IV	/	/	/	/	/	/	/	/	/	/
45.	920818104017	Muneeshwaran N	IV	/	/	/	/	/	/	/	/	/	/
46.	920818104019	Naveen Raja B	IV	/	/	/	/	/	/	/	/	/	/
47.	920818104022	Palpandi R	IV	/	/	/	/	/	/	/	/	/	/
48.	920818104023	Pradap S	IV	/	/	/	/	a	a	/	/	a	a
49.	920818104024	Prakash P	IV	/	/	/	/	/	/	a	a	/	/
50.	920818104026	Ramya R	IV	a	a	/	/	/	/	/	/	/	/
51.	920818104027	Roobika N	IV	/	/	/	/	/	/	/	/	/	/
52.	920818104028	Ruthra A	IV	/	/	/	/	/	/	/	/	/	/
53.	920818104029	Safrine Banu S	IV	a	a	/	/	/	/	/	/	/	/
54.	920818104037	Sridhar K	IV	a	a	/	/	a	a	/	/	/	/
55.	920818104039	Vineeth Pandian S	IV	a	a	a	a	/	/	/	/	/	/
	Present			41	41	48	48	48	48	53	53	43	43
	Absentees			14	14	07	07	07	07	02	02	12	12
	Coordinator Signature												

PROGRAM COORDINATOR

I-PRICD MADY

HoD/CSE

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21CSCC01 & DATA ANALYSIS USING PYTHON AND R

QUIZ QUESTION PAPER WITH ANSWER KEY

Quiz Link: https://forms.gle/4RSh4vuK4oGKnjPV8

NPR College of Engineering & Technology

Data analysis using python and R

Email *

Valid email

This form is collecting emails. Change settings

1. Which of the following will start the R program? *

- $ R
- > R
- * R
- @ R

2. Elementary commands in R consist of either _____ or assignments. *

- utilstats
- language
- expressions
- packages

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3. If a command is not complete at the end of a line, R will give a different prompt, by default it * is _____

- ○ .
- ○ +
- ○ *
- ○ /

4. ____ text editor provides more general support mechanisms via ESS for working interactively with R. *

- ○ EAC
- ○ Emacs
- ○ Shell
- ○ ECAP

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5. What is output of getOption("defaultPackages") in R studio? *

- a) Installs a new package
- b) Shows default packages in R
- c) Error
- d) Nothing will print

6. R language has superficial similarity with _____ *

- a) C
- b) Python
- c) MATLAB
- d) SAS

7. How many atomic vector types does R have? *

- a) 5
- b) 6
- c) 8
- d) 10

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8. _____ graph displays information as a series of data points connected by straight line segments. *

- Bar
- Scatter
- Histogram
- Line

9. A method used to make vector of repeated values? *

- read()
- data()
- rep()
- view()

10. K- nearest neighbors algorithm is based on _____ learning *

- Supervised
- Unsupervised
- Association
- Correlation

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11. Which of the following function gives information about top-level data? *

- head
- tail
- summary
- none of the above

12. CNN is mostly used for which type of data *

- Structured Data
- Unstructured Data
- Both Structured and Unstructured
- None of the above

13. A perfect negative correlation is signified by *

- 1
- 0
- -1
- 2

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14 _____ is the basic data structure of pandas that can be thought of SQL table or a spreadsheet data representation. *

- Series
- List
- Dataframe
- ndarray

15. Which of the following uses data on some object to predict values for other object ? *

- Inferential
- Predictive
- Exploratory
- None of the above

ANSWERS :

1- A	2- C	3- B	4- B	5- B	6- A	7- B	8- D	9- B	10- A
11- A	12- B	13- C	14- A	15- B					

PROGRAM CO-ORDINATOR

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

STUDENT'S FEEDBACK FORM

Feedback Form Link: https://forms.gle/H5Ek5XzegdiWWduh8

NPR College of Engineering & Technology

Certificate course on **"DATA ANALYTICS USING PYTHON AND R"** - FEEDBACK FORM

nprcetcse@nprcolleges.org Switch account

* Required

Email *

Your email

NAME *

Your answer

YEAR & BRANCH *

Your answer

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1. Course Content *

- ◯ EXCELLENT
- ◯ GOOD
- ◯ FAIR
- ◯ SATISFACTORY

2. Emphasis on fundamentals *

- ◯ EXCELLENT
- ◯ GOOD
- ◯ FAIR
- ◯ SATISFACTORY

3. Way of exposed new knowledge and practices *

- ◯ EXCELLENT
- ◯ GOOD
- ◯ FAIR
- ◯ SATISFACTORY

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4. Course delivered by Resource Person *

- ○ EXCELLENT
- ○ GOOD
- ○ FAIR
- ○ SATISFACTORY

5. Overall rating of this course *

1	2	3	4	5
○	○	○	○	○

Any other Suggestions

Your answer

Submit

Clear form

PROGRAM COORDINATOR

A. PRISCA MARY

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

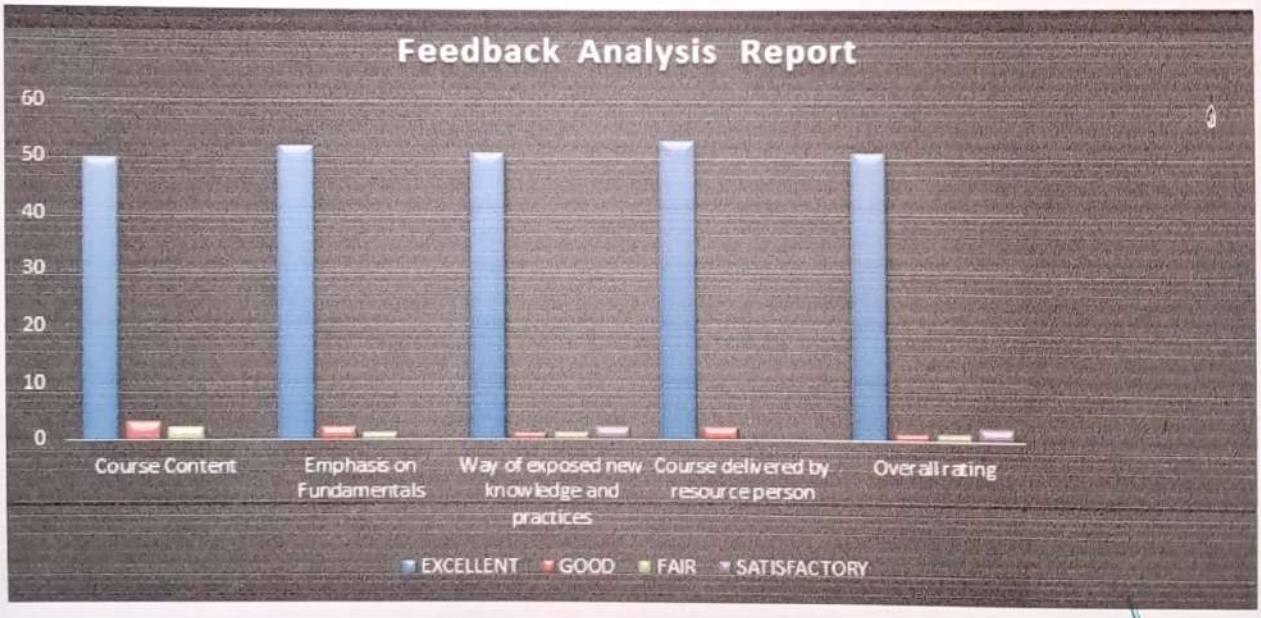
CERTIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

STUDENT'S FEEDBACK ANALYSISREPORT

ATTENDED STUDENTS: 55 **DATE:3.01.2022**

S. No.	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	50	3	2	0
2.	Emphasis on Fundamentals	52	2	1	0
3.	Way of exposed new knowledge and practices	51	1	1	2
4.	Course delivered by resource person	53	2	0	0
5.	Overall rating	51	1	1	2
	Average	51.14	1.8	1	0.8

Total number of students who gave feedback: 55



PROGRAM COORDINATOR

S. PRISCA MARY

HoD/CSE

Head of the Department
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PRINCIPAL

Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

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DATE: 3.01.2022

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

SUMMARY REPORT

The Department of Computer Science and Engineering organized an Certificate Course on **"DATA ANALYSIS USING PYTHON AND R"** from 14.12.2021 to 18.12.2021 (5 Days) through Online mode - Google Meet (Due to Covid Pandemic situation).

On 14.12.2021, Ms.Bavithra.C of III year CSE has delivered the welcome address.

Dr.J.Sundararajan, Principal of our college inaugurated the program and delivered the felicitation address. The resource person taught the students about latest analytics tools and techniques, how to work with SQL databases, the languages of R and Python, art of creating data visualizations, and how to apply statistics and predictive analytics in a business environment. He explained about how to use Python to analyze data, create beautiful visualizations, and use powerful machine learning algorithms, how to visualize and respond to new data, as well as develop innovative new technologies. One of the most important aspects of this course is that the students are getting hands-on experience on creating analytics models.

55 Students attended this Certificate course from our CSE Department. Students who were actively participated and successfully completed the quiz program had been awarded with certificates through mail.

Ms. Safrine Banu.S of IV year CSE delivered the vote of thanks during the valedictory session.

PROGRAM COORDINATOR | **HoD/CSE** | **IQAC** | **PRINCIPAL**

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "DATA ANALYSIS USING PYTHON AND R"

COURSE MATERIAL

Course Link:

1. https://www.udemy.com/course/python-r-programming/
2. https://www.coursera.org/learn/data-analysis-with-python
3. https://onlinecourses.nptel.ac.in/noc20_cs46/preview

Books and References:

1. Data Analytics Made Accessible by Dr. Anil Maheshwari
2. Python for Everybody: Exploring Data in Python 3 by Dr. Charles Russell Severance
3. A Data Visualization Guide for Business Professionals by Cole Nussbaumer Knaflic
4. SQL QuickStart Guide: The Simplified Beginner's Guide to Managing, Analyzing, and Manipulating Data With SQL by Walter Shields

PROGRAM COORDINATOR

J. PRISCA MARY

HoD/CSE

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
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PRINCIPAL

Principal
V.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate of Completion

This certificate is presented to

Mr. GUHAN P - III Year CSE

for completing Add-on Course on **"DATA ANALYSIS USING PYTHON AND R"** *from 14.12.2021 to 18.12.2021 (5 Days).*

HoD/CSE
Dr.K.Ramanan

PRINCIPAL
Dr.J.Sundararajan

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NPR College of Engineering & Technology

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

INDEX

COURSE CODE & NAME: **21CSAO02 & ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY**

ACADEMIC YEAR: 2021-2022 SEMESTER: EVEN DURATION: 35 HOURS

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PROGRAM COORDINATOR **HoD/CSE** **IQAC** **PRINCIPAL**

ARockia Iruday...

Head of the Department
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PERMISSION LETTER

26.6.2022

From

Dr.K.Ramanan,

Head of the Department,

Computer Science and Engineering,

NPR College of Engineering & Technology,

Natham.

To

The Principal,

NPR College of Engineering & Technology,

Natham.

Respected Sir,

Sub: Requisition to conduct Add-on Course for CSE students – Regarding.

We have planned to conduct an Add-on Course on **"Artificial Intelligence for Cyber Security"** to our students from 6.6.2022 to 11.06.2022 (5 Days) in our college premises. We suggest **Mr.T.Ashok Kumar, Founder&Director, Lync Space Software Solutions Private Limited, Chennai** as a resource person for this Add-on Course program. Kindly permit us to conduct the same.

Thanking you.

NPR COLLEGE OF ENGG. & TECHNOLOGY ★ NATHAM

Yours truly,

Dr.K.Ramanan
Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

RESOURCE PERSON'S PROFILE

Name : Mr.T.Ashok Kumar

Designation : Founder & Director

Company Name : Lync Space Software Services Private Limited, Chennai.

About Resource Person : He has 10+ years of experience in various technologies and helps in aligning technologies towards business needs. He is extensively involved in analysis, design, development and integration that enable partners to achieve growth and drive profitability. He is focused on setting the culture of the company by enabling his team to adapt towards Lync Space's core value system which is driven through Commitment, Quality and Innovation. Mr.T.Ashok Kumar is an aspiring thought leader who plays a critical role in the growth of organization.

PROGRAM COORDINATOR **HoD/CSE** **PRINCIPAL**

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NPRCET/OFF/CSE/VAC/2021– 2022 **Date: 30.05.2022**

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

CIRCULAR

This is to inform that Department of Computer Science and Engineering has planned to conduct an Add-on Course on **"ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"** for the students from 6.06.2022 to 11.06.2022 (5 Days) during the even semester of 2021-2022. Interested students can enroll their name to the program coordinator on or before 3.06.2022. The details of the Add-on Course program are given below.

RESOURCE PERSON	:	Mr.T.Ashok Kumar Founder&Director Lync Space Software Solutions Private Limited, Chennai.
VENUE	:	Computer Practice Laboratory
DATE & DURATION	:	6.06.2022 to 11.06.2022 (5 Days)
PROGRAM COORDINATOR	:	Mr.M.Arockia Irudayaraja, AP/CSE.

PRINCIPAL

Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401

Copy to:

1. All the HoDs
2. Notice Board
3. File
4. Program Coordinator
5. IQAC

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INVITATION

The Management, Principal, Staff and Students
Cordially invite you for the inauguration of

ADD-ON COURSE on

"ARTIFICAL INTELLIGENCE FOR CYBER SECURITY"

On 6th June, 2022

Venue: Computer Practice Laboratory at 9.30 a.m.

Chief Guest

Mr.T.Ashok Kumar,

Founder&Director,
Lync Space Software Solutions Private Limited, Chennai.

Dr. J Sundararajan

Principal,
NPR College of Engineering & Technology

felicitates the function

Organized By

Department of Computer Science and Engineering,
NPR College of Engineering & Technology,
NPR Nagar, Natham.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

AGENDA

- Inauguration on 6th June, 2022.
- Prayer Song
- Welcome address by Ms.Kamali.B, Final Year Student.
- Felicitation address by Dr.J.Sundararajan, Prncipal, NPRCET.
- Chief Guest Honoring
- Chief Guest Introduction
- Chief Guest Address

- Valedictory on 11th June, 2022
- Introduction
- Certificate Distribution
- Feedback Session
- Vote of thanks by Mr.G.Srivaths Karthick, Third Year Student.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

REGISTERED STUDENTS NAME LIST

S. No.	Register Number	Name of the student	Year
1.	920819104002	Afhran Nisha A	III Year
2.	920819104005	Anandakumar A	III Year
3.	920819104006	Bavithra C	III Year
4.	920819104009	Divya S	III Year
5.	920819104015	Indhumathi V	III Year
6.	920819104016	Janani R	III Year
7.	920819104018	Mangala Dharsini R	III Year
8.	920819104021	Monica R	III Year
9.	920819104024	Nandhini S	III Year
10.	920819104025	Naveen Kumar S	III Year
11.	920819104027	Poornima Devi P	III Year
12.	920819104031	Santhosh Prakash M	III Year
13.	920819104036	Shajitha Begum M	III Year
14.	920819104037	Sharumathi P	III Year
15.	920819104038	Sivapriya R	III Year
16.	920819104042	Srivaths Karthic G	III Year
17.	920819104043	Subhashini K	III Year
18.	920819104044	Sujitha P	III Year
19.	920819104046	Thilagavathy V	III Year
20.	920819104047	Thirisha P	III Year
21.	920819104048	Thirunavukkarasar T	III Year
22.	920819104049	Thiyagarajan S	III Year
23.	920819104050	Vaishali S	III Year
24.	920818104002	Aravind B	IV Year
25.	920818104003	Bhavithra R	IV Year
26.	920818104004	Chandru R	IV Year
27.	920818104005	Chithra B	IV Year
28.	920818104007	Guna Devi I	IV Year
29.	920818104009	Hemapriya M	IV Year
30.	920818104010	Kamali B	IV Year
31.	920818104011	Kanmani A	IV Year
32.	920818104017	Muneeshwaran N	IV Year
33.	920818104019	Naveen Raja B	IV Year
34.	920818104020	Nivedha R	IV Year
35.	920818104021	Nivetha A	IV Year
36.	920818104022	Palpandi R	IV Year
37.	920818104024	Prakash P	IV Year
38.	920818104026	Ramya R	IV Year
39.	920818104027	Roobika N	IV Year
40.	920818104028	Ruthra A	IV Year

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S. No.	Register Number	Name of the student	Year
41.	920818104029	Safrine Banu S	IV Year
42.	920818104030	Santhoshini V	IV Year
43.	920818104033	Saraniya M	IV Year
44.	920818104034	Sathana S	IV Year
45.	920818104036	Shrinithi M	IV Year
46.	920818104038	Vijaya Bharathi P	IV Year
47.	920818104040	Yogeshwaran V	IV Year

PROGRAM COORDINATOR

HoD /CSE

PRINCIPAL

Head of the Department
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Principal
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

COURSE SCHEDULE

Venue: Computer Practice Laboratory **Date:30.05.2022**

External Resource Person:
Mr.T.Ashok Kumar.

Internal Resource Person:
Mr.M.Arockia Irudayaraja,AP/CSE.

Day 1 21.03.2022	9.30 a.m. to 10.00 a.m.	Inauguration	
	10. 00 a.m. to 11.10 a.m.	Session 1	Introduction Mr.T.Ashok Kumar
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Different cryptographic algorithms & protocols - Mr.T.Ashok Kumar
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Basics of Deep Learning Mr.M.Arockia Irudayaraja
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Compliance and Security Assessment Mr.T.Ashok Kumar
Day 2 22.03.2022	9.30 a.m. to 11.10 a.m.	Session 1	Train test splitting the data Mr.T.Ashok Kumar
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Standardizing and summarizing data Mr.T.Ashok Kumar
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Analyzing time series Mr.M.Arockia Irudayaraja
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Anomaly detection with Isolation Forest - Mr.T.Ashok Kumar.
Day 3 23.03.2022	9.30 a.m.to 11.10 a.m.	Session 1	Malware analysis tools Mr.T.Ashok Kumar.
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Static and dynamic malware analysis Mr.T.Ashok Kumar
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Clustering malware with K-Means Mr.T.Ashok Kumar
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	K-Means steps and its advantages and disadvantages Mr.M.Arockia Irudayaraja

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Day 4 24.03.2022	9.30 a.m. to 11.10 a.m.	Session 1	Introduction to classification of network attacks Mr.M.Arockia Irudayaraja
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Detecting botnet topology Mr.T.Ashok Kumar
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Different ML algorithms for botnet detection Mr.M.Arockia Irudayaraja
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Gaussian anomaly detection Mr.T.Ashok Kumar
Day 5 25.03.2022	9.30 a.m. to 11.10 a.m.	Session 1	Detecting DDos Attack Mr.M.Arockia Irudayaraja
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Credit Card fraud detection Mr.M.Arockia Irudayaraja
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Wireless indoor localization Implementation Mr.T.Ashok Kumar
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Deepfake recognition Mr.T.Ashok Kumar

PROGRAM COORDINATOR

AROCKIA IRUDAYARAJA.M

HoD/CSE

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

STUDENTS ATTENDANCE

S. No.	Register Number	Name of the student	Year	6.6.2022		7.6.2022		8.6.2022		9.6.2022		11.6.2022	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	920819104002	Afhran Nisha A	III Year	/	/	/	/	/	/	/	/	/	/
2.	920819104005	Anandakumar A	III Year	/	/	/	/	/	/	/	/	/	/
3.	920819104006	Bavithra C	III Year	/	/	/	/	/	/	/	/	/	/
4.	920819104009	Divya S	III Year	/	/	/	/	/	/	/	/	/	/
5.	920819104015	Indhumathi V	III Year	/	/	/	/	/	/	/	/	/	/
6.	920819104016	Janani R	III Year	/	/	/	/	/	/	/	/	/	/
7.	920819104018	Mangala Dharsini R	III Year	/	/	/	/	/	/	/	/	/	/
8.	920819104021	Monica R	III Year	/	/	/	/	/	/	/	/	/	/
9.	920819104024	Nandhini S	III Year	/	/	/	/	/	/	/	/	/	/
10.	920819104025	Naveen Kumar S	III Year	/	/	/	/	/	/	/	/	a	a
11.	920819104027	Poornima Devi P	III Year	/	/	/	/	/	/	/	/	/	/
12.	920819104031	Santhosh Prakash M	III Year	/	/	/	/	/	/	/	/	/	/
13.	920819104036	Shajitha Begum M	III Year	/	/	/	/	/	/	/	/	/	/
14.	920819104037	Sharumathi P	III Year	/	/	/	/	/	/	/	/	/	/
15.	920819104038	Sivapriya R	III Year	/	/	/	/	/	/	/	/	/	/
16.	920819104042	Srivaths Karthic G	III Year	/	/	/	/	/	/	/	/	/	/
17.	920819104043	Subhashini K	III Year	/	/	/	/	/	/	/	/	/	/
18.	920819104044	Sujitha P	III Year	/	/	/	/	/	/	/	/	/	/
19.	920819104046	Thilagavathy V	III Year	/	/	/	/	/	/	/	/	/	/
20.	920819104047	Thirisha P	III Year	/	/	/	/	/	/	/	/	/	/
21.	920819104048	Thirunavukkarasar T	III Year	/	/	/	/	/	/	/	/	/	/
22.	920819104049	Thiyagarajan S	III Year	/	/	/	/	/	/	/	/	/	/
23.	920819104050	Vaishali S	III Year	/	/	/	/	/	/	/	/	/	/
24.	920818104002	Aravind B	IV Year	/	/	/	/	/	/	/	/	/	/
25.	920818104003	Bhavithra R	IV Year	/	/	/	/	/	/	/	/	/	/
26.	920818104004	Chandru R	IV Year	/	/	/	/	/	/	/	/	/	/
27.	920818104005	Chithra B	IV Year	/	/	/	/	/	/	/	/	/	/
28.	920818104007	Guna Devi I	IV Year	/	/	/	/	/	/	/	/	/	/
29.	920818104009	Hemapriya M	IV Year	/	/	/	/	/	/	/	/	/	/
30.	920818104010	Kamali B	IV Year	/	/	a	a	/	/	/	/	/	/
31.	920818104011	Kanmani A	IV Year	/	/	/	/	/	/	/	/	/	/

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S. No.	Register Number	Name of the student	Year	6.6.2022		7.6.2022		8.6.2022		9.6.2022		11.6.2022	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
32	920818104017	Muneeshwaran N	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
33	920818104019	Naveen Raja B	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
34	920818104020	Nivedha R	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
35	920818104021	Nivetha A	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
36	920818104022	Palpandi R	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
37	920818104024	Prakash P	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
38	920818104026	Ramya R	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
39	920818104027	Roobika N	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40	920818104028	Ruthra A	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
41	920818104029	Safrine Banu S	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
42	920818104030	Santhoshini V	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
43	920818104033	Saraniya M	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
44	920818104034	Sathana S	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
45	920818104036	Shrinithi M	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
46	920818104038	Vijaya Bharathi P	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
47	920818104040	Yogeshwaran V	IV Year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Present			47	47	46	46	47	47	47	47	46	46
	Absentees			Nil	Nil	01	01	Nil	Nil	Nil	Nil	01	01
	Coordinator Signature			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

PROGRAM COORDINATOR

ARCHANA SRINIVASAN B.M

HoD/CSE

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

PRINCIPAL

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Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

SAMPLE QUESTION PAPER WITH ANSWER KEY

1. What is meant by Artificial Intelligence?

a) Artificial intelligence is defined as a field aiming to make humans more intelligent.

b) Artificial intelligence is defined as a field aiming to improve security.

c) Artificial intelligence is defined as a field aiming to mine the data.

d) Artificial intelligence is defined as a field aiming to develop intelligent machines.

2. Blind Search is used for which of the mentioned situations?

a) Advanced Game Theory

b) Real-life Simulation

c) Small Search Space

d) None of the above

3. ____ is the common language for AI.

a) Lisp

b) Python

c) PHP

d) Java

4. On which approach the face recognition system is based?

a) Weak AI Approach

b) Cognitive AI Approach

c) Strong AI Approach

d) Applied AI Approach

5. Procedural Domain Knowledge in a rule-based system is classified in the form of ____.

a) Control Rules

b) Production Rules

c) Meta Rules

d) None of the above

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6. Which of the following algorithm has similarity with K-Means?

a) Support Vector Machine

b) Logistic Regression

c) K-NN

d) Linear Regression

7. Which of the following algorithm has similarity with K-Means?

a) Manhattan distance

b) Hamming distance

c) Euclidean distance

d) Minkowski distance

8. Which of the following is the function of an AI Agent?

a) To map the percept sequence to an action

b) To map the goal sequence to an action

c) To work without direct interference from any external factor like humans

d) To map the environment sequence to an action

9. What are characteristics of Network based IDS?

a) They look for attack signatures in network traffic

b) Filter decides which traffic will not be discarded or passed

c) It is programmed to interpret a certain series of packet

d) It models the normal usage of network as a noise characterization

10. What is the major drawback of anomaly detection IDS?

a) These are very slow at detection

b) It generates many false alarms

c) It doesn't detect novel attacks

d) None of the mentioned

ANSWERS:

1. D 2. C 3. B 4. C 5. B 6. C 7. C 8. A 9. D 10. A

PROGRAM COORDINATOR

Arockia Jeyapaandi M

HoD/CSE

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DATE:2.07.2022

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

STUDENT'S FEEDBACK FORM

Name of the Student : BAVITHRA .C	**Year / Semester:** III Year
Name of the Program: ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY	

S. No.	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	✓			
2.	Presentation of the Course	✓			
3.	Effective Teaching Strategies and Techniques	✓			
4.	Time Management		✓		
5.	Overall rating of the course		✓		
6.	Average				

PROGRAM COORDINATOR
ARockia Irudhayaraj.M

HoD/CSE

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DATE : 2.07.2022

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

STUDENT'S FEEDBACK FORM

Name of the Student : Kanmani. A	**Year / Semester:** IV Year
Name of the Program: ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY	

S. No.	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	✓			
2.	Presentation of the Course		✓		
3.	Effective Teaching Strategies and Techniques	✓			
4.	Time Management		✓		
5.	Overall rating of the course	✓			
6.	Average				

PROGRAM COORDINATOR

A ROCKIA [illegible] M

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DATE : 2.07.2022

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

STUDENT'S FEEDBACK FORM

Name of the Student : Prakash P	**Year / Semester:** IV Year
Name of the Program: ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY	

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	✓			
2.	Presentation of the Course		✓		
3.	Effective Teaching Strategies and Techniques	✓			
4.	Time Management		✓		
5.	Overall rating of the course	✓			
6.	Average				

PROGRAM COORDINATOR

HoD/CSE

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

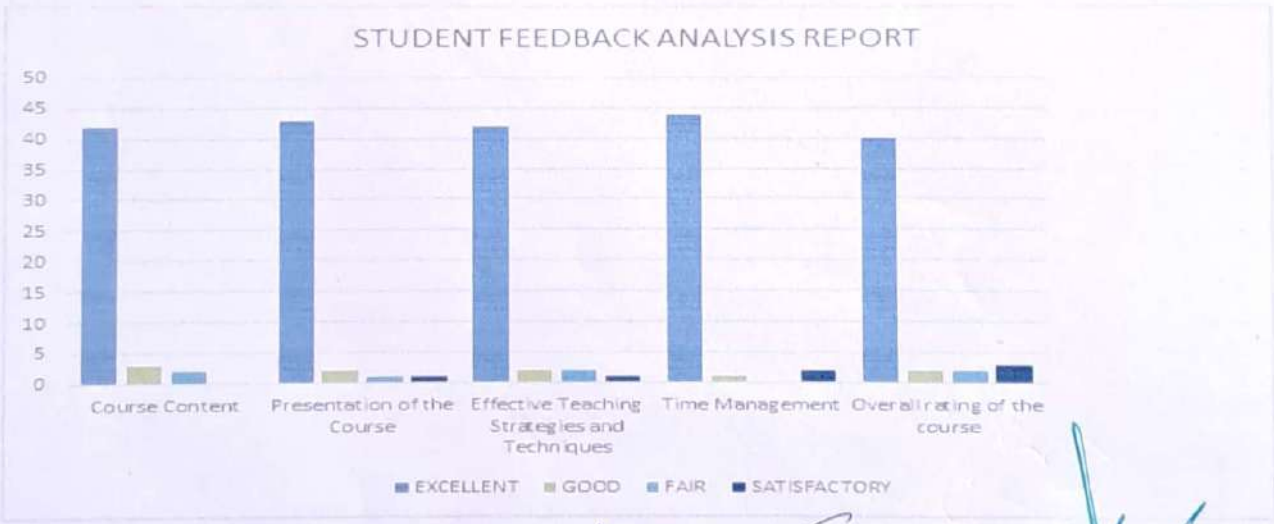
ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

STUDENT'S FEEDBACK ANALYSISREPORT

REGISTERED STUDENTS: 39 **DATE:2.07.2022**

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	42	3	2	0
2.	Presentation of the Course	43	2	1	1
3.	Effective Teaching Strategies and Techniques	42	2	2	1
4.	Time Management	44	1	0	2
5.	Overall rating of the course	40	2	2	3
6.	Average	42.2	2	1.4	1.4

Total Students who gave feedback : 47



PROGRAM COORDINATOR
AROCKIA IRUDAYARAJA.M

HoD/CSE

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Principal
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DATE: 2.07.2022

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

SUMMARY REPORT

The Department of Computer Science and Engineering organized an Add-on Course on **"ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"** from 21.03.2022 to 25.03.2022 (5 Days) in our college premises.

Ms.Kamali.B, IV year CSE has delivered the welcome address. **Dr. J. Sundararajan, Principal** of our college inaugurated the program and delivered the inaugural address. The Resource person **Mr.T.Ashok Kumar.**

He explained about how **"Artificial Intelligence (AI)"** is helping under-resourced security operations analysts stay ahead of threats and how the cyber attacks grow in volume and complexity. Curating threat intelligence from millions of research papers, blogs and news stories, AI technologies like machine learning and natural language processing provide rapid insights to cut through the noise of daily alerts, drastically reducing response times. He explained how AI helps analysts connect the dots between threats. He also explained about how Artificial Intelligence is ideally suited to solve some of our most difficult problems, and cybersecurity certainly falls into that category. With today's ever evolving cyber-attacks and proliferation of devices, he elucidated how machine learning and AI are used in automating threat detection and respond more efficiently than traditional software-driven approaches.

39 Students attended from CSE III and IV year classes. Students those who have participated and successfully completed the quiz program on **"ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"** has been awarded with certificates.

Mr.G.Srivaths Karthick from III year CSE delivered the vote of thanks.

PROGRAM COORDINATOR | **HoD/CSE** | **IQAC** | **PRINCIPAL**

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

Dr. J.SUNDARARAJAN
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ADD-ON COURSE ON "ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY"

COURSE MATERIALS

Course Links:

1. https://www.ibm.com/security/artificial-intelligence
2. https://my.uq.edu.au/programs-courses/course.html?course_code=COMP7710
3. https://www.udemy.com/course/the-complete-artificial-intelligence-for-cyber-security-2021/

Course References :

1. Hands-On Artificial Intelligence for Cybersecurity by Alessandro Parisi
2. Cyber Minds: Insights on cybersecurity across the cloud, data, artificial intelligence, blockchain, and IoT to keep you cyber safe Paperback by Shira Rubinoff (Author)
3. Cybersecurity: A Comprehensive Beginner's Guide to learn the Realms of Cybersecurity from A-Z by Elijah Lewis
4. https://link.springer.com/book/10.1007/978-3-030-72236-4

PROGRAM COORDINATOR **HoD/CSE** **PRINCIPAL**

AROCKIA JEYADOSS M

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate of Completion

This certificate is presented to

Mr. SANTHOSH PRAKASH M - III Year CSE

for completing Add-on Course on **"ARTIFICIAL INTELLIGENCE FOR CYBER SECURITY** *"from 6.06.2022 to 11.06.202 (5 Days).*

HoD/CSE
Dr.K.Ramanan

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

INDEX

COURSE CODE & NAME: **21CSCC02 & INTRODUCTION TO RELATIONAL DATABASE AND SQL**

ACADEMIC YEAR: 2021 -2022 SEMESTER: EVEN DURATION: 35 HOURS

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1	PERMISSION LETTER	1
2	RESOURCE PERSON'S PROFILE	2
3	CIRCULAR TO STUDENTS	3
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5	COURSE CONTENT	5
6	REGISTERED STUDENTS NAME LIST	7
7	COURSE SCHEDULE	8
8	STUDENT'S ATTENDANCE	10
9	QUIZ QUESTION PAPER WITH ANSWER KEY	13
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PROGRAM COORDINATOR

HoD/CSE

IQAC

PRINCIPAL

M. KALAIARASI
Assistant Professor

Head of the Department
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Coordinator - IQAC
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PERMISSION LETTER

24.06.2022

From

Dr.K.Ramanan,
Head of the Department,
Computer Science and Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Requisition to conduct Certificate Course for CSE students – Regarding.

We have planned to conduct a Certificate Course on **"INTRODUCTION TO RELATIONAL DATABASE AND SQL"** to our students from 5.07.2022 to 9.07.2022 (5 Days) through Online mode - Google Meet. We suggest **Ms.M.V.Nandhinee, Senior Developer, Cognizant Technology Solutions, Chennai** as the resource person for this Certificate Course. Kindly permit us to conduct the same.

REGISTRATION FORM LINK: https://forms.gle/z88LrBbv6eMvw3jYA

GOOGLE MEET LINK: https://meet.google.com/jdg-yzsa-hbw

Join Meeting on 5.07.2022 at 9.30 a.m.

Thanking You,

Yours truly,

Dr.K.Ramanan
Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

RESOURCE PERSON'S PROFILE

Name : Ms.M.V.Nandhinee

Designation : Senior Developer

Company Name : Cognizant Technology Solutions, Chennai.

About Resource Person : She is a Senior Developer with Specialization on Salesforce at Cognizant Technology Solutions, who helps a team of intelligent minds to explore and innovate new solutions. She is a Salesforce Trailblazer, having 4 years of experience in IT industry, which includes working with HCL Technologies and Infosys. She is passionate towards hosting/organizing events and have hosted many events in various organizations. She was rewarded with 'HCL Spark Award' from HCL technologies. She was also a member of the sports council at HCL. Apart from her IT Experience, she loves engaging with people for which she had chosen to be a freelancer trainer. She had completed my trainings and certification on 'Corporate Trainer', 'Train the trainer' and 'Soft skill trainer'. Team management & Leadership and Time Management are her niche.

PROGRAM COORDINATOR

M. KALARANI
AP/CSE

HoD/CSE

Dr.T.C.

PRINCIPAL

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NPRCET/OFF/CSE/VAC/2021–2022/04

Date: 28.06.2022

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

CIRCULAR

This is to inform that Department of Computer Science and Engineering has planned to conduct a Certificate Course on **"INTRODUCTION TO RELATIONAL DATABASE AND SQL"** for the students from 5.07.2022 to 9.07.2022 (5 Days) through online mode - Google Meet. Interested students can enroll their name to the program coordinator on or before 3.07.2022 through WhatsApp.

REGISTRATION FORM LINK: https://forms.gle/z88LrBbv6eMvw3jYA

The details of the Certificate Course are given below:

RESOURCE PERSON	:	**Ms.M.V.Nandhinee,** Senior Developer, Cognizant Technology Solutions, Chennai.
MODE	:	Virtual Mode (Google Meet)
GOOGLE MEET LINK	:	**https://meet.google.com/jdg-vzsa-hbw** Join Meeting on 5.07.2022 at 9.30 a.m.
DATE & DURATION	:	5.07.2022 to 9.07.2022 (5 Days) &35 Hours
PROGRAM COORDINATOR	:	Mrs.M.Kalarani, AP/CSE.

PRINCIPAL

Copy to:

1. All the HoDs
2. Notice Board
3. File
4. Program Coordinator
5. IQAC

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INVITATION

The Management, Principal, Staff and Students
Cordially invite you for the inauguration of

CERTIFICATE COURSE on

"INTRODUCTION TO RELATIONAL DATABASE AND SQL"

On 5th July at 9.30 a.m.

Google Meet Link: https://meet.google.com/jdg-vzsa-hbw

Chief Guest

Ms.M.V. Nandhinee,

Senior Developer,
Cognizant Technology Solutions, Chennai

Dr.J.Sundararajan

Principal,
NPR College of Engineering & Technology

Felicitates the function

Organized By

Department of Computer Science and Engineering,
NPR College of Engineering & Technology,
NPR Nagar, Natham.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

AGENDA

- Inauguration on 5th July,2022.
- Prayer Song
- Welcome address by Ms.M.Swathi, Second Year Student.
- Felicitation address by Dr.J.Sundararajan, Principal, NPRCET.
- Chief Guest Honoring
- Chief Guest Introduction
- Chief Guest Address

- Valedictory on 9th July,2022.
- Introduction
- Certificate Distribution
- Feedback Session
- Vote of thanks by Mr.S.Naveen Kumar, Final Year Student.
- National Anthem

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

COURSE CONTENT

Day 1 - Relational database Design

- Introduction to Relational Database
- Logical Design and Entity Relationship model
- Physical Design and Relational Database
- Normal forms and Normalization

Day 2 - SQL Introduction

- PostgreSQL Introduction and Installation
- CREATE and DROP
- Naming Convention and Demo Oracle
- Naming Convention and Demo PostgreSQL

Day 3 – Simple Data Handling

- Simple INSERT and SELECT
- Data Types
- Row Level and Aggregate Functions
- Changing Table Data and Structure

Day 4 – Dataset Operations

- UNION, INTERSECT, MINUS
- SELECT Statement with JOIN and GROUP BY
- Inner Join, Outer Join and Cross Join
- Views

Day 5 - Advanced Topics in SQL

- Transactions for concurrency control and failure recovery
- Database constraints: key, referential integrity, and "check" constraints
- Database triggers
- Authorization in relational databases

Criteria to get Certificate:

- Students should register their names for this course.
- Students must have 85% attendance.
- Students should secure 75% marks in the Exam.

Prepared By: Mrs.M.Kalarani, AP/CSE.

PROGRAM COORDINATOR	HoD/CSE	IQAC	PRINCIPAL
M. KALARANI	Dr.N.Jaisankar	Coordinator - IQAC	Principal
AP/CSE	Head of the Department	NPR College of Engineering & Technology	N.P.R. College of Engineering & Technology
	Department of Computer Science & Engineering	Natham, Dindigul (Dt)-624 401	Natham, Dindigul (Dt) - 624 401.
	NPR College of Engineering & Technology		
	Natham, Dindigul (DT) - 624 401.		

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

REGISTERED STUDENTS NAME LIST

S.No.	Register Number	Name of the student	Year
1.	920820104001	Abinaya A	II Year
2.	920820104002	Anandaraj M	II Year
3.	920820104003	Deepika V	II Year
4.	920820104004	Dharshanapriya K	II Year
5.	920820104005	Divya S	II Year
6.	920820104006	Geethanjali S	II Year
7.	920820104007	Hari Vignesh K	II Year
8.	920820104008	Jeron Robinson T	II Year
9.	920820104009	Joshuva Baskaran M	II Year
10.	920820104011	Kaleeswaran S	II Year
11.	920820104013	Karthikeyan.M	II Year
12.	920820104014	Kaviarasan C	II Year
13.	920820104015	Keerthi S	II Year
14.	920820104016	Kowsalya M	II Year
15.	920820104021	Nafeela Nasrin S	II Year
16.	920820104022	Naveen K	II Year
17.	920820104023	Nivetha K	II Year
18.	920820104024	Palanikumar V	II Year
19.	920820104025	Ponnalagu N	II Year
20.	920820104026	Pradeep Raj R S	II Year
21.	920820104028	Priyadharshini M	II Year
22.	920820104030	Rampriya A	II Year
23.	920820104031	Sabarishan S	II Year
24.	920820104032	Salini S	II Year
25.	920820104033	Sanjay H	II Year
26.	920820104034	Saravanakumar T	II Year
27.	920820104035	Saravana Pandi P	II Year
28.	920820104036	Shabarikanth Gk	II Year
29.	920820104037	Shajitha Yasmin N	II Year
30.	920820104038	Shrinidhi G	II Year
31.	920820104039	Sivamani Vignesh D	II Year
32.	920820104040	Sowmiya T	II Year
33.	920820104041	Sripradeep M	II Year
34.	920820104042	Subbulakshmi T	II Year
35.	920820104043	Sudharsan G	II Year
36.	920820104044	Sujit Raghav Mm	II Year
37.	920820104045	Swathi M	II Year
38.	920820104046	Tharvinraja S	II Year
39.	920820104047	Venkatraman M	II Year

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S.No.	Register Number	Name of the student	Year
40.	920819104002	Afhran Nisha A	III Year
41.	920819104003	Ajaykumar M	III Year
42.	920819104005	Anandakumar A	III Year
43.	920819104006	Bavithra C	III Year
44.	920819104008	Deva Dharshini N	III Year
45.	920819104009	Divya S	III Year
46.	920819104014	Hifaya Thaqfeen M	III Year
47.	920819104015	Indhumathi V	III Year
48.	920819104016	Janani R	III Year
49.	920819104018	Mangala Dharsini R	III Year
50.	920819104020	Mohamed Ribak B	III Year
51.	920819104021	Monica R	III Year
52.	920819104022	Muthu Kumar P	III Year
53.	920819104024	Nandhini S	III Year
54.	920819104025	Naveen Kumar S	III Year
55.	920819104027	Poornima Devi P	III Year
56.	920819104028	Praveen T	III Year
57.	920819104030	Sai Prasanthy N S	III Year
58.	920819104031	Santhosh Prakash M	III Year
59.	920819104032	Saranya R	III Year
60.	920819104033	Sathya M	III Year
61.	920819104034	Selvambikai N	III Year
62.	920819104035	Selvanjali P	III Year
63.	920819104036	Shajitha Begum M	III Year
64.	920819104037	Sharumathi P	III Year
65.	920819104038	Sivapriya R	III Year
66.	920819104040	Soundharya V	III Year
67.	920819104041	Srinivash A	III Year
68.	920819104042	Srivaths Karthic G	III Year
69.	920819104043	Subhashini K	III Year
70.	920819104044	Sujitha P	III Year
71.	920819104046	Thilagavathy V	III Year
72.	920819104047	Thirisha P	III Year
73.	920819104048	Thirunavukkarasar T	III Year
74.	920819104049	Thiyagarajan S	III Year
75.	920819104050	Vaishali S	III Year

PROGRAM COORDINATOR

M. KALARANI

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PRINCIPAL

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

COURSE SCHEDULE

Venue: Virtual Mode **Date: 28.06.2022**

Google Meet - https://meet.google.com/ytk-pnxx-wnm

External Resource Person:
Ms.M.V.Nandhinee

Internal Resource Person:
Mrs.M.Kalarani, AP/CSE.

Day 1 25.07.2022	9.30 a.m. to 10.00 a.m.	Inauguration	
	10. 00 a.m. to 11.10 a.m.	Session 1	Introduction to Relational Database Ms.M.V.Nandhinee
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Logical Design and Entity Relationship model Mrs.M.Kalarani
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Physical Design and Relational Database Ms.M.V.Nandhinee
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Normal forms and Normalization Mrs.M.Kalarani
Day 2 26.07.2022	9.30 a.m. to 11.10 a.m.	Session 1	PostgreSQL Introduction and Installation Ms.M.V.Nandhinee
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	CREATE and DROP Mrs.M.Kalarani
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to3.40 p.m.	Session 3	Naming Convention and Demo Oracle Ms.M.V.Nandhinee
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m.to 4.30 p.m.	Session 4	Naming Convention and Demo PostgreSQL Ms.M.V.Nandhinee
Day 3 27.07.2022	9.30 a.m. to 11.10 a.m.	Session 1	Simple INSERT and SELECT Mrs.M.Kalarani
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Data Types - Mrs.M.Kalarani
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Row Level and Aggregate Funcitons Ms.M.V.Nandhinee
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Changing Table Data and Structure Ms.M.V.Nandhinee

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Day 4 28.07.2022	9.30 a.m. to 11.10 a.m.	Session 1	UNION, INTERSECT, MINUS Mrs.M.Kalarani
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	SELECT Statement with JOIN and GROUP BY Mrs.M.Kalarani
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Inner Join, Outer Join and Cross Join Ms.M.V.Nandhinee
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Views Ms.M.V.Nandhinee
Day 5 29.07.2022	9.30 a.m. to 11.10 a.m.	Session 1	Transactions for concurrency control and failure recovery Ms.M.V.Nandhinee
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m.to 1.10 p.m.	Session 2	Database constraints: key, referential integrity, and "check" constraints Ms.M.V.Nandhinee
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Database triggers Mrs.M.Kalarani
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Authorization in relational databases Ms.M.V.Nandhinee

PROGRAM COORDINATOR

HoD/CSE

IQAC

PRINCIPAL

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

STUDENT'S ATTENDANCE

S. No.	Register Number	Name of the student	Year	5.7.2022		6.7.2022		7.7.2022		8.7.2022		9.7.2022	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	920820104001	Abinaya A	II	/	/	/	/	/	/	/	/	/	/
2.	920820104002	Anandaraj M	II	/	/	/	/	/	/	/	/	/	/
3.	920820104003	Deepika V	II	/	/	/	/	/	/	/	/	/	/
4.	920820104004	Dharshanapriya K	II	/	/	/	/	/	/	/	/	/	/
5.	920820104005	Divya S	II	/	/	/	/	/	/	/	/	/	/
6.	920820104006	Geethanjali S	II	/	/	/	/	/	/	/	/	/	/
7.	920820104007	Hari Vignesh K	II	/	/	/	/	/	/	/	/	/	/
8.	920820104008	Jeron Robinson T	II	/	/	/	/	/	/	/	/	/	/
9.	920820104009	Joshuva Baskaran M	II	/	/	/	/	/	/	/	/	/	/
10.	920820104011	Kaleeswaran S	II	/	/	/	/	/	/	/	/	/	/
11.	920820104013	Karthikeyan.M	II	/	/	/	/	/	/	/	/	/	/
12.	920820104014	Kaviarasan C	II	/	/	/	/	/	/	/	/	/	/
13.	920820104015	Keerthi S	II	/	/	/	/	/	/	/	/	/	/
14.	920820104016	Kowsalya M	II	/	/	/	/	/	/	/	/	/	/
15.	920820104021	Nafeela Nasrin S	II	/	/	/	/	/	/	/	/	/	/
16.	920820104022	Naveen K	II	/	/	/	/	/	/	/	/	/	/
17.	920820104023	Nivetha K	II	/	/	/	/	/	/	/	/	/	/
18.	920820104024	Palanikumar V	II	/	/	/	/	/	/	/	/	/	/
19.	920820104025	Ponnalagu N	II	/	/	/	/	/	/	/	/	/	/
20.	920820104026	Pradeep Raj R S	II	/	/	/	/	/	/	/	/	/	/
21.	920820104028	Priyadharshini M	II	/	/	/	/	/	/	/	/	/	/
22.	920820104030	Rampriya A	II	/	/	/	/	/	/	/	/	/	/
23.	920820104031	Sabarishan S	II	/	/	/	/	/	/	/	/	/	/
24.	920820104032	Salini S	II	/	/	/	/	/	/	/	/	/	/
25.	920820104033	Sanjay H	II	/	/	/	/	/	/	/	/	/	/
26.	920820104034	Saravanakumar T	III	/	/	/	/	a	a	/	/	/	/
27.	920820104035	Saravana Pandi P	III	/	/	/	/	/	/	/	/	/	/
28.	920820104036	Shabarikanth Gk	III	/	/	/	/	/	/	/	/	/	/
29.	920820104037	Shajitha Yasmin N	III	/	/	/	/	/	/	/	/	/	/
30.	920820104038	Shrinidhi G	III	/	/	/	/	/	/	/	/	/	/
31.	920820104039	Sivamani Vignesh D	III	/	/	/	/	/	/	/	/	/	/
32.	920820104040	Sowmiya T	III	/	/	/	/	/	/	/	/	/	/

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				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
33.	920820104041	Sripradeep M	III	/	/	/	/	/	/	/	/	/	/
34.	920820104042	Subbulakshmi T	III	/	/	/	/	/	/	/	/	/	/
35.	920820104043	Sudharsan G	III	/	/	/	/	/	/	/	/	/	/
36.	920820104044	Sujit Raghav Mm	III	/	/	/	/	/	/	/	/	/	/
37.	920820104045	Swathi M	III	a	a	/	/	/	/	/	/	/	/
38.	920820104046	Tharvinraja S	III	/	/	/	/	/	/	/	/	/	/
39.	920820104047	Venkatraman M	III	/	/	/	/	/	/	/	/	/	/
40.	920819104002	Afhran Nisha A	III	/	/	/	/	/	/	/	/	/	/
41.	920819104003	Ajaykumar M	III	/	/	/	/	/	/	/	/	/	/
42.	920819104005	Anandakumar A	III	/	/	/	/	/	/	/	/	/	/
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44.	920819104008	Deva Dharshini N	III	/	/	/	/	/	/	/	/	/	/
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50.	920819104020	Mohamed Ribak B	III	/	/	/	/	/	/	/	/	a	a
51.	920819104021	Monica R	III	/	/	/	/	/	/	/	/	/	/
52.	920819104022	Muthu Kumar P	III	/	/	/	/	/	/	/	/	/	/
53.	920819104024	Nandhini S	III	/	/	/	/	/	/	/	/	/	/
54.	920819104025	Naveen Kumar S	III	/	/	/	/	/	/	/	/	/	/
55.	920819104027	Poornima Devi P	III	/	/	/	/	/	/	/	/	/	/
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57.	920819104030	Sai Prasanthy N S	III	/	/	/	/	/	/	/	/	/	/
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62.	920819104035	Selvanjali P	III	/	/	/	/	/	/	/	/	/	/
63.	920819104036	Shajitha Begum M	III	/	/	/	/	/	/	/	/	/	/
64.	920819104037	Sharumathi P	III	/	/	/	/	/	/	/	/	/	/

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65.	920819104038	Sivapriya R	III	/	/	/	/	/	/	/	/	/	/
66.	920819104040	Soundharya V	III	/	/	/	/	/	/	/	/	/	/
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68.	920819104042	Srivaths Karthic G	III	/	/	/	/	/	/	/	/	/	/
69.	920819104043	Subhashini K	III	/	/	/	/	/	/	/	/	/	/
70.	920819104044	Sujitha P	III	/	/	/	/	/	/	/	/	/	/
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72.	920819104047	Thirisha P	III	/	/	/	/	/	/	/	/	/	/
73.	920819104048	Thirunavukkarasar T	III	/	/	/	/	/	/	/	/	/	/
74.	920819104049	Thiyagarajan S	III	/	/	/	/	/	/	/	/	/	/
75.	920819104050	Vaishali S	III	/	/	/	/	/	/	/	/	/	/
	Total Number of Students Present			74	74	75	75	74	74	75	75	74	74
	Absentees			01	01	NIL	NIL	01	01	NIL	NIL	01	01
	Coordinator Signature			M	M	M	M	M	M	M	M	M	M

PROGRAM COORDINATOR

M. KALARANI
AP/CSE

HoD/CSE

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

21CSCC02 &INTRODUCTION TO RELATIONAL DATABASE AND SQL

QUIZ QUESTION PAPER WITH ANSWER KEY

Quiz Link: https://forms.gle/6cJ7YmGsm2wc94Zo8

NPR College of Engineering & Technology

Department of Computer Science and Engineering
Certificate Course on " Introduction to relational database and SQL"

nprcetcse@nprcolleges.org Switch account

* Required

Email *

Your email

1. What is a relation in RDBMS? * 1 point

- ◯ Table
- ◯ Key
- ◯ Row
- ◯ Data type

2. The relational model of RDBMS is concerned with * 1 point

- ◯ Data structure
- ◯ Data Manipulation
- ◯ Data Integrity
- ◯ all of the above

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3. Minimal Superkeys are also called * 1 point

- ○ Primary key
- ○ Candidate key
- ○ foreign key
- ○ None

4. Select command is a part of what type of statement? * 1 point

- ○ DML
- ○ DDL
- ○ VIEW
- ○ None

5. Number of attributes in a relation is called its? * 1 point

- ○ Cardinality
- ○ Degree
- ○ strength
- ○ None

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6. What kind of Joins is a default in SQL? * 1 point

- ○ Inner
- ○ Outer
- ○ self
- ○ None

7. primary key must be * 1 point

- ○ Unique
- ○ Not null
- ○ Both A and B
- ○ None

8. Which of the following are examples of aggregate functions in SQL * 1 point

- ○ SUM
- ○ MIN
- ○ MAX
- ○ All of the above

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9. OLAP stands for? * 1 point

- Online analytical processing
- Online analysis processing
- Online transaction processing
- Online aggregate processing

10. Which of the following commands do we use to delete a relation (RDBMS) from a database? * 1 point

- delete table RDBMS
- drop table RDBMS
- delete from RDBMS
- drop relation RDBMS

11. ——— deletes a data item from a database. * 1 point

- Insert(RDBMS)
- Drop(RDBMS)
- Delete(RDBMS)
- None of the mentioned

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12. What is the format of entering date into a database while inserting data into it? * 1 point

- "YYYY-MM-DD"
- YYYY-MM-DD
- "DD-MM-YYYY"
- 'YYYY-MM-DD'

13. Which of the following cannot be used to modify the data in a database? * 1 point

- delete
- update
- drop
- insert

14. Which of the following is the full form of RDBMS? * 1 point

- Relational Data Management System
- Relational Database Management System
- Relative Database Management System
- Regional Data Management System

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15. Which of the following is the property of transaction that protects data from system failure? * 1 point

- ○ Atomicity
- ○ Isolation
- ○ Consistency
- ○ Durability

Send me a copy of my responses.

Submit Clear form

ANSWERS :

1- A 2- C 3- B 4- B 5- B 6- A 7- B 8- D 9- B 10- A
11- A 12- B 13- C 14- A 15- B

PROGRAM CO-ORDINATOR
B. KALARANI
AP/CSE

HoD/CSE
Dr. K. [illegible]
Head of the Dept.
Department of Computer Science & Engg.
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

STUDENT'S FEEDBACK FORM

Feedback Form Link: https://forms.gle/NezEDz5XrVwjgELu8

NPR College of Engineering & Technology

Certificate course on "INTRODUCTION TO RELATIONAL DATABASE AND SQL" - FEEDBACK FORM

nprcetcse@nprcolleges.org Switch account

* Required

Email *

Your email

Name *

Your answer

Year & Branch *

Your answer

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1. Course Content *

- ◯ EXCELLENT
- ◯ GOOD
- ◯ FAIR
- ◯ SATISFACTORY

2. Emphasis on fundamentals *

- ◯ EXCELLENT
- ◯ GOOD
- ◯ FAIR
- ◯ SATISFACTORY

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3. Way of exposed new knowledge and practices *

- ○ EXCELLENT
- ○ GOOD
- ○ FAIR
- ○ SATISFACTORY

4. Course delivered by Resource Person *

- ○ EXCELLENT
- ○ GOOD
- ○ FAIR
- ○ SATISFACTORY

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5. Overall rating of this course *

- ◯ EXCELLENT
- ◯ GOOD
- ◯ FAIR
- ◯ SATISFACTORY

Any other commnets/ suggestions

Your answer

Submit Clear form

PROGRAM COORDINATOR

M. KALARANI
AP/CSE

HoD/CSE

Dr. K. [illegible]

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Department of Computer Science & Engineering
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

STUDENT'S FEEDBACK ANALYSISREPORT

ATTENDED STUDENTS: 71 **DATE:1.08.2022**

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1.	Course Content	69	2	0	0
2.	Emphasis on Fundamentals	68	2	1	0
3.	Way of exposed new knowledge and practices	69	1	1	0
4.	Course delivered by resource person	70	1	0	0
5.	Overall rating	65	3	1	2
	Average	68.2	1.8	0.6	0.4

Total number of students who gave feedback: 71



PROGRAM COORDINATOR HoD/CSE PRINCIPAL

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NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

Principal
N.P.R. College of Engineering & Techno
Natham, Dindigul (Dt) - 624 401

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DATE: 1.08.2022

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

SUMMARY REPORT

The Department of Computer Science and Engineering organized an Certificate Course on **"INTRODUCTION TO RELATIONAL DATABASE AND SQL"** from 5.07.2022 to 9.07.2022 (5 Days) through Online mode - Google Meet.

On 5.07.2022, Ms.Swathi.M of II year CSE has delivered the welcome address. Dr.J.Sundararajan, Principal of our college inaugurated the program and delivered the felicitation address.

The resource person taught the students about latest analytics tools and techniques, how to work with SQL databases, the languages of R and Python, art of creating data visualizations, and how to apply statistics and predictive analytics in a business environment. He explained about how to use Python to analyze data, create beautiful visualizations, and use powerful machine learning algorithms, how to visualize and respond to new data, as well as develop innovative new technologies. One of the most important aspects of this course is that the students are getting hands-on experience on creating analytics models.

75 Students attended this Certificate Course from our CSE Department. Students who were actively participated and successfully completed the quiz program had been awarded with certificates through mail.

Mr. Naveen Kumar.S of III year CSE delivered vote of thanks during the valedictory session.

PROGRAM COORDINATOR	HoD/CSE	IQAC	PRINCIPAL
	Head of the Department, Department of Computer Science & Engineering, NPR College of Engineering & Technology, Natham, Dindigul (DT) - 624 401.	Coordinator - IQAC, NPR College of Engineering & Technology, Natham, Dindigul (Dt)-624 401.	Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D., Principal, N.P.R. College of Engineering & Technology, Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE COURSE ON "INTRODUCTION TO RELATIONAL DATABASE AND SQL"

COURSE MATERIAL

Course Link:

1. https://www.coursera.org/projects/introduction-to-relational-database-and-sql
2. https://www.datacamp.com/courses/introduction-to-relational-databases-in-sql
3. https://www.udemy.com/course/introduction-to-relational-database-and-sql/
4. https://www.udacity.com/course/intro-to-relational-databases--ud197
5. https://www.edx.org/learn/relational-databases

Books and References

1. SQL QuickStart Guide: The Simplified Beginner's Guide to Managing, Analyzing, and Manipulating Data With SQL
2. SQL in 10 Minutes a Day
3. SQL Cookbook: Query Solutions and Techniques for Database Developers
4. Head First SQL: Your Brain on SQL
5. SQL Queries for Mere Mortals: A Hands-On Guide to Data Manipulation

PROGRAM COORDINATOR
M. KALARANI
AP/CSE

HoD/CSE
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PRINCIPAL
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate of Completion

This certificate is presented to

Ms. KEERTHI.S - II Year CSE

for completing Add-on Course on **"INTRODUCTION TO RELATIONAL DATABASE AND SQL"** *from 5.07.2022 to 9.07.2022 (5 Days).*

HoD/CSE
Dr.K.Ramanan

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

INDEX

COURSE CODE & NAME: **21ECCC01-- INTRODUCTION TO INTERNET OF THINGS (IoT)**

ACADEMIC YEAR: **2021-2022** SEMESTER: **ODD** DURATION: **36 HOURS**

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PROGRAM COORDINATOR
[S.SUDHAKAR]
AP-ECE

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Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

PRINCIPAL
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From

Mr.S. Sudhakar,

Assistant Professor-ECE

NPR College of Engineering & Technology,

Natham-624 401.

To

The Principal,

NPR College of Engineering & Technology,

NPR Nagar,

Natham-624 401.

Respected Sir,

Sub: Request for permission to Conduct Certificate Course for ECE students – Reg

We have planned to conduct Certificate Course on **"INTRODUCTION TO INTERNET OF THINGS (IoT)"** to our students from 11.08.2021, 12.08.2021, 13.08.2021, 16.08.2021 & 17.08.2021 (5 Days) in our college. We proposed Er.K.Ramesh Kumar, Electronics Engineer as the resource person for this Certificate Course. Kindly permit us to conduct the same.

Thanking you,

Yours faithfully,

S. SUDHAKAR

Date :27.07.2021

Place :Natham

Head of the Department
Department of Electronics & Communication Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) 624 401.

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO INTERNET OF THINGS (IoT)

RESOURCE PERSON'S PROFILE

K .Ramesh Kumar
Senior Solution Architect –CSI
Bangalore.

PROFESSIONAL Details

Total years of experience	: 15+ years
Address	: Flat F, Balaji Enclave, 2nd cross, Doddanakundi, Bangalore-560037
Telephone	: +91-9591476009
Date of Birth	: 23/07/1985
Passport Number	: P0905979

SUMMARY

- 14+ years of professional experience in the area of Telecom nodes integration, operation and maintenance.
- Experience in Solution Design HLD, LLD, IoT, Acceptance Testing, Implementation support, Operation & Maintenance of Packet core nodes and NFVI (HDS and CEE)
- Ericsson Packet Core Professional Certifications (EPG, SGSN-MME and SAPC)
- Ericsson 5G core Associate certified
- Hands on v EPC deployment in lab and production environment
- Experience in Ericsson Cloud Execution Environment (CEE)
- Knowledge in HDS Architecture, RTE installation and CSU/SSU upgrades
- Experience in LTE-EPC (MME, SGW & PGW) Rel 9.0 Networks.
- Experience with Ericsson EPG-M, GGSN-MPG, SGSN-MME MkVIII/MKVI+
- Experience in integration/Feature testing for EPC core (2G, 3G & 4G).
- Good understanding of Protocols used CS/PS domain like: - GTPv1/v2, S1AP, UDP, SIGTRAN, MAP, BSSAP/BSSGP, RANAP, SIP, CAMEL and SS7.
- Experience in preparing MOP for implementation of Core network features.
- Hands on Experience with Juniper routers.
- ATP testing on packet core nodes SGSN, GGSN and DNS
- Hands on experience on protocol analyzers like Wire shark and testing tool like IXIA
- Basic Technical knowledge of Juniper routers and switches configurations.

PROGRAM COORDINATOR

NPR COLLEGE OF ENGG. & TECHNOLOGY NATHAM

HoD/ECE

Head of the Department
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NPRCET/OFF/ECE/VAC/2021-2022

Date: 03.08.2021

CIRCULAR

This is to inform that Department of Electronics and Communication Engineering has planned to conduct an Certificate Course on **INTRODUCTION TO INTERNET OF THINGS (IoT)** for the students during the end of this odd semester 2021-2022. Interested students can enroll their name on or before **10.08.2021.**

COURSE NAME	:	INTRODUCTION TO INTERNET OF THINGS (IoT)
RESOURCE PERSON	:	Mr.K.RAMESH KUMAR
VENUE	:	NPRCET Seminar Hall
DATE & DURATION	:	11.08.2021,12.08.2021,13.08.2021,16.08.2021and 17.08.2021 & 36 Hours
PROGRAM COORDINATOR	:	Mr.S. Sudhakar, AP/ECE

NPR COLLEGE OF ENGG. & TECHNOLOGY ★ NATHAM

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
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Copy to:

1. All the HoDs
2. IQAC
3. All the Class Rooms
4. Notice Board
5. File
6. Program Coordinator

NPR College of Engineering & Technology
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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

CERTIFICATE COURSE ON INTRODUCTION TO INTERNET OF THINGS (IoT)"

On 11th August, 2021

Venue: NPRCET Seminar Hall at 9.30 a.m.

Chief Guest

Mr.K.RAMESH KUMAR

Senior Solution Architect -CSI

Bangalore

Dr.J.Sundararajan

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Electronics and Communication Engineering,

NPR College of Engineering & Technology,

NPR Nagar, Natham.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO INTERNET OF THINGS (IoT)

AGENDA

- **Inauguration on 11th August 2021**
- Prayer song
- Welcome address by Ms. Vishalini.B, IV Year ECE
- Felicitation address by Dr.J. Sundararajan, Principal,
- Chief Guest Honoring
- Chief Guest Introduction
- Chief Guest Address
- **Valedictory on 17th August 2021**
- Certificate distribution
- Feedback Session
- Vote of thanks by Ms.S. Porkodi, III Year ECE
- National Anthem

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO INTERNET OF THINGS (IoT)

COURSE CONTENT

CHAPTER 1: INTRODUCTION TO IOT
- Understanding IoT fundamentals
- IOT Architecture and protocols
- Various Platforms for IoT
- Real time Examples of IoT

CHAPTER 2: ARDUINO SIMULATION ENVIRONMENT
- Arduino Uno Architecture
- Setup the IDE, Writing Arduino Software
- Arduino Libraries
- Basics of Embedded C programming for Arduino

CHAPTER 3: IOT PROTOCOLS
- M2M vs. IOT
- Communication Protocols
- Basics of Wireless Networking Protocols
- ESP8266 Wi-Fi Module

CHAPTER 4: CLOUD PLATFORMS FOR IOT
- Cloud services -- SaaS, PaaS, IaaS
- Cloud providers & offerings
- Study of IOT Cloud platforms
- Thing Speak API and MQTT

CHAPTER 5: SENSOR & ACTUATORS WITH ARDUINO
- Overview of Sensors working
- Analog and Digital Sensors
- Interfacing of Actuators with Arduino
- Servo Motor with Arduino

CRITERIATO GET CERTIFICATE:
- Students should register their names for this course
- Students must have **85%** attendance.
- Student should secure **75% marks in the Exam.**

Prepared by: Mr.J.G. Sabarish

Approved By,

HoD/ECE
Head of the Department
Department of Electronics & Communication Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) 624 401.

IQAC
Coordinator - IQAC
NPR College of Engineering & Technology
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PRINCIPAL
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CERTIFICATE COURSE ON INTRODUCTION TO INTERNET OF THINGS (IoT)

REGISTERED STUDENTS NAME LIST

S.NO.	REGISTER NO.	STUDENT NAME	YEAR & DEPT
1.	920818106001	ABILASHA.M	IV-ECE
2.	920818106002	ABINAYA .S	IV-ECE
3.	920818106004	BLESSING.X	IV-ECE
4.	920818106005	DHARSHINI.V	IV-ECE
5.	920818106007	DURGADEVI.B	IV-ECE
6.	920818106008	DURGADEVI.S	IV-ECE
7.	920818106009	HARIPRIYA.M	IV-ECE
8.	920818106010	ILAKKIYA.B	IV-ECE
9.	920818106012	JEYARAJ.S	IV-ECE
10.	920818106013	KIRUTHIKA.R	IV-ECE
11.	920818106014	MANOJ PRABHAKAR.V	IV-ECE
12.	920818106016	MUKESH KANNA.G	IV-ECE
13.	920818106017	MUTHU VIGNESH.M	IV-ECE
14.	920818106018	NISHA.M	IV-ECE
15.	920818106019	NIVETHA.K. S	IV-ECE
16.	920818106023	PUSHPA PRIYADHARSHINI.R	IV-ECE
17.	920818106024	RAJKUMAR.K	IV-ECE
18.	920818106026	SARITHA RANI.K	IV-ECE
19.	920818106027	SARUMATHI.R	IV-ECE
20.	920818106029	SEEMA FATHIMA.S	IV-ECE
21.	920818106031	SOWMIYA.P	IV-ECE
22.	920818106032	SREE RAGA SUDHA.K	IV-ECE
23.	920818106033	SURYA PRAKASH.V.M	IV-ECE
24.	920818106035	SWETHA.M	IV-ECE
25.	920818106036	VARSHIINI.B	IV-ECE
26.	920818106037	VENNILA.A	IV-ECE
27.	920818106038	VIGNESH.R	IV-ECE
28.	920818106039	VISHALINI.B	IV-ECE
29.	920818106040	VIVEKA.S	IV-ECE
30.	920818106302	VIGNESH.S	IV-ECE
31.	920819106002	AFRIN SHIFANA A	III-ECE
32.	920819106003	AJITH KUMAR K	III-ECE
33.	920819106004	AMIZHTHAA B	III-ECE
34.	920819106006	ARAVINTH RAJ K	III-ECE
35.	920819106007	ASMA ROSHAN T	III-ECE
36.	920819106008	BALAJI M (2001)	III-ECE
37.	920819106009	BALAJI M (2002)	III-ECE
38.	920819106010	BLESSY JEBAMANI G	III-ECE

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39.	920819106011	CHRISTIYA I	III-ECE
40.	920819106012	DEVI SRI S	III-ECE
41.	920819106013	DHANALAKSHMI P	III-ECE
42.	920819106014	DHATH VETHA S	III-ECE
43.	920819106015	DHINESH M	III-ECE
44.	920819106016	DIVESH V	III-ECE
45.	920819106017	DIVYA DHARSHINI S	III-ECE
46.	920819106019	HARISHWAR S	III-ECE
47.	920819106020	JOSEPHRUMSBILT R	III-ECE
48.	920819106021	JYOTHIKA B	III-ECE
49.	920819106022	KAMALESH K	III-ECE
50.	920819106023	KARUNIAA J S	III-ECE
51.	920819106024	KEERTHI M	III-ECE
52.	920819106025	KIRTHICK N	III-ECE
53.	920819106026	KISHOREKRISHNAA J	III-ECE
54.	920819106028	MADHUMITHA P	III-ECE
55.	920819106029	MANOJKUMAR A	III-ECE
56.	920819106030	MANOJ KUMAR S	III-ECE
57.	920819106031	MOHAMED ASIF M	III-ECE
58.	920819106032	MOHAMEDIBRAHIM J	III-ECE
59.	920819106033	MOHAN S	III-ECE
60.	920819106034	MOHAN BABU B	III-ECE
61.	920819106035	MURUGANATHAN M	III-ECE
62.	920819106036	MUTHU MOORTHY M	III-ECE
63.	920819106037	MUTHU RANJANI V	III-ECE
64.	920819106038	MYTHILI M	III-ECE
65.	920819106039	NAGA VISHWA G	III-ECE
66.	920819106040	NALINASHREE N	III-ECE
67.	920819106041	NANDHA KUMAR G	III-ECE
68.	920819106042	PAVITHRA N	III-ECE
69.	920819106043	PORKODI S	III-ECE
70.	920819106044	POWSIKA DEVI K	III-ECE
71.	920819106045	PRABHU C	III-ECE
72.	920819106046	PRASANNA D	III-ECE
73.	920819106048	RAMVIGNHESH R P	III-ECE
74.	920819106049	RENUGA DEVI N	III-ECE
75.	920819106050	RIFAYA S	III-ECE
76.	920819106051	RISHWANA BURVEEN S	III-ECE
77.	920819106052	SANO NISHA N	III-ECE
78.	920819106053	SARAN G V	III-ECE
79.	920819106054	SASMITHA PARVEEN K	III-ECE
80.	920819106055	SHAM HIRUTHIK R	III-ECE
81.	920819106057	SHARMILA DEVI G	III-ECE
82.	920820106019	MAHAVARSHINI S	II-ECE

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83.	920820106020	MAHESWARI R	II-ECE
84.	920820106021	MALAVIKA A	II-ECE
85.	920820106022	MANIYAMMAIYAR N	II-ECE
86.	920820106023	MANOJ S	II-ECE
87.	920820106035	SANJAY KUMAR S	II-ECE
88.	920820106036	SANTHINI R	II-ECE
89.	920820106037	SELVA KUMAR M	II-ECE
90.	920820106038	SIVAPRASAD K	II-ECE
91.	920820106039	SIVARANJANI S	II-ECE
92.	920820106035	SANJAY KUMAR S	II-ECE
93.	920820106036	SANTHINI R	II-ECE
94.	920820106040	SIVARANJANI T	II-ECE

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

21ECCC01-- INTRODUCTION TO INTERNET OF THINGS (IoT)

COURSE SCHEDULE

Venue: NPRCET Seminar Hall **Date: 11.08.2021**

EXTERNAL RESOURCE PERSON
1.Mr.K. Ramesh Kumar

INTERNAL RESOURCE PERSONS
1.Mr.K. Jeyaprakasam
2.Mr.J.G.Sabarish

Day 1 11.08.2021	9.30 a.m.to 10.00 a.m.	**Inauguration**	
	10. 00 a.m. to 11.10 a.m.	Session 1	Understanding IoT fundamentals **Mr.K.Ramesh Kumar**
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	IOT Architecture and protocols **Mr.K.Ramesh Kumar**
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Various Platforms for IoT **Mr.K. Jeyaprakasam**
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Real time Examples of IoT **Mr.J.G.Sabarish**
Day 2 12.08.2021	9.30 a.m. to 11.10 a.m.	Session 1	Arduino Uno Architecture **Mr.K.Ramesh Kumar**
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Setup the IDE, Writing Arduino Software **Mr.J.G.Sabarish**
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to3.40 p.m.	Session 3	Arduino Libraries **Mr.J.G.Sabarish**
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Basics of Embedded C programming for Arduino **Mr.K. Ramesh Kumar**

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Day 3 13.08.2021	9.30 a.m. to 11.10 a.m.	Session 1	M2M vs. IOT **Mr.K.Ramesh Kumar**
	11.10 a.m. to 11. 30 a.m	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Communication Protocols **Mr.J.G.Sabarish**
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Basics of Wireless Networking Protocols **Mr.K.Jeyaprakasam**
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	ESP8266 Wi-Fi Module **Mr.K.Jeyaprakasam**
Day 4 16.08.2021	9.30 a.m. to 11.10 a.m.	Session 1	Multiple hypotheses **Mr.K.Ramesh Kumar**
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Cloud services -- SaaS, PaaS, IaaS **Mr.K.Ramesh Kumar**
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Cloud providers & offerings **Mr.K.Jeyaprakasam**
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Thing Speak API and MQTT **Mr.J.G.Sabarish**
Day 5 17.08.2021	9.30 a.m. to 11.10 a.m.	Session 1	Overview of Sensors working **Mr.K.Ramesh Kumar**
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 p.m.	Session 2	Analog and Digital Sensors **Mr.K.Jeyaprakasam**
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Interfacing of Actuators with Arduino **Mr.J.G.Sabarish**
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Servo Motor with Arduino **Mr.K.Ramesh Kumar**
	4.30 p.m. to 5.00 p.m.	**Valedictory**	

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

21ECCC01-- INTRODUCTION TO INTERNET OF THINGS (IT)

STUDENTS ATTENDANCE

S. NO.	COURSE CODE	NAME OF THE STUDENT	YEAR	11.08.2021		12.08.2021		13.08.2021		16.08.2021		17.08.2021	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	21ECCC01001	ABILASHA.M	IV	P	P	P	P	P	P	P	P	P	P
2.	21ECCC01002	ABINAYA. S	IV	P	P	P	P	P	P	P	P	AB	AB
3.	21ECCC01003	BLESSING.X	IV	P	P	P	P	P	P	P	P	P	P
4.	21ECCC01004	DHARSHINI.V	IV	P	P	P	P	P	P	P	P	P	P
5.	21ECCC01005	DURGADEVI.B	IV	P	P	P	P	P	P	P	P	P	P
6.	21ECCC01006	DURGADEVI.S	IV	AB	AB	P	P	P	P	P	P	P	P
7.	21ECCC01007	HARIPRIYA.M	IV	P	P	P	P	P	P	P	P	P	P
8.	21ECCC01008	ILAKKIYA.B	IV	P	P	P	P	P	P	P	P	P	P
9.	21ECCC01009	JEYARAJ.S	IV	P	P	P	P	P	P	P	P	P	P
10.	21ECCC01010	KIRUTHIKA.R	IV	P	P	P	P	P	P	P	P	P	P
11.	21ECCC01011	MANOJ PRABHAKAR.V	IV	P	P	P	P	P	P	P	P	P	P
12.	21ECCC01012	MUKESH KANNA.G	IV	P	P	P	P	P	P	P	P	P	P
13.	21ECCC01013	MUTHU VIGNESH.M	IV	P	P	P	P	P	P	P	P	P	P
14.	21ECCC01014	NISHA.M	IV	P	P	P	P	P	P	P	P	P	P
15.	21ECCC01015	NIVETHA.K.S	IV	P	P	P	P	P	P	P	P	P	P
16.	21ECCC01016	PUSHPA PRIYADHARSHINI.R	IV	P	P	P	P	P	P	P	P	P	P
17.	21ECCC01017	RAJKUMAR.K	IV	P	P	P	P	P	P	P	P	P	P
18.	21ECCC01018	SARITHA RANI.K	IV	P	P	P	P	P	P	P	P	P	P
19.	21ECCC01019	SARUMATHI.R	IV	P	P	P	P	P	P	P	P	P	P
20.	21ECCC01020	SEEMA FATHIMA.S	IV	P	P	P	P	P	P	P	P	P	P
21.	21ECCC01021	SOWMIYA.P	IV	P	P	P	P	P	P	P	P	P	P
22.	21ECCC01022	SREE RAGA SUDHA.K	IV	P	P	P	P	P	P	P	P	P	P
23.	21ECCC01023	SURYA PRAKASH.V.M	IV	P	P	P	P	P	P	P	P	P	P
24.	21ECCC01024	SWETHA.M	IV	P	P	P	P	P	P	P	P	P	P
25.	21ECCC01025	VARSHIINI.B	IV	P	P	P	P	P	P	P	P	P	P
26.	21ECCC01026	VENNILA.A	IV	P	P	P	P	P	P	P	P	P	P
27.	21ECCC01027	VIGNESH.R	IV	P	P	P	P	P	P	P	P	P	P
28.	21ECCC01028	VISHALINI.B	IV	P	P	P	P	P	P	P	P	P	P
29.	21ECCC01029	VIVEKA.S	IV	P	P	P	P	P	P	P	P	P	P
30.	21ECCC01030	VIGNESH.S	IV	P	P	P	P	P	P	P	P	P	P
31.	21ECCC01031	AFRIN SHIFANA A	III	P	P	P	P	P	P	P	P	P	P
32.	21ECCC01032	AJITH KUMAR K	III	P	P	P	P	P	P	P	P	P	P
33.	21ECCC01033	AMIZHTHAA B	III	P	P	AB	AB	P	P	P	P	P	P
34.	21ECCC01034	ARAVINTH RAJ K	III	P	P	P	P	P	P	P	P	P	P
35.	21ECCC01035	ASMA ROSHAN T	III	P	P	P	P	P	P	P	P	P	P
36.	21ECCC01036	BALAJI M (2001)	III	P	P	P	P	P	P	P	P	—	P

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37.	21ECCC01037	BALAJI M(2002)	III										
38.	21ECCC01038	BLESSY JEBAMANI G	III										
39.	21ECCC01039	CHRISTIYA I	III										
40.	21ECCC01040	DEVI SRI S	III										
41.	21ECCC01041	DHANALAKSHMI P	III										
42.	21ECCC01042	DHATH VETHA S	III										
43.	21ECCC01043	DHINESH M	III										
44.	21ECCC01044	DIVESH V	III										
45.	21ECCC01045	DIVYA DHARSHINI S	III										
46.	21ECCC01046	HARISHWAR S	III										
47.	21ECCC01047	JOSEPHRUMSBILT R	III										
48.	21ECCC01048	JYOTHIKA B	III										
49.	21ECCC01049	KAMALESH K	III										
50.	21ECCC01050	KARUNIAA J S	III										
51.	21ECCC01051	KEERTHI M	III										
52.	21ECCC01052	KIRTHICK N	III										
53.	21ECCC01053	KISHOREKRISHNAA J	III										
54.	21ECCC01054	MADHUMITHA P	III										
55.	21ECCC01055	MANOJKUMAR A	III										
56.	21ECCC01056	MANOJ KUMAR S	III										
57.	21ECCC01057	MOHAMED ASIF M	III										
58.	21ECCC01058	MOHAMEDIBRAHIM J	III										
59.	21ECCC01059	MOHAN S	III										
60.	21ECCC01060	MOHAN BABU B	III										
61.	21ECCC01061	MURUGANATHAN M	III										
62.	21ECCC01062	MUTHU MOORTHY M	III										
63.	21ECCC01063	MUTHU RANJANI V	III										
64.	21ECCC01064	MYTHILI M	III										
65.	21ECCC01065	NAGA VISHWA G	III										
66.	21ECCC01066	NALINASHREE N	III										
67.	21ECCC01067	NANDHA KUMAR G	III										
68.	21ECCC01068	PAVITHRA N	III										
69.	21ECCC01069	PORKODI S	III										
70.	21ECCC01070	POWSIKA DEVI K	III										
71.	21ECCC01071	PRABHU C	III										
72.	21ECCC01072	PRASANNA D	III										
73.	21ECCC01073	RAMVIGNHESH R P	III										
74.	21ECCC01074	RENUGA DEVI N	III										
75.	21ECCC01075	RIFAYA S	III										
76.	21ECCC01076	RISHWANA BURVEEN S	III										
77.	21ECCC01077	SANO NISHA N	III										
78.	21ECCC01078	SARAN G V	III										
79.	21ECCC01079	SASMITHA PARVEEN K	III										
80.	21ECCC01080	SHAM HIRUTHIK R	III										

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81.	21ECCC01081	SHARMILA DEVI G	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
82.	21ECCC01082	MAHAVARSHINI S	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
83.	21ECCC01083	MAHESWARI R	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
84.	21ECCC01084	MALAVIKA A	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
85.	21ECCC01085	MANIYAMMAIYAR N	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
86.	21ECCC01086	MANOJ S	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
87.	21ECCC01087	SANJAY KUMAR S	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
88.	21ECCC01088	SANTHINI R	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
89.	21ECCC01089	SELVA KUMAR M	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
90.	21ECCC01090	SIVAPRASAD K	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
91.	21ECCC01091	SIVARANJANI S	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
92.	21ECCC01092	SANJAY KUMAR S	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
93.	21ECCC01093	SANTHINI R	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
94.	21ECCC01094	SIVARANJANI T	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		PRESENT		93	93	93	93	94	94	94	94	93	93
		ABSENT		01	01	01	01	—	—	—	—	01	01
		COORDINATOR SIGNATURE											

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

21ECCC01- INTRODUCTION TO INTERNET OF THINGS (IOT)

SAMPLE QUESTION PAPER & ANSWERS

1. Who coined the term "Internet of Things"?
a) Kevin Aston
b) John Wright
c) Edward Jameson
d) George Garton

2. Which of the following is not an IoT device?
a) Table
b) Laptop
c) Arduino
d) Tablet

3. Which of the following is not an IoT platform?
a) Amazon Web Services
b) Microsoft Azure
c) Salesforce
d) Flipkart

4. Which of the following is not a fundamental component of an IoT system?
a) Sensors
b) Connectivity and data processing
c) User interface
d) Transformer

5. Which of the following is not a sensor in IoT?
a) BMP280
b) DHT11
c) Photoresistor
d) LED

6. What is the use of PWM signals in IoT development boards?
a) They are used by sensors to have analog input
b) They are used by sensors to have digital input
c) They are used by actuators to have analog input
d) They are used by actuators to have digital input

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7.Which of the following is true about Arduino IoT devices?
a) They are open-source software
b) They can only read analog inputs
c) They have their own operating systems
d) They don't have pre-programmed firmware

8. How many number of elements in the Open IoT Architecture?
a) 3 elements
b) 7 elements
c) 8 elements
d) 6 elements

9.Which of the following processor is used in the Raspberry PI 3 IoT device?
a) Broadcom BCM2711
b) Broadcom BCM2837
c) Broadcom BCM2838
d) Intel 8085

10.IoT gateway must provide _____
a) Protocol abstraction
b) Data storage
c) Security with hardware
d) Simple and fast installation

Ans: 1-a,2-a,3-c,4-d,5-d,6-c,7-a,8-b,9-b,10-a

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO IOT

STUDENT'S FEEDBACK FORM

Name of the Student: R. Kiruthika	Year / Semester: IV - 07
Name of the Program: Introduction to IOT	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples provided during this course		✓			
4	Course delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	This course is very useful for me to learn about Introduction to IOT				

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO IOT

STUDENT'S FEEDBACK FORM

Name of the Student: S. PORKodi	Year / Semester: III – 05
Name of the Program: Introduction to IOT	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices		✓			
3	Examples provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	This course is very helpful to gain more knowledge.				

COLLEGE OF ENGG. & TECHNOLOGY * NPR * NATHAM

PROGRAM COORDINATOR

HoD/ECE

Head of the Department
Department of Electronics & Communication Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) 624 401.

NPR College of Engineering & Technology
NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO IOT

STUDENT'S FEEDBACK FORM

Name of the Student: R. Mahesuwari	Year / Semester: II - 02
Name of the Program: Introduction to IoT	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	I have utilized this course to learn lot about IoT				

PROGRAM COORDINATOR

NATHAM

HoD/ECE

Head of the Department
Department of Electronics & Communication Engineering
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEEIRNG

CERTIFICATE COURSE ON INTRODUCTION TO IOT

STUDENT FEEDBACK SUMMARY REPORT

TOTAL STRENGTH: 94 **DATE: 17.08.2021**

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1.	Course Content	85	6	2	0	0
2.	Way of exposed new knowledge and practices	87	5	1	0	0
3.	Examples Provided during this course	88	4	1	0	0
4.	Course delivered by Resource Person	82	9	2	0	0
5.	Time Management	85	6	2	0	0
6.	Average	**85.4**	7	**1.6**	**0**	**0**



PROGRAM COORDINATOR **HoD/ECE** **IQAC** **PRINCIPAL**

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Coordinator - IQAC
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO INTERNET OF THINGS (IoT)

SUMMARY REPORT

The Department of Electronics and Communication Engineering organized Certificate Course "Introduction to Internet of Things (IoT)" on 11.08.2021, 12.08.2021, 13.08.2021, 16.08.2021and 17.08.2021 (5 Days) at NPRCET Seminar Hall.

Ms. Vishalini.B, IV ECE delivered the welcome address during the inauguration function.

Dr.J. Sundararajan, Principal of our college inaugurated the program and delivered the inaugural address. Resources Person Mr.K. Ramesh Kumar shared his knowledge with our students. Students learnt fundamentals and principles of IOT, its features and applications. They got knowledge about IOT concepts and IOT with machine learning and IOT with deep learning and also machine learning algorithms like linear regression, logistic regression, decision tree, SVM algorithm, KNN algorithm.

94 Students attended from ECE II, III and IV-years classes. Students who participated and successfully completed the Quiz program were awarded with certificates.

Ms.S. Porkodi, III years ECE delivered the vote of thanks.

PROGRAM COORDINATOR HoD/ECE IQAC PRINCIPAL

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEEIRNG

CERTIFICATE COURSE ON INTRODUCTION TO INTERNET OF THINGS (IoT)

COURSE MATERIAL

MATERIAL LINK:

CHAPTER1:https://blog.coursesity.com/best-IoT-tutorials/

CHAPTER2:https://core-electronics.com.au/tutorials/IoT-workshop-for-beginners.html

CHAPTER3:https://www.classcentral.com/tag/IoT

CHAPTER4:https://hackr.io/tutorials/learn-IoT

CHAPTER5:https://www.coursera.org/learn/IoT

FURTHER STUDY:

1.Programming IoT: Getting Started with Sketches (Tab) 2nd Edition, Kindle Edition by Simon monk
2. Exploring IoT 1st Edition by Jeremy Blum
3. Getting Started with IoT: The Open Source Electronics Prototyping Platform (Make) 3rd Edition by Massimo Banzi
4. IoT Workshop: A Hands-On Introduction with 65 Projects 1st Edition by John Boxall
5. Beginning C for IoT, Second Edition: Learn C Programming for the Arduino 2nd ed. Edition by Jack Purdum

PROGRAM COORDINATOR **HoD/ECE** **PRINCIPAL**

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

Mr. M. Balaji, III-ECE

for the successful completion of Certificate Course on
"INTRODCUTION TO IOT"
Conducted from 11.08.2021 to 13.08.2021&16.08.2021 to 17.08.2021(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

Mr. S. Maraj, II-ECE

for the successful completion of Certificate Course on
"INTRODCUTION TO IOT"
Conducted from 11.08.2021 to 13.08.2021&16.08.2021 to 17.08.2021(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

Ms. S. Vivoka, IV-ECE

for the successful completion of Certificate Course on
"INTRODCUTION TO IOT"
Conducted from 11.08.2021 to 13.08.2021&16.08.2021 to 17.08.2021(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN,
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Natham, Dindigul (Dt) - 624 401.

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF ELETRONICS AND COMMUNICATION ENGINEERING

INDEX

COURSE CODE & NAME: **21ECAO02-PROGRAMMING IN JAVA**

ACADEMIC YEAR: **2021-2022** SEMESTER: **ODD** DURATION: **35 HOURS**

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PROGRAM COORDINATOR **HoD/ECE** **IQAC** **PRINCIPAL**

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From

Mr.J.G. Sabarish,

Assistant professor,

Department of ECE,

NPR College of Engineering & Technology,

Natham-624 401

To

The Principal,

NPR College of Engineering & Technology,

NPR Nagar,

Natham-624 401

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Respected Sir,

Sub: Request for permission to Conduct Add on Course for ECE students – Reg.

We have planned to conduct Add on Course on "PROGRAMMING IN JAVA" to our students on 16.10.2021,23.10.2021,30.10.2021,06.01.2021 and 13.11.2021 (5 Days) in our college premises. We proposed Mr.S. Harish Babu, Abile Business Solutions (P) Ltd, as the resource person for this Add on Course. Kindly permit us to conduct the same.

Thanking you,

COLLEGE OF ENGG. & TECHNOLOGY * NPR * NATHAM

Yours faithfully,

J.G. SABARISH

Date: 28.09.21

Place: Natham

Head of the Department
Department of Electronics & Communication Engineering
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

RESOURCE PERSON'S PROFILE

Name	:	Mr.S.HARISH BABU
Designation	:	Senior Software Engineer
Company Name	:	Abile Business Solutions (P) Ltd, Chennai.
About Resource Person	:	Abile Business Solutions (P) Ltd, Chennai-Senior software Engineer AUG 2020 – Present My role is Full Stack Developer and developed web applications using MEAN Stack in the IIOT Sector.AR/VR Application Engineer in the manufacturing sector. Develop Engineer to automate the development process using Jenkins Deloitte India LLP, Chennai-Consultant JAN 2020 - AUG 2020 My role is Full Stack Developer in Java and developed web applications using MEAN Stack in the IIOT Sector. Develop Engineer to automate the development process using Jenkins Redeem Systems Pvt Ltd, Bangalore - Lead Developer DEC 2017 - JAN 2020

PROGRAM COORDINATOR

HoD/ECE

Head of the Department
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NPRCET/OFF/ECE/VAC/2021-2022

DATE:05.10.2021

CIRCULAR

This is to inform that Department of Electronics and Communication Engineering has planned to conduct an Add on course on **"PROGRAMMING IN JAVA"** for the students during the end of this ODD semester 2021-2022.Interested students can enroll their name on or before 14.10.2021.

The details of the training program are given below.

COURSE NAME	:	PROGRAMMMING IN JAVA
RESOURCE PERSONS	:	Mr.S.HARISH BABU
VENUE	:	NPRCET Seminar Hall
DATE & DURATION	:	16.10.2021,23.10.2021,30.10.2021,06.11.2021 and 13.11.2021 & 35 Hours
PROGRAM COORDINATOR	:	Mr.J.G. Sabarish AP/ECE, NPRCET.

NPR COLLEGE OF ENGG. & TECHNOLOGY NATHAM

PRINCIPAL
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. All the HoDs
2. IQAC
3. All the Class Rooms
4. Notice Board
5. File
6. Program Coordinator

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

"Add on Course on programming in JAVA "

On 16th Oct, 2021

Venue: NPRCET Seminar Hall at 9.30 a.m.

Chief Guest

Mr.S.HARISH BABU

Abile Business Solutions (P) Ltd, Chennai.

Dr.J. SUNDARARAJAN

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Electronics and Communication Engineering,

NPR College of Engineering & Technology,

NPR Nagar, Natham.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

AGENDA

- **Inauguration on 16th Oct 2021**
- Prayer song
- Welcome address by Ms.P.Sneha, III Year ECE
- Felicitation address by Dr.J. Sundararajan, Principal,
- Chief Guest Honoring
- Chief Guest Introduction
- Chief Guest Address
- **Valedictory on 13th Nov 2021**
- Certificate distribution
- Feedback Session
- Vote of thanks by Ms. Ms.A. Meera Jafrin, II Year ECE
- National Anthem

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

21ECAO02-PROGRAMMING IN JAVA-COURSE CONTENT

CHAPTER 1: JAVA FUNDAMENTALS

- Working with Pre-Written Code
- Java Class Design – Interfaces
- Java Class Design – Abstract Classes
- Exceptions and Assertions

CHAPTER 2: OOPS CONCEPTS.

- Generics
- Collections – Part 1
- Collections – Part 2
- Sorting and Searching

CHAPTER 3: OVERLOADING & OVERRIDING.

- String Processing
- Use Regular Expressions
- Recursion
- JDBC Introduction

CHAPTER 4: INHERITANCE WITH INTERFACE

- Basics of Input and Output
- Input and Output Fundamentals
- Deploying an Application
- JDBC Basics

CHAPTER 5: EXCEPTION HANDLING

- Introduction to JVM Architecture
- Java Memory Structure
- JDK Tools
- Class Files

CRITERIATO GET CERTIFICATE:

- Students should register their names for this course
- Students must have **85%** attendance.
- Student should secure **75% marks in the Exam.**

Prepared by: Mrs. Kalpana, AP-CSE

Approved By,

HoD/ECE

Head of the Department
Department of Electronics & Communication Engineering
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IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
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PRINCIPAL

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DEPARTMENT OF ELETRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

REGISTERED STUDENTS NAME LIST

S. NO.	REGISTER.NO.	STUDENT NAME	YEAR & DEPT
1.	920818106002	ABINAYA. S	IV-ECE
2.	920818106004	BLESSING.X	IV-ECE
3.	920818106005	DHARSHINI.V	IV-ECE
4.	920818106007	DURGADEVI.B	IV-ECE
5.	920818106008	DURGADEVI.S	IV-ECE
6.	920818106009	HARIPRIYA.M	IV-ECE
7.	920818106010	ILAKKIYA.B	IV-ECE
8.	920818106011	JAYA PRATHAP.S	IV-ECE
9.	920818106012	JEYARAJ.S	IV-ECE
10.	920818106013	KIRUTHIKA.R	IV-ECE
11.	920818106014	MANOJ PRABHAKAR.V	IV-ECE
12.	920818106016	MUKESH KANNA.G	IV-ECE
13.	920818106017	MUTHU VIGNESH.M	IV-ECE
14.	920818106018	NISHA.M	IV-ECE
15.	920818106019	NIVETHA.K. S	IV-ECE
16.	920818106020	PONBHARATHI.V	IV-ECE
17.	920818106022	PUGALARASU.S	IV-ECE
18.	920818106023	PUSHPA PRIYADHARSHINI.R	IV-ECE
19.	920818106024	RAJKUMAR.K	IV-ECE
20.	920818106026	SARITHA RANI.K	IV-ECE
21.	920818106027	SARUMATHI.R	IV-ECE
22.	920818106028	SATHISH KUMAR.G	IV-ECE
23.	920819106002	AFRIN SHIFANA A	III-ECE
24.	920819106003	AJITH KUMAR K	III-ECE
25.	920819106004	AMIZHTHAA B	III-ECE
26.	920819106006	ARAVINTH RAJ K	III-ECE
27.	920819106007	ASMA ROSHAN T	III-ECE
28.	920819106008	BALAJI M (2001)	III-ECE
29.	920819106009	BALAJI M (2002)	III-ECE
30.	920819106010	BLESSY JEBAMANI G	III-ECE
31.	920819106011	CHRISTIYA I	III-ECE
32.	920819106012	DEVI SRI S	III-ECE
33.	920819106013	DHANALAKSHMI P	III-ECE
34.	920819106014	DHATH VETHA S	III-ECE
35.	920819106015	DHINESH M	III-ECE
36.	920819106016	DIVESH V	III-ECE
37.	920819106017	DIVYA DHARSHINI S	III-ECE

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38.	920819106019	HARISHWAR S	III-ECE
39.	920819106049	RENUGA DEVI N	III-ECE
40.	920819106050	RIFAYA S	III-ECE
41.	920819106051	RISHWANA BURVEEN S	III-ECE
42.	920819106052	SANO NISHA N	III-ECE
43.	920819106053	SARAN G V	III-ECE
44.	920819106054	SASMITHA PARVEEN K	III-ECE
45.	920819106055	SHAM HIRUTHIK R	III-ECE
46.	920819106057	SHARMILA DEVI G	III-ECE
47.	920819106058	SHINY RESHMA J	III-ECE
48.	920819106059	SINGARABRINDHA N	III-ECE
49.	920819106060	SNEHA P	III-ECE
50.	920820106001	AARTHY M	II-ECE
51.	920820106002	AJAY GOWTHAM S	II-ECE
52.	920820106003	AJITHA S	II-ECE
53.	920820106004	AKASH S	II-ECE
54.	920820106005	ARAVINTHAN S	II-ECE
55.	920820106006	ARCHANA P	II-ECE
56.	920820106007	ARIHARAN K	II-ECE
57.	920820106008	BALASAKTHI S	II-ECE
58.	920820106010	DHAARINI M J	II-ECE
59.	920820106011	HAREESH V	II-ECE
60.	920820106012	HARINI C	II-ECE
61.	920820106014	HEMESHWAR S	II-ECE
62.	920820106015	JAWAHAR R	II-ECE
63.	920820106016	JEEVA S	II-ECE
64.	920820106017	JEFFERY ALBERT J	II-ECE
65.	920820106018	LOKESH KANNA G	II-ECE
66.	920820106019	MAHAVARSHINI S	II-ECE
67.	920820106020	MAHESWARI R	II-ECE
68.	920820106021	MALAVIKA A	II-ECE
69.	920820106022	MANIYAMMAIYAR N	II-ECE
70.	920820106023	MANOJ S	II-ECE
71.	920820106024	MEERA JAFRIN A	II-ECE
72.	920820106025	MOHAMMED THOUFIQ AGARISH R	II-ECE
73.	920820106026	MUNEESWARI L	II-ECE
74.	920820106032	SABEER AHAMED T	II-ECE
75.	920820106033	SAI SANKARA NARAYANAN S	II-ECE
76.	920820106034	SANDHIYA D	II-ECE
77.	920820106035	SANJAY KUMAR S	II-ECE
78.	920820106036	SANTHINI R	II-ECE
79.	920820106037	SELVA KUMAR M	II-ECE
80.	920820106038	SIVAPRASAD K	II-ECE

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81.	920820106039	SIVARANJANI S	II-ECE
82.	920820106040	SIVARANJANI T	II-ECE
83.	920820106041	SOUNDARYA LAKSHMI D	II-ECE
84.	920820106042	SUPRAJA SURYAWANSHI	II-ECE
85.	920820106043	SURESH A	II-ECE
86.	920820106044	THARANI V	II-ECE
87.	920820106045	UDAIYAPPAN N	II-ECE
88.	920820106046	VASANTHAKUMAR M	II-ECE
89.	920820106301	A.ASWATHAMAN	II-ECE
90.	920820106302	N.S.DURGADEVI	II-ECE
91.	920820106303	N.GAYATHRI	II-ECE
92.	920820106304	PARTHIBAN	II-ECE
93.	920820106305	PASILAN	II-ECE

NATHAM

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

COURSE SCHEDULE

Venue: NPRCET Seminar Hall

Date: 13.11.2021

EXTERNAL RESOURCE PERSON:
1. Mr.S.Harish Babu

INTERNAL RESOURCE PERSONS:
1.Mrs.J. Prisca Mary, AP-CSE
2.Mrs.C.Kalpana , AP-CSE

Day 1 16.10.2021	9.30 a.m.to 10.00 a.m.	Inauguration	
	10. 00 a.m. to 11.10 a.m.	Session 1	Working with Pre-Written Code **Mr.S.Harish Babu**
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 a.m.	Session 2	Java Class Design – Interfaces **Mr.S.Harish Babu**
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Java Class Design – Abstract Classes Mrs.J. Prisca Mary
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Exceptions and Assertions **Mrs.C.Kalpana**

Day 2 23.10.2021	9.30 a.m.to 11.10 a.m.	Session 1	Generics **Mr.S.Harish Babu**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Collections – Part 1 **Mrs.C.Kalpana**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	Collections – Part 2 Mrs.J. Prisca Mary
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	Sorting and Searching **Mr.S.Harish Babu**

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Day 3 30.10.2021	9.30 a.m.to 11.10 a.m.	Session 1	String Processing **Mrs.J. Prisca Mary**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Use Regular Expressions **Mrs.C.Kalpana**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	Recursion **Mr.S.Harish Babu**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	JDBC Introduction **Mr.S.Harish Babu**

Day 4 06.11.2021	9.30 a.m.to 11.10 a.m.	Session 1	Basics of Input and Output **Mr.S.Harish Babu**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Input and Output Fundamentals **Mrs.J. Prisca Mary**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	Deploying an Application **Mrs.C.Kalpana**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	JDBC Basics **Mr.S.Harish Babu**

Day 5 13.11.2021	9.30 a.m.to 11.10 a.m.	Session 1	Introduction to JVM Architecture **Mr.S.Harish Babu**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Java Memory Structure **Mrs.J. Prisca Mary**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	JDK Tools **Mrs.C.Kalpana**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	Class Files **Mr.S. Harish Babu**
	4.30 p.m. to 5.00 p.m.	Valedictory	

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

STUDENTS ATTENDANCE

S NO	COURSE CODE	STUDENT NAME	YEAR	16.10.2021		23.10.2021		30.10.2021		06.11.2021		13.11.2021	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	21ECAO02001	ABINAYA. S	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2.	21ECAO02002	BLESSING.X	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.	21ECAO02003	DHARSHINI.V	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.	21ECAO02004	DURGADEVI.B	IV	✓	✓	✓	✓	✓	✓	✓	✓	AB	AB
5.	21ECAO02005	DURGADEVI.S	IV	AB	AB	✓	✓	✓	✓	✓	✓	✓	✓
6.	21ECAO02006	HARIPRIYA.M	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7.	21ECAO02007	ILAKKIYA.B	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8.	21ECAO02008	JAYA PRATHAP.S	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9.	21ECAO02008	JEYARAJ.S	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10.	21ECAO02010	KIRUTHIKA.R	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11.	21ECAO02011	MANOJ PRABHAKAR.V	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12.	21ECAO02012	MUKESH KANNA.G	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13.	21ECAO02013	MUTHU VIGNESH.M	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14.	21ECAO02014	NISHA.M	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15.	21ECAO02015	NIVETHA.K.S	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16.	21ECAO02016	PONBHARATHI.V	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17.	21ECAO02017	PUGALARASU.S	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18.	21ECAO02018	PUSHPA PRIYADHARSHINI.R	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
19.	21ECAO02019	RAJKUMAR.K	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
20.	21ECAO02020	SARITHA RANI.K	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
21.	21ECAO02021	SARUMATHI.R	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
22.	21ECAO02022	SATHISH KUMAR.G	IV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
23.	21ECAO02023	AFRIN SHIFANA A	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
24.	21ECAO02024	AJITH KUMAR K	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
25.	21ECAO02025	AMIZHTHAA B	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
26.	21ECAO02026	ARAVINTH RAJ K	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
27.	21ECAO02027	ASMA ROSHAN T	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
28.	21ECAO02028	BALAJI M (2001)	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
29.	21ECAO02029	BALAJI M(2002)	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
30.	21ECAO02030	BLESSY JEBAMANI G	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
31.	21ECAO02031	CHRISTIYA I	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
32.	21ECAO02032	DEVI SRI S	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
33.	21ECAO02033	DHANALAKSHMI P	III	✓	✓	✓	✓	AB	AB	✓	✓	✓	✓
34.	21ECAO0203	DHATH VETHA S	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
35.	21ECAO02035	DHINESH M	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
36.	21ECAO02036	DIVESH V	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
37.	21ECAO02037	DIVYA DHARSHINI S	III	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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38.	21ECAO02038	HARISHWAR S	III										
39.	21ECAO02039	RENUGA DEVI N	III										
40.	21ECAO02040	RIFAYA S	III										
41.	21ECAO02041	RISHWANA BURVEEN S	III										
42.	21ECAO02042	SANO NISHA N	III										
43.	21ECAO02043	SARAN G V	III										
44.	21ECAO02044	SASMITHA PARVEEN K	III										
45.	21ECAO02045	SHAM HIRUTHIK R	III										
46.	21ECAO02046	SHARMILA DEVI G	III										
47.	21ECAO02047	SHINY RESHMA J	III										
48.	21ECAO02048	SINGARABRINDHA N	III										
49.	21ECAO02049	SNEHA P	III										
50.	21ECAO02050	AARTHY M	II										
51.	21ECAO02051	AJAY GOWTHAM S	II										
52.	21ECAO02052	AJITHA S	II										
53.	21ECAO02053	AKASH S	II										
54.	21ECAO02054	ARAVINTHAN S	II										
55.	21ECAO02055	ARCHANA P	II										
56.	21ECAO02056	ARIHARAN K	II										
57.	21ECAO02057	BALASAKTHI S	II										
58.	21ECAO02058	DHAARINI M J	II										
59.	21ECAO02059	HAREESH V	II										
60.	21ECAO02060	HARINI C	II										
61.	21ECAO02061	HEMESHWAR S	II										
62.	21ECAO02062	JAWAHAR R	II										
63.	21ECAO02063	JEEVA S	II										
64.	21ECAO02064	JEFFERY ALBERT J	II										
65.	21ECAO02065	LOKESH KANNA G	II										
66.	21ECAO02066	MAHAVARSHINI S	II										
67.	21ECAO02067	MAHESWARI R	II										
68.	21ECAO02068	MALAVIKA A	II										
69.	21ECAO02069	MANIYAMMAIYAR N	II										
70.	21ECAO02070	MANOJ S	II										
71.	21ECAO02071	MEERA JAFRIN A	II										
72.	21ECAO02072	MOHAMMED THOUFIQ AGARISH R	II										
73.	21ECAO02073	MUNEESWARI L	II										
74.	21ECAO02074	SABEER AHAMED T	II										
75.	21ECAO02075	SAI SANKARA NARAYANAN S	II										
76.	21ECAO02076	SANDHIYA D	II										
77.	21ECAO02077	SANJAY KUMAR S	II										
78.	21ECAO02078	SANTHINI R	II										
79.	21ECAO02079	SELVA KUMAR M	II										
80.	21ECAO02080	SIVAPRASAD K	II										

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81.	21ECAO02081	SIVARANJANI S	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
82.	21ECAO02082	SIVARANJANI T	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
83.	21ECAO02083	SOUNDARYA LAKSHMI D	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
84.	21ECAO02084	SUPRAJA SURYAWANSHI	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
85.	21ECAO02085	SURESH A	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
86.	21ECAO02086	THARANI V	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
87.	21ECAO02087	UDAIYAPPAN N	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
88.	21ECAO02088	VASANTHAKUMAR M	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
89.	21ECAO02089	A.ASWATHAMAN	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
90.	21ECAO02090	N.S.DURGADEVI	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
91.	21ECAO02091	N.GAYATHRI	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
92.	21ECAO02092	PARTHIBAN	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
93.	21ECAO02093	PASILAN	II	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		PRESENT		92	92	93	93	92	92	93	93	92	92
		ABSENT		01	01	—	—	01	01	—	—	01	01
		COORDINATOR SIGNATURE											

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

SAMPLE QUESTION PAPER & ANSWERS

1. JDK stands for ____

   A. Java development kit
   B. Java deployment kit
   C. JavaScript deployment kit
   D. None of these

Answer: A) Java development kit

2. JRE stands for ___

   A. Java run ecosystem
   B. JDK runtime Environment
   C. Java Runtime Environment
   D. None of these

Answer: C) Java Runtime Environment

3. What makes the Java platform independent?

   A. Advanced programming language
   B. It uses bytecode for execution
   C. Class compilation
   D. All of these



Answer: B) It uses bytecode for execution

4. Can we keep a different name for the java class name and java file name?

   A. Yes
   B. No

Answer: A) Yes

5. What are the types of memory allocated in memory in java?

   A. Heap memory
   B. Stack memory
   C. Both A and B
   D. None of these

Answer: C) Both A and B

6. Multiline comment is created using ___.

A. //
B. /* */
C. <!-- -->
D. All of these

Answer: B) /* */

7. What is the entry point of a program in Java?

A. main() method
B. The first line of code
C. Last line of code
D. main class

Answer: A) main() method

8. Which keyword in java is used for exception handling?

A. exep
B. excepHand
C. throw
D. All of these

Answer: C) throw

9. Can we write a program without a main method in Java?

A. Yes
B. No

Answer: A) Yes

10. Can the main() method be overloaded in Java?

A. Yes
B. No

Answer: A) Yes

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

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STUDENT'S FEEDBACK FORM

Name of the Student: S. Abinaya	Year / Semester: IV - 07
Name of the Program: Programming in Java	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples provided during this course	✓				
4	Course delivered by Resource Person		✓			
5	Time Management	✓				
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	This session is useful for me to know about Programming in Java.				

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

STUDENT'S FEEDBACK FORM

Name of the Student: P. Sneha — Year / Semester: III - 05

Name of the Program: Programming in Java

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	I have utilized this course to learn lot about programming in Java				

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NPR College of Engineering & Technology
Natham, Dindigul (DT) 624 401.

NPR College of Engineering & Technology

NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.
An ISO 9001:2015 Certified Institution.
Phone No: 04544- 246 500, 246501, 246502.
Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

STUDENT'S FEEDBACK FORM

Name of the Student: D. Sandhiya	Year / Semester: II - 03
Name of the Program: Programming in Java	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices		✓			
3	Examples provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	This Program is very helpful to gain more knowledge.				

NPR COLLEGE OF ENGG & TECH NATHAM

PROGRAM COORDINATOR

HoD/ECE

Head of the Department
Department of Electronics & Communication Engineering
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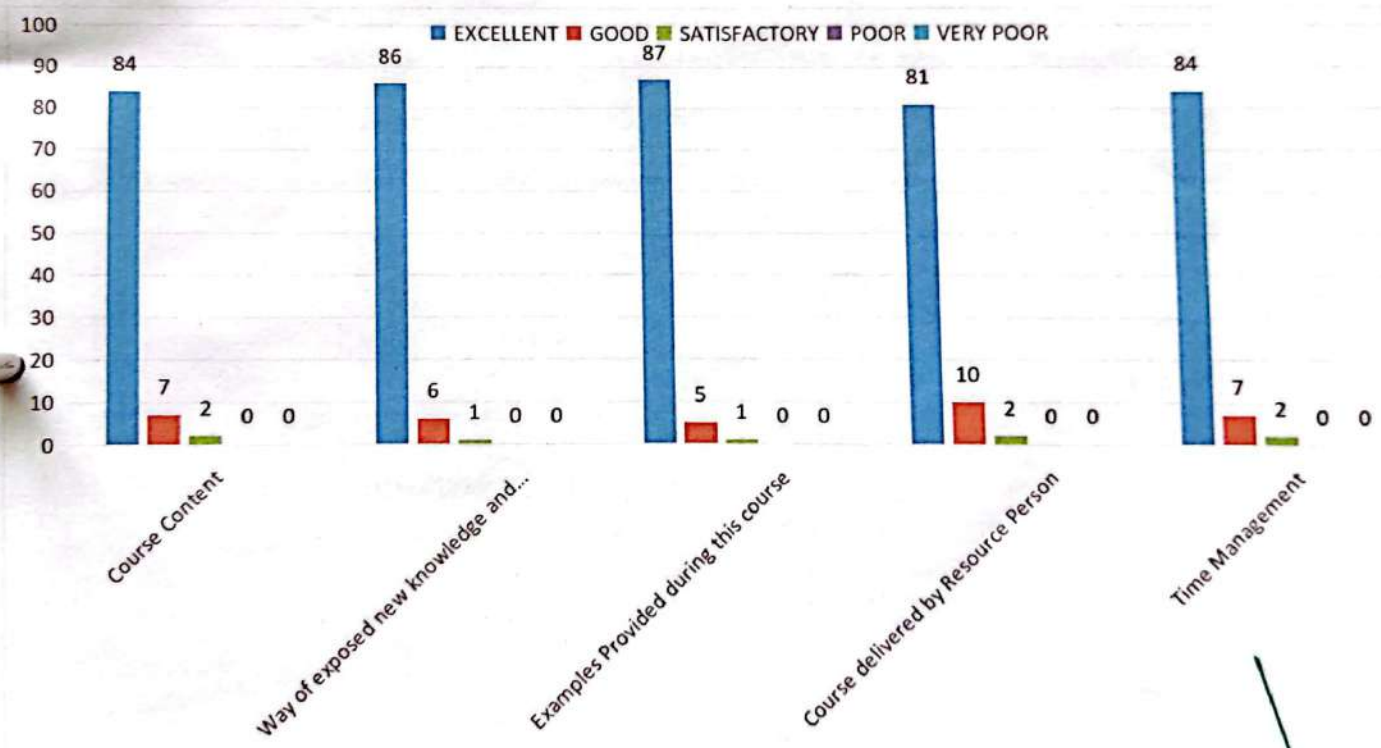
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

STUDENT FEEDBACK SUMMARY REPORT

TOTAL STRENGTH: 93 **DATE: 13.11.2021**

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1.	Course Content	84	7	2	0	0
2.	Way of exposed new knowledge and practices	86	6	1	0	0
3.	Examples Provided during this course	87	5	1	0	0
4.	Course delivered by Resource Person	81	10	2	0	0
5.	Time Management	84	7	2	0	0
6.	Average	**84.4**	**7**	**1.6**	**0**	**0**



PROGRAM COORDINATOR HoD/ECE IQAC PRINCIPAL

Head of the Department
Dept of Electronics & Communication Engg
NPR College of Engineering & Technology
Natham, Dindigul (Dt)

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 40

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
Principal
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Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON PROGRAMMING IN JAVA

SUMMARY REPORT

The Department of Electronics and Communication Engineering organized Certificate a program **"PROGRAMMMING IN JAVA"** on 16.10.2021, 23.10.2021, 30.10.2021,06.11.2021 &13.11.2021 (5 Days) at NPRCET Seminar Hall.

Ms. P. Sneha, III Year ECE delivered the welcome address.

Dr.J. Sundararajan, Principal of our college inaugurated the program and delivered the inaugural address.

Resources Person Mr.S. Harish Babu shared his knowledge with our students. This five days course gives over view about java programming. This program also taught the fundamentals and principles of JAVA, class design and exceptions, data structures, generics and collections, strings, regular expressions and recursion, input and output & java memory and the JVM. The students learnt various existing and emerging technologies of java programming.

93 Students attended from ECE II, III and IV-year classes. Students who participated and successfully completed the Quiz program has awarded with certificates.

Ms.Meera Jafrin A, II year ECE delivered the vote of thanks.

PROGRAM COORDINATOR **HoD/ECE** **IQAC** **PRINCIPAL**

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEEIRNG

ADD ON COURSE ON PROGRAMMING IN JAVA

COURSE MATERIAL

MATERIAL LINK:

CHAPTER1: Learn Java Programming (programiz.com)

CHAPTER2: Java Tutorial - Java Programming Language (geeksforgeeks.org)

CHAPTER3: Java Tutorial | Learn Java Programming - javatpoint

CHAPTER4:https://hackr.io/tutorials/learn-java

CHAPTER5:https://www.coursera.org/learn/java

FURTHER STUDY:

1.*Programming java: Getting Started with Sketches (Tab) 2nd Edition, Kindle Edition by Simon monk*
2. *Exploring java 1st Edition by Jeremy Blum*
3. *Getting Started with java: The Open Source Electronics Prototyping Platform (Make) 3rd Edition by Massimo Banzi*
4. *java Workshop: A Hands-On Introduction with 65 Projects 1st Edition by John Boxall*
5.*Learn java Programming for the Arduino 2nd ed. Edition by Jack Purdum*

PROGRAM COORDINATOR **HoD/ECE** **PRINCIPAL**

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

Ms.Sandhiya.D II-ECE

For the successful completion of Add on Course on

"PROGRAMMIMG IN JAVA"

Conducted on 16.10.2021, 23.10.2021, 30.11.2021, 06.11.2021 and 13.11.2021(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401

PRINCIPAL
Dr.J.Sundararajan

NPR College of Engineering & Technology

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

Ms. S. Abinaya IV - ECE

For the successful completion of Add on Course on

"PROGRAMMIMG IN JAVA"

Conducted on 16.10.2021, 23.10.2021, 30.11.2021, 06.11.2021 and 13.11.2021(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (DU) - 624 401.

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

Mr. V. Divash, III - ECE

For the successful completion of Add on Course on

"PROGRAMMIMG IN JAVA"

Conducted on 16.10.2021, 23.10.2021, 30.11.2021, 06.11.2021 and 13.11.2021(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN,
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Natham, Dindigul (Dt) - 624 401.

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

INDEX

COURSE CODE & NAME: 21ECCC03- INTRODUCTION TO DEEP LEARNING

ACADEMIC YEAR: 2021-2022 **SEMESTER: EVEN** **DURATION: 34 HOURS**

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NPR COLLEGE OF ENGG. & TECHNOLOGY NATHAM

PROGRAM COORDINATOR **HoD/ECE** **IQAC** **PRINCIPAL**

Head of the Department
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Coordinator - IQAC
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From

Mr.K.Jayaprakasam,

Assistant Professor-ECE

NPR College of Engineering and Technology,

Natham-624 401.

To

The Principal,

NPR College of Engineering and Technology,

NPR Nagar,

Natham-624 401.

Respected Sir,

Sub: Request for Permission to Conduct Certificate course for ECE students – Reg.

We have planned to Conduct Certificate Course on "**INTRODUCTION TO DEEP LEARNING**" to our students on 09.04.2022, 16.04.2022,07.05.20222,14.05.2022 and 21.05.2022 (5 Days) in our college premises. We proposed **Dr. T. RUSO**, Associate Consultant, Wipro Limited, Chennai as the resource person for this Certificate Course. Kindly permit us to conduct the same.

Thanking you.

COLLEGE OF ENGG. & TECHNOLOGY * NPR * NATHAM

Yours faithfully,

K. Jayaprakasam

Date:21.03.2022

Place: Natham

Head of the Department
Department of Electronics & Communication Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) 624 401.

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
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From

Mr.K.Jayaprakasam,

Assistant Professor-ECE

NPR College of Engineering and Technology,

Natham-624 401.

To

The Principal,

NPR College of Engineering and Technology,

NPR Nagar,

Natham-624 401.

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Thanking you.

Yours faithfully,

K. Jayaprakasam

Date:21.03.2022

Place: Natham

Head of the Department
Department of Electronics & Communication Engineering
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Natham, Dindigul (Dt) 624 401

Dr. J.SUNDARARAJAN,
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

RESOURCE PERSON'S PROFILE

Name	:	**Dr. T. RUSO**
Designation	:	Associate Consultant
Company Name	:	Wipro Limited, Chennai.
About Resource Person	:	He has completed his B.Sc. (Computer Science) in Aditanar College of Arts and Science (Tiruchendur), M.Sc. (Computer Science) in Annamalai University (Chithambaram), M.E (Computer Science and Engineering) in Crescent Engineering College (Chennai) and finally he was awarded Ph.D. (Computer Science and Engineering) from CEG - Anna University (Chennai). In total he has 11 years and 6 months of experience in Research, Teaching and Industry sectors. ➢ From January 2008 to February 2011, he has worked as PROJECT ASSOCIATE in IIT MADRAS. ➢ From May 2015 to June 2019, He has worked as ASSISTANT PROFESSOR (Senior Grade) in SAVEETHA UNIVERSITY (Chennai). ➢ Currently, he is working with WIPRO PVT. LTD. (Chennai) as Associate Consultant. His Contributions and Accolade: ➢ When he was working in IIT Madras, he has developed the Multiparty video conference tool using JAVA for "Smart and Secure Environment" Research Consortium, funded by the National Technical Research Organization (NTRO), Government of India, New Delhi. It is used to connect all the Professors, Research Scholars and Students among the eight institutions across Tamilnadu. i.e., IIT Madras, NIT Tiruchirappalli, CEG - Anna University, Pondicherry University, PSG College of Technology (Coimbatore), Thiyagaraja College of Engineering - Madurai, Madurai Kamaraj University and Alagappa University (Karaikudi) through MPLS-VPN network. ➢ He developed a prototype design for the National Knowledge Network (NKN) project, using AI and data science. It is used to connect all the knowledge institutions across India. ➢ During the year 2013 (August 24 & 25), he has visited Singapore for presenting a paper titled "POSET: Network Coding Multicast in Application Layer" in the second International Conference on Advancements in Information Technology (ICAIT 2013).

PROGRAM COORDINATOR

HoD/ECE

Head of the Department
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NPRCET/OFF/ECE/VAC/2021-2022 DATE:29.03.2022

CIRCULAR

This is to inform that Department of Electronics and Communication Engineering has planned to conduct a Certificate Course on **"INTRODUCTION TO DEEP LEARNING"** for the students during the end of this even semester 2021-2022.Interested students can enroll their name on or before 07.04.2022.

The details of the training program are given below.

COURSE NAME	:	Introduction to Deep learning
RESOURCE PERSON	:	Dr. T. RUSO, Associate Consultant, Wipro Limited, Chennai.
VENUE	:	NPRCET Seminar Hall
DATE & DURATION	:	09.04.2022,16.04.2022,07.05.2022,14.05.2022 and 21.05.2022 &
PROGRAM		34 Hours
COORDINATOR	:	Mr.K.Jayaprakasam, AP-ECE

COLLEGE OF ENGG. & TECHNOLOGY NATHAM NPRCET

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. All the HoDs
2. IQAC
4. All the Class Rooms
5. Notice Board
6. File
7. Program Coordinator

NPR College of Engineering & Technology
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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

On 9th April, 2022

Venue: NPRCET Seminar Hall at 9.30 a.m.

Chief Guest

Dr. T. RUSO

Associate Consultant

Wipro Limited, Chennai.

Dr.J.SUNDARARAJAN

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Electronics and Communication Engineering,

NPR College of Engineering & Technology,

NPR Nagar, Natham.



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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

AGENDA

- **Inauguration on 9th April 2022**
- Prayer song
- Welcome address by Ms.P.Sneha, III Year ECE
- Felicitation address by Dr.J. Sundararajan, Principal,
- Chief Guest Honoring
- Chief Guest Introduction
- Chief Guest Address
- **Valedictory on 21st May 2022**
- Certificate distribution
- Feedback Session
- Vote of thanks by Ms. C. Harini, II Year ECE
- National Anthem

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

21ECCC03- INTRODUCTION TO DEEP LEARNING -COURSE CONTENT

CHAPTER 1: Improving Deep Neural Networks

- Introduction to deep learning
- Neural Networks Basics
- Shallow neural networks
- Deep Neural Networks Understanding IoT fundamentals

CHAPTER 2: Improving Deep Neural Networks

- Practical aspects of Deep Learning
- Optimization algorithms
- Hyper-parameter tuning, Batch Normalization
- Programming Frameworks

CHAPTER 3: Convolutional Neural Networks Sequence Models

- Recurrent Neural networks
- Natural Language Processing
- Word Embedding
- Sequence models & Attention mechanism

CHAPTER 4: Deep learning models

- CNNs
- GANs
- YOLO
- Elman Networks

CHAPTER 5: Sensor & Actuators with Arduino

- Foundations of Convolutional Neural Networks
- Deep convolutional models: case studies
- Object detection
- Special applications: Face recognition & Neural style transfer

CRITERIA TO GET CERTIFICATE:

- Students should register their names for this course
- Students must have **85%** attendance.
- Student should secure **75% marks in the Exam.**
-

Prepared by: Mrs.J. Prisca Mary, AP-CSE

Approved By,

HoD/ECE

Head of the Department
Department of Electronics & Communication Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) 624 401.

IQAC

Coordinator - IQAC
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PRINCIPAL

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

REGISTERED STUDENTS NAME LIST

S. NO.	REGISTER. NO.	STUDENT NAME	YEAR & DEPT
1.	920818106001	ABILASHA.M	IV-ECE
2.	920818106002	ABINAYA .S	IV-ECE
3.	920818106004	BLESSING.X	IV-ECE
4.	920818106005	DHARSHINI.V	IV-ECE
5.	920818106007	DURGADEVI.B	IV-ECE
6.	920818106008	DURGADEVI.S	IV-ECE
7.	920818106009	HARIPRIYA.M	IV-ECE
8.	920818106010	ILAKKIYA.B	IV-ECE
9.	920818106011	JAYA PRATHAP.S	IV-ECE
10.	920818106012	JEYARAJ.S	IV-ECE
11.	920818106013	KIRUTHIKA.R	IV-ECE
12.	920818106014	MANOJ PRABHAKAR.V	IV-ECE
13.	920818106016	MUKESH KANNA.G	IV-ECE
14.	920818106017	MUTHU VIGNESH.M	IV-ECE
15.	920818106018	NISHA.M	IV-ECE
16.	920818106019	NIVETHA.K.S	IV-ECE
17.	920818106020	PONBHARATHI.V	IV-ECE
18.	920818106022	PUGALARASU.S	IV-ECE
19.	920818106023	PUSHPA PRIYADHARSHINI.R	IV-ECE
20.	920818106024	RAJKUMAR.K	IV-ECE
21.	920818106026	SARITHA RANI.K	IV-ECE
22.	920818106027	SARUMATHI.R	IV-ECE
23.	920818106028	SATHISH KUMAR.G	IV-ECE
24.	920818106029	SEEMA FATHIMA.S	IV-ECE
25.	920818106031	SOWMIYA.P	IV-ECE
26.	920818106032	SREE RAGA SUDHA.K	IV-ECE
27.	920818106033	SURYA PRAKASH.V.M	IV-ECE
28.	920818106035	SWETHA.M	IV-ECE
29.	920818106036	VARSHIINI.B	IV-ECE
30.	920818106037	VENNILA.A	IV-ECE
31.	920818106038	VIGNESH.R	IV-ECE
32.	920818106039	VISHALINI.B	IV-ECE
33.	920818106040	VIVEKA.S	IV-ECE
34.	920818106302	VIGNESH.S	IV-ECE
35.	920819106004	AMIZHTHAA B	III-ECE
36.	920819106006	ARAVINTH RAJ K	III-ECE
37.	920819106007	ASMA ROSHAN T	III-ECE
38.	920819106008	BALAJI M (2001)	III-ECE
39.	920819106009	BALAJI M(2002)	III-ECE
40.	920819106010	BLESSY JEBAMANI G	III-ECE
41.	920819106011	CHRISTIYA I	III-ECE
42.	920819106012	DEVI SRI S	III-ECE
43.	920819106013	DHANALAKSHMI P	III-ECE
44.	920819106014	DHATH VETHA S	III-ECE
45.	920819106015	DHINESH M	III-ECE

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46.	920819106016	DIVESH V	III-ECE
47.	920819106017	DIVYA DHARSHINI S	III-ECE
48.	920819106028	MADHUMITHA P	III-ECE
49.	920819106029	MANOJKUMAR A	III-ECE
50.	920819106030	MANOJ KUMAR S	III-ECE
51.	920819106031	MOHAMED ASIF M	III-ECE
52.	920819106032	MOHAMEDIBRAHIM J	III-ECE
53.	920819106033	MOHAN S	III-ECE
54.	920819106034	MOHAN BABU B	III-ECE
55.	920819106035	MURUGANATHAN M	III-ECE
56.	920819106036	MUTHU MOORTHY M	III-ECE
57.	920819106037	MUTHU RANJANI V	III-ECE
58.	920819106038	MYTHILI M	III-ECE
59.	920819106039	NAGA VISHWA G	III-ECE
60.	920819106040	NALINASHREE N	III-ECE
61.	920819106041	NANDHA KUMAR G	III-ECE
62.	920819106042	PAVITHRA N	III-ECE
63.	920819106043	PORKODI S	III-ECE
64.	920819106044	POWSIKA DEVI K	III-ECE
65.	920819106045	PRABHU C	III-ECE
66.	920819106046	PRASANNA D	III-ECE
67.	920819106048	RAMVIGNHESH R P	III-ECE
68.	920819106049	RENUGA DEVI N	III-ECE
69.	920819106050	RIFAYA S	III-ECE
70.	920819106051	RISHWANA BURVEEN S	III-ECE
71.	920819106052	SANO NISHA N	III-ECE
72.	920819106053	SARAN G V	III-ECE
73.	920819106054	SASMITHA PARVEEN K	III-ECE
74.	920819106055	SHAM HIRUTHIK R	III-ECE
75.	920819106057	SHARMILA DEVI G	III-ECE
76.	920819106058	SHINY RESHMA J	III-ECE
77.	920819106059	SINGARABRINDHA N	III-ECE
78.	920819106060	SNEHA P	III-ECE
79.	920819106061	SOUNDHARYA S	III-ECE
80.	920819106062	SUMUGAPRIYA M	III-ECE
81.	920819106063	THAMBI DURAI P K	III-ECE
82.	920819106064	THARSHITHA S	III-ECE
83.	920819106065	THARUNKUMAR M	III-ECE
84.	920820106003	AJITHA S	II-ECE
85.	920820106004	AKASH S	II-ECE
86.	920820106005	ARAVINTHAN S	II-ECE
87.	920820106006	ARCHANA P	II-ECE
88.	920820106007	ARIHARAN K	II-ECE
89.	920820106008	BALASAKTHI S	II-ECE
90.	920820106010	DHAARINI M J	II-ECE
91.	920820106011	HAREESH V	II-ECE
92.	920820106012	HARINI C	II-ECE
93.	920820106014	HEMESHWAR S	II-ECE
94.	920820106029	PRAVEENKUMAR P	II-ECE
95.	920820106031	ROHITH ABRAHAM J	II-ECE
96.	920820106032	SABEER AHAMED T	II-ECE

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97.	920820106033	SAI SANKARA NARAYANAN S	II-ECE
98.	920820106034	SANDHIYA D	II-ECE
99.	920820106035	SANJAY KUMAR S	II-ECE
100.	920820106036	SANTHINI R	II-ECE
101.	920820106037	SELVA KUMAR M	II-ECE
102.	920820106038	SIVAPRASAD K	II-ECE
103.	920820106039	SIVARANJANI S	II-ECE
104.	920820106040	SIVARANJANI T	II-ECE
105.	920820106041	SOUNDARYA LAKSHMI D	II-ECE

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEEIRNG

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

COURSE SCHEDULE

Venue: NPRCET Seminar Hall **Date: 09.04.2022**

EXTERNAL RESOURCE PERSON:	INTERNAL RESOURCE PERSONS:
1 Dr.T.Ruso	1.Mrs.J.Prisca Mary, AP-CSE 2.Mrs.C.Kalpana, AP-CSE

Day 1 09.04.2022	9.30 a.m.to 10.00 a.m.	**Inauguration**	
	10. 00 a.m. to 11.10 a.m.	Session 1	Introduction to deep learning **Dr.T.Ruso**
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 a.m.	Session 2	Neural Networks Basics **Dr.T.Ruso**
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Shallow neural networks **Mrs.J. Prisca Mary**
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Deep Neural Networks Understanding IoT fundamentals **Mrs.C.Kalpana**
Day 2 16.04.2022	9.30 a.m.to 11.10 a.m.	Session 1	Practical aspects of Deep Learning **Dr.T.Ruso**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Optimization algorithms **Mrs.J. Prisca Mary**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to 3.40 p.m.	Session 3	Hyper-parameter tuning, Batch Normalization **Dr.T.Ruso**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	Programming Frameworks **Mrs.C.Kalpana**



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Day 3 07.05.2022	9.30 a.m.to 11.10 a.m.	Session 1	Recurrent Neural networks **Dr.T.Ruso**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Natural Language Processing **Dr.T.Ruso**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	Word Embedding **Mrs.C.Kalpana**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	Sequence models & Attention mechanism **Mrs.J. Prisca Mary**
Day 4 14.05.2022	9.30 a.m.to 11.10 a.m.	Session 1	CNNs **Dr.T.Ruso**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	GANs **Dr.T.Ruso**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	YOLO **Mrs.C.Kalpana**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	Elman Networks **Mrs.J. Prisca Mary**
Day 5 21.05.2022	9.30 a.m.to 11.10 a.m.	Session 1	Foundations of Convolutional Neural Networks **Dr.T. Ruso**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Multi agent framework, Representation of Games **Mrs.J. Prisca Mary**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	Deep convolutional models: case studies **Mrs.C.Kalpana**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	Special applications: Face recognition & Neural style transfer **Dr.T.Ruso**
	4.30 p.m. to 5.00 p.m.	**Valedictory**	

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEEIRNG

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

STUDENTS ATTENDANCE

S. NO.	COURSE CODE	NAME OF THE STUDENT	YEAR	09.04.2022		16.04.2022		07.05.2022		14.05.2022		21.05.2022	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	21ECCC03001	ABILASHA.M	IV	P	P	P	P	P	P	P	P	P	P
2.	21ECCC03002	ABINAYA .S	IV	P	P	P	P	P	P	P	P	P	P
3.	21ECCC03003	BLESSING.X	IV	P	P	P	P	P	P	P	P	P	P
4.	21ECCC03004	DHARSHINI.V	IV	P	P	P	P	P	P	P	P	P	P
5.	21ECCC03005	DURGADEVI.B	IV	P	P	P	P	P	P	P	P	P	P
6.	21ECCC03006	DURGADEVI.S	IV	P	P	P	P	P	P	P	P	P	P
7.	21ECCC03007	HARIPRIYA.M	IV	P	P	P	P	AB	AB	P	P	P	P
8.	21ECCC03008	ILAKKIYA.B	IV	P	P	P	P	P	P	P	P	P	P
9.	21ECCC03009	JAYA PRATHAP.S	IV	P	P	P	P	P	P	P	P	P	P
10.	21ECCC03010	JEYARAJ.S	IV	P	P	P	P	P	P	P	P	P	P
11.	21ECCC03011	KIRUTHIKA.R	IV	P	P	P	P	P	P	P	P	P	P
12.	21ECCC03012	MANOJ PRABHAKAR.V	IV	P	P	P	P	P	P	P	P	P	P
13.	21ECCC03013	MUKESH KANNA.G	IV	P	P	P	P	P	P	P	P	P	P
14.	21ECCC03014	MUTHU VIGNESH.M	IV	P	P	P	P	P	P	P	P	P	P
15.	21ECCC03015	NISHA.M	IV	P	P	P	P	P	P	P	P	P	P
16.	21ECCC03016	NIVETHA.K.S	IV	P	P	P	P	P	P	P	P	P	P
17.	21ECCC03017	PONBHARATHI.V	IV	P	P	P	P	P	P	P	P	P	P
18.	21ECCC03018	PUGALARASU.S	IV	P	P	P	P	P	P	P	P	P	P
19.	21ECCC03019	PUSHPA PRIYADHARSHINI.R	IV	P	P	P	P	P	P	P	P	P	P
20.	21ECCC03020	RAJKUMAR.K	IV	P	P	P	P	P	P	P	P	P	P
21.	21ECCC03021	SARITHA RANI.K	IV	P	P	P	P	P	P	P	P	P	P
22.	21ECCC03022	SARUMATHI.R	IV	P	P	P	P	P	P	P	P	P	P
23.	21ECCC03023	SATHISH KUMAR.G	IV	P	P	P	P	P	P	P	P	P	P
24.	21ECCC03024	SEEMA FATHIMA.S	IV	P	P	P	P	P	P	P	P	P	P
25.	21ECCC03025	SOWMIYA.P	IV	P	P	P	P	P	P	P	P	P	P
26.	21ECCC03026	SREE RAGA SUDHA.K	IV	P	P	P	P	P	P	P	P	P	P
27.	21ECCC03027	SURYA PRAKASH.V.M	IV	P	P	P	P	P	P	P	P	P	P
28.	21ECCC03028	SWETHA.M	IV	P	P	P	P	P	P	P	P	P	P
29.	21ECCC03029	VARSHIINI.B	IV	P	P	P	P	P	P	P	P	P	P
30.	21ECCC03030	VENNILA.A	IV	P	P	P	P	P	P	P	P	P	P
31.	21ECCC03031	VIGNESH.R	IV	P	P	P	P	P	P	P	P	P	P
32.	21ECCC03032	VISHALINI.B	IV	P	P	P	P	P	P	P	P	P	P
33.	21ECCC03033	VIVEKA.S	IV	AB	AB	P	P	P	P	P	P	P	P
34.	21ECCC03034	VIGNESH.S	IV	P	P	P	P	P	P	P	P	P	P
35.	21ECCC03035	AMIZHTHAA B	III	P	P	P	P	P	P	P	P	P	P
36.	21ECCC03036	ARAVINTH RAJ K	III	P	P	P	P	P	P	P	P	P	P
37.	21ECCC03037	ASMA ROSHAN T	III	P	P	P	P	P	P	P	P	P	P
38.	21ECCC03038	BALAJI M (2001)	III	P	P	AB	AB	P	P	P	P	P	P

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39.	21ECCC03039	BALAJI M(2002)	III										
40.	21ECCC03040	BLESSY JEBAMANI G	III										
41.	21ECCC03041	CHRISTIYA I	III										
42.	21ECCC03042	DEVI SRI S	III										
43.	21ECCC03043	DHANALAKSHMI P	III										
44.	21ECCC03044	DHATH VETHA S	III										
45.	21ECCC03045	DHINESH M	III										
46.	21ECCC03046	DIVESH V	III										
47.	21ECCC03047	DIVYA DHARSHINI S	III										
48.	21ECCC03048	MADHUMITHA P	III										
49.	21ECCC03049	MANOJKUMAR A	III										
50.	21ECCC03050	MANOJ KUMAR S	III										
51.	21ECCC03051	MOHAMED ASIF M	III										
52.	21ECCC03052	MOHAMEDIBRAHIM J	III										
53.	21ECCC03053	MOHAN S	III										
54.	21ECCC03054	MOHAN BABU B	III										
55.	21ECCC03055	MURUGANATHAN M	III										
56.	21ECCC03056	MUTHU MOORTHY M	III										
57.	21ECCC03057	MUTHU RANJANI V	III										
58.	21ECCC03058	MYTHILI M	III										
59.	21ECCC03059	NAGA VISHWA G	III										
60.	21ECCC03060	NALINASHREE N	III										
61.	21ECCC03061	NANDHA KUMAR G	III										
62.	21ECCC03062	PAVITHRA N	III										
63.	21ECCC03063	PORKODI S	III										
64.	21ECCC03064	POWSIKA DEVI K	III										
65.	21ECCC03065	PRABHU C	III										
66.	21ECCC03066	PRASANNA D	III										
67.	21ECCC03067	RAMVIGNHESH R P	III										
68.	21ECCC03068	RENUGA DEVI N	III										
69.	21ECCC03069	RIFAYA S	III										
70.	21ECCC03070	RISHWANA BURVEEN S	III										
71.	21ECCC03071	SANO NISHA N	III										
72.	21ECCC03072	SARAN G V	III										
73.	21ECCC03073	SASMITHA PARVEEN K	III										
74.	21ECCC03074	SHAM HIRUTHIK R	III										
75.	21ECCC03075	SHARMILA DEVI G	III										
76.	21ECCC03076	SHINY RESHMA J	III										
77.	21ECCC03077	SINGARABRINDHA N	III										
78.	21ECCC03078	SNEHA P	III										
79.	21ECCC03079	SOUNDHARYA S	III										
80.	21ECCC03080	SUMUGAPRIYA M	III										
81.	21ECCC03081	THAMBI DURAI P K	III										
82.	21ECCC03082	THARSHITHA S	III										
83.	21ECCC03083	THARUNKUMAR M	III										

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84.	21ECCC03084	AJITHA S	II										
85.	21ECCC03085	AKASH S	II										
86.	21ECCC03086	ARAVINTHAN S	II										
87.	21ECCC03087	ARCHANA P	II										
88.	21ECCC03088	ARIHARAN K	II										
89.	21ECCC03089	BALASAKTHI S	II										
90.	21ECCC03090	DHAARINI M J	II										
91.	21ECCC03091	HAREESH V	II										
92.	21ECCC03092	HARINI C	II										
93.	21ECCC03093	HEMESHWAR S	II										
94.	21ECCC03094	PRAVEENKUMAR P	II										
95.	21ECCC03095	ROHITH ABRAHAM J	II										
96.	21ECCC03096	SABEER AHAMED T	II										
97.	21ECCC03097	SAI SANKARA NARAYANAN S	II										
98.	21ECCC03098	SANDHIYA D	II										
99.	21ECCC03099	SANJAY KUMAR S	II										
100.	21ECCC03100	SANTHINI R	II										
101.	21ECCC03101	SELVA KUMAR M	II										
102.	21ECCC03102	SIVAPRASAD K	II										
103.	21ECCC03103	SIVARANJANI S	II										
104.	21ECCC03104	SIVARANJANI T	II										
105.	21ECCC03105	SOUNDARYA LAKSHMI D	II										
		PRESENT											
		ABSENT											
		COORDINATOR SIGNATURE											

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

SAMPLE QUESTION PAPER WITH ANSWER KEY

1. Which neural network has only one hidden layer between the input and output?

1. Deep neural network
2. Feed-forward neural networks
3. Recurrent neural networks
4. Shallow neural network

Answer: Shallow neural network

2. Deep learning algorithms are _____ more accurate than machine learning algorithms in image classification

1. 0.37%
2. 0.41%
3. 33%
4. 0.4%

Answer: 0.41%

3. How many layers of Deep learning algorithms are constructed?

1. 3
2. 4
3. 2
4. 5

Answer: 4

4. RNNs stands for?

1. Receives neural networks
2. Recurrent neural networks
3. Recording neural networks
4. None pf above

Answer: Recurrent neural networks

5. Which of the following is/are Limitations of deep learning?

1. Obtain huge training datasets
2. Data labeling
3. None of the above
4. All of above

Answer: All of above

6. Which of the following is well suited for perceptual tasks?

1. Recurrent neural networks
2. Convolutional neural networks
3. Reinforcement Learning
4. Feed-forward neural networks

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Answer: Convolutional neural networks

7. CNN is mostly used when there is an?

1. unstructured data
2. structured data
3. None of the above
4. All of above

Answer: structured data

8. Which of the following functions can be used as an activation function in the output layer if we wish to predict the probabilities of n classes (p1, p2..pk) such that the sum of p over all n equals to1?

1. ReLu
2. Softmax
3. Tanh
4. Sigmoid

Answer: Softmax

9. In a neural network, knowing the weight and bias of each neuron is the most important step. If you can somehow get the correct value of weight and bias for each neuron, you can approximate any function. What would be the best way to approach this?

1. Search every possible combination of weights and biases till you get the best value
2. Iteratively check that after assigning a value how far you are from the best values, and slightly change the assigned values values to make them better
3. Assign random values and pray to God they are correct
4. None of these

Answer: Iteratively check that after assigning a value how far you are from the best values, and slightly change the assigned values values to make them better

10. Which of the following is/are Common uses of RNNs?

1. Detect fraudulent credit-card transaction
2. Provide a caption for images
3. Businesses Help securities traders to generate analytic reports
4. All of the above

Answer: All of the above

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

STUDENT'S FEEDBACK FORM

Name of the Student: M. Abilasha	Year / Semester: IV
Name of the Program: Introduction to Deep learning	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples provided during this course	✓				
4	Course delivered by Resource Person		✓			
5	Time Management	✓				
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	This course is very useful for me to learn about Introduction to deep learning				

NPR COLLEGE OF ENGG. & TECHNOLOGY ★ NATHAM

PROGRAM COORDINATOR

HoD/ECE

Head of the Department
Department of Electronics & Communication Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) 624 401.

NPR College of Engineering & Technology
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

STUDENT'S FEEDBACK FORM

Name of the Student: N. Sano Nisha	Year / Semester: III
Name of the Program: Introduction to Deep learning	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices		✓			
3	Examples provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	I have utilized this course to learn lot about Introduction to deep learning				

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PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

STUDENT'S FEEDBACK FORM

Name of the Student : S. Akash	Year / Semester: II
Name of the Program: Introduction to Deep learning	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this course		✓			
7	Any other Comments / Suggestions	This program is very helpful to gain more knowledge				

NPR COLLEGE OF ENGG. & TECHNOLOGY NATHAM

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

STUDENT FEEDBACK SUMMARY REPORT

TOTAL STRENGTH: 105

DATE: 21.05.2022

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1.	Course Content	96	7	2	0	0
2.	Way of exposed new knowledge and practices	97	7	1	0	0
3.	Examples Provided during this course	94	9	2	0	0
4.	Course delivered by Resource Person	95	8	2	0	0
5.	Time Management	95	8	2	0	0
6.	Average	**95.4**	**7.8**	**1.8**	**0**	**0**



COLLEGE OF ENGG. & TECHNOLOGY * NPR NATHAM

PROGRAM COORDINATOR

HoD/ECE

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IQAC

Coordinator - IQAC
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Natham, Dindigul (Dt)-624 40

PRINCIPAL

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

SUMMARY REPORT

The Department of Electronics and Communication Engineering organized a certificate course on "Introduction to Deep learning" on 09.04.2022,16.04.2022,07.05.2022,14.05.2022 and 21.5.2022 at NPRCET Seminar Hall. Ms.P. Sneha,III Year ECE delivered the welcome address during the inauguration function.

Dr.J. Sundararajan, Principal of our college inaugurated the program and delivered the inaugural address. Resources Persons Dr.T.Ruso shared his knowledge with our students. This five days course gives over view about deep learning and its growth. This program also taught the fundamentals and principles of Deep learning and simplify the AI Lifecycle of Preparing Data & Building, Deploying & Managing Your Models. Assess Your AI Journey and Turn Your Machine Learning Insights into Improved Actions. Pattern Detection. Engage an Expert. Predictive Capabilities. The students learnt various existing and emerging technologies of deep learning.

105 Students attended from ECE II, III and IV year classes. Students who participated and successfully completed the Quiz program were awarded with certificates.

Ms.C.Harini, II ECE delivered the vote of thanks.

NPR COLLEGE OF ENGG & TECHNOLOGY NATHAM

PROGRAM COORDINATOR **HoD/ECE** **IQAC** **PRINCIPAL**

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE COURSE ON INTRODUCTION TO DEEP LEARNING

COURSE MATERIAL

MATERIAL LINK:

CHAPTER1: Learn deep learning Programming (programiz.com)

CHAPTER2: https://www.deeplearning.ai/

CHAPTER3: https://www.techtarget.com/searchenterpriseai/definition/deep-learning-deep-neural-network

CHAPTER4:https://hackr.io/tutorials/learn-deep

CHAPTER5:https://www.coursera.org/learn/deep

FURTHER STUDY:

1.Programming deep learning: Getting Started with Sketches (Tab) 2nd Edition, Kindle Edition by Simon monk
2. Exploring deep learning 1st Edition by Jeremy Blum
3. Getting Started with java: The Open-Source Electronics Prototyping Platform (Make) 3rd Edition by Massimo Banzi
4. Deep learning Workshop: A Hands-On Introduction with 65 Projects 1st Edition by John Boxall
5.Learn deep learning Programming for the Arduino 2nd ed. Edition by Jack Purdum

PROGRAM COORDINATOR **HoD/ECE** **PRINCIPAL**

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

---

for the successful completion of certificate course on

"INTRODUCTION TO DEEP LEARNING"

Conducted on 09.04.2022, 16.04.2022, 07.05.2022, 14.05.2022 & 21.05.2022(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

PRINCIPAL
Dr.J.Sundararajan

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Dr.J.Sundararajan

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DEPARTMENT OF ELETRONICS AND COMMUNICATION ENGINEERING

INDEX

COURSE CODE& NAME: 21ECAO04- CRPTOGRAPHY AND NETWORK SECURITY

ACADEMIC YEAR: 2021-2022 **SEMESTER: EVEN** **DURATION: 35 HOURS**

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PROGRAM COORDINATOR **HoD/ECE** **IQAC** **PRINCIPAL**

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Coordinator - IQAC
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From

Dr.S.M.Vijayarajan,

Electronics and Communication Engineering,

NPR College of Engineering and Technology,

Natham-624 401

To

The Principal

NPR College of Engineering and Technology,

Natham-624 401.

Respected Sir,

Sub: Request for permission to conduct certificate Course for ECE students – Reg

We have planned to conduct Add on course on "CRPTOGRAPHY AND NETWORK SECURITY" to our students from 05.07.2022 to 09.07.2022 (5 Days) in our college premises. We are proposed Mr.R.PARTHASARATHI M.E., Senior Engineer, L & T Technology Services, as a resource person for this certificate course program. Kindly permit us to conduct the same.

Thanking you,

NPR COLLEGE OF ENGG & TECHNOLOGY ★ NATHAM

Yours faithfully,

(Dr.S.M.Vijayarajan)

Date:25.06.2022

Place :Natham

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
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NPRCET/OFF/ECE/VAC/2021-2022 DATE:

CIRCULAR

This is to inform that Department of Electronics and Communication Engineering has planned to conduct a Add on course on **CRPTOGRAPHY AND NETWORK SECURITY"** for the students during the end of this even semester 2021-2022.Interested students can enroll their name on or before 03.07.2022

The details of the training program are given below.

COURSE NAME	:	**CRPTOGRAPHY AND NETWORK SECURITY**
RESOURCE PERSON	:	Mr.R.Parthasarathi
VENUE	:	ECE DSP LAB
DATE & DURATION	:	05.07.2022 to 09.07.2022 & 35 Hours
PROGRAM COORDINATOR	:	Dr.S.M.Vijayarajan, Dept.of ECE, NPRCET.

HOD-ECE

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

Copy to:

1. All the HoDs
2. All the Class Rooms
3. Notice Board
4. File
5. Program Coordinator

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

RESOURCE PERSON PROFILE

Name	:	Mr.R.Parthasarathi
Designation	:	Senior Engineer
Company Name	:	L & T Technology Services, Chennai.
About Resource Person	:	L & T Technology Services, Chennai-Senior Engineer AUG 2020 - Present My role is Full Stack Developer and developed web applications using MEAN Stack in the IIOT Sector.AR/VR Application Engineer in the manufacturing sector. Develop Engineer to automate the development process using Jenkins Deloitte India LLP, Chennai-Consultant JAN 2020 - AUG 2020 My role is Full Stack Developer and developed web applications using MEAN Stack in the IIOT Sector. Develop Engineer to automate the development process using Jenkins Redeem Systems Pvt Ltd, Bangalore - Lead Developer DEC 2017 - JAN 2020 KLN College of Information Technology, Madurai - Industry Consultant JULY 2011 - NOV 2017Actively Participated Consultancy Project Implementation in Embedded

NPR COLLEGE OF ENGG & TECHNOLOGY ★ NATHAM

PROGRAM COORDINATOR

HoD/ECE

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

"Add on Course on Crptography and Network Security"

On 5th JULY, 2022

Venue: NPRCET Rear Block Seminar Hall at 9.30 a.m.

Chief Guest

Mr.R.Parthasarathi

L&T Technology Services, Chennai.

Dr.J.Sundararajan

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized By

Department of Electronics and Communication Engineering,

NPR College of Engineering & Technology,

NPR Nagar, Natham.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

AGENDA

- **Inauguration on 5th July 2022**
- Prayer song
- Welcome address by Ms.P.Sneha, III Year ECE
- Felicitation address by Dr.J. Sundararajan, Principal,
- Chief Guest Honoring
- Chief Guest Introduction
- Chief Guest Address
- **Valedictory on 9th July 2022**
- Certificate distribution
- Feedback Session
- Vote of thanks by Ms. C. Harini, II Year ECE
- National Anthem

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

21ECAO04- ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

COURSE CONTENT

CHAPTER 1: Improving Deep Neural Networks

- Introduction to deep learning
- Neural Networks Basics
- Shallow neural networks
- Deep Neural Networks Understanding IoT fundamentals

CHAPTER 2: Improving Deep Neural Networks

- Practical aspects of Deep Learning
- Optimization algorithms
- Hyper-parameter tuning, Batch Normalization
- Programming Frameworks

CHAPTER 3: Convolutional Neural Networks Sequence Models

- Recurrent Neural networks
- Natural Language Processing
- Word Embedding
- Sequence models & Attention mechanism

CHAPTER 4: Deep learning models

- CNNs
- GANs
- YOLO
- Elman Networks

CHAPTER 5: Sensor & Actuators with Arduino

- Foundations of Convolutional Neural Networks
- Deep convolutional models: case studies
- Object detection
- Special applications: Face recognition & Neural style transfer

CRITERIA TO GET CERTIFICATE:

- Students should register their names for this course
- Students must have **85%** attendance.
- Student should secure **75% marks in the Exam.**
-

Prepared by: Mrs.J. Prisca Mary, AP-CSE

Approved By,

HoD/ECE

Head of the Department
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IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

PRINCIPAL

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DEPARTMENT OF ELETRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

REGISTERED STUDENTS NAME LIST

S NO	REGISTER NO	STUDENT NAME	YEAR & DEPT
1.	920818106001	ABILASHA.M	IV-ECE
2.	920818106002	ABINAYA .S	IV-ECE
3.	920818106004	BLESSING.X	IV-ECE
4.	920818106005	DHARSHINI.V	IV-ECE
5.	920818106007	DURGADEVI.B	IV-ECE
6.	920818106008	DURGADEVI.S	IV-ECE
7.	920818106009	HARIPRIYA.M	IV-ECE
8.	920818106010	ILAKKIYA.B	IV-ECE
9.	920818106012	JEYARAJ.S	IV-ECE
10.	920818106013	KIRUTHIKA.R	IV-ECE
11.	920818106014	MANOJ PRABHAKAR,.V	IV-ECE
12.	920818106016	MUKESH KANNA.G	IV-ECE
13.	920818106017	MUTHU VIGNESH.M	IV-ECE
14.	920818106018	NISHA.M	IV-ECE
15.	920818106019	NIVETHA.K.S	IV-ECE
16.	920818106023	PUSHPA PRIYADHARSHINI.R	IV-ECE
17.	920818106024	RAJKUMAR.K	IV-ECE
18.	920818106026	SARITHA RANI.K	IV-ECE
19.	920818106027	SARUMATHI.R	IV-ECE
20.	920818106028	SATHISH KUMAR.G	IV-ECE
21.	920818106029	SEEMA FATHIMA.S	IV-ECE
22.	920818106031	SOWMIYA.P	IV-ECE
23.	920818106032	SREE RAGA SUDHA.K	IV-ECE
24.	920818106035	SWETHA.M	IV-ECE
25.	920818106036	VARSHIINI.B	IV-ECE
26.	920818106037	VENNILA.A	IV-ECE
27.	920818106038	VIGNESH.R	IV-ECE
28.	920818106039	VISHALINI.B	IV-ECE
29.	920818106040	VIVEKA.S	IV-ECE
30.	920818106302	VIGNESH.S	IV-ECE
31.	920819106007	ASMA ROSHAN T	III-ECE
32.	920819106008	BALAJI M (2001)	III-ECE
33.	920819106009	BALAJI M(2002)	III-ECE
34.	920819106010	BLESSY JEBAMANI G	III-ECE
35.	920819106011	CHRISTIYA I	III-ECE
36.	920819106012	DEVI SRI S	III-ECE
37.	920819106013	DHANALAKSHMI P	III-ECE

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38.	920819106014	DHATH VETHA S	III-ECE
39.	920819106015	DHINESH M	III-ECE
40.	920819106016	DIVESH V	III-ECE
41.	920819106017	DIVYA DHARSHINI S	III-ECE
42.	920819106019	HARISHWAR S	III-ECE
43.	920819106020	JOSEPHRUMSBILT R	III-ECE
44.	920819106021	JYOTHIKA B	III-ECE
45.	920819106022	KAMALESH K	III-ECE
46.	920819106023	KARUNIAA J S	III-ECE
47.	920819106024	KEERTHI M	III-ECE
48.	920819106025	KIRTHICK N	III-ECE
49.	920819106026	KISHOREKRISHNAA J	III-ECE
50.	920819106028	MADHUMITHA P	III-ECE
51.	920819106029	MANOJKUMAR A	III-ECE
52.	920819106030	MANOJ KUMAR S	III-ECE
53.	920819106031	MOHAMED ASIF M	III-ECE
54.	920819106032	MOHAMEDIBRAHIM J	III-ECE
55.	920819106033	MOHAN S	III-ECE
56.	920819106049	RENUGA DEVI N	III-ECE
57.	920819106050	RIFAYA S	III-ECE
58.	920819106051	RISHWANA BURVEEN S	III-ECE
59.	920819106052	SANO NISHA N	III-ECE
60.	920819106053	SARAN G V	III-ECE
61.	920819106054	SASMITHA PARVEEN K	III-ECE
62.	920819106055	SHAM HIRUTHIK R	III-ECE
63.	920819106057	SHARMILA DEVI G	III-ECE
64.	920819106058	SHINY RESHMA J	III-ECE
65.	920819106059	SINGARABRINDHA N	III-ECE
66.	920819106060	SNEHA P	III-ECE
67.	920819106061	SOUNDHARYA S	III-ECE
68.	920819106062	SUMUGAPRIYA M	III-ECE
69.	920819106063	THAMBI DURAI P K	III-ECE
70.	920819106064	THARSHITHA S	III-ECE
71.	920819106065	THARUNKUMAR M	III-ECE
72.	920819106066	UMA NANTHINI N	III-ECE
73.	920819106067	VENKATESH P	III-ECE
74.	920819106068	VIKRAM S	III-ECE
75.	920819106069	VISHALI K	III-ECE
76.	920819106070	YASHICA S	III-ECE
77.	920820106019	MAHAVARSHINI S	II-ECE
78.	920820106020	MAHESWARI R	II-ECE
79.	920820106021	MALAVIKA A	II-ECE
80.	920820106022	MANIYAMMAIYAR N	II-ECE

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81.	920820106023	MANOJ S	II-ECE
82.	920820106024	MEERA JAFRIN A	II-ECE
83.	920820106025	MOHAMMED THOUFIQ AGARISH R	II-ECE
84.	920820106026	MUNEESWARI L	II-ECE
85.	920820106027	NANDHINI A	II-ECE
86.	920820106028	NIVETHITHA V	II-ECE
87.	920820106029	PRAVEENKUMAR P	II-ECE
88.	920820106031	ROHITH ABRAHAM J	II-ECE
89.	920820106032	SABEER AHAMED T	II-ECE
90.	920820106033	SAI SANKARA NARAYANAN S	II-ECE
91.	920820106034	SANDHIYA D	II-ECE
92.	920820106035	SANJAY KUMAR S	II-ECE
93.	920820106036	SANTHINI R	II-ECE
94.	920820106037	SELVA KUMAR M	II-ECE
95.	920820106045	UDAIYAPPAN N	II-ECE
96.	920820106046	VASANTHAKUMAR M	II-ECE
97.	920820106301	A.ASWATHAMAN	II-ECE
98.	920820106302	N.S.DURGADEVI	II-ECE
99.	920820106303	N.GAYATHRI	II-ECE
100.	920820106304	PARTHIBAN	II-ECE

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

21ECAO04- CRPTOGRAPHY AND NETWORK SECURITY

COURSE SCHEDULE

Venue: NPRCET Seminar Hall

EXTERNAL RESOURCE PERSON
1.Mr.R.Parthasarathi

INTERNAL RESOURCE PERSON
1.Mr.J.G.Sabarish, AP/ECE
2.Mr.S.Sudhakar, AP/ECE

Day 1	9.30 a.m.to 10.00 a.m.	Inauguration	
	10. 00 a.m. to 11.10 a.m.	Session 1	Network virtualization, **Mr.R.Parthasarathi**
	11.10 a.m. to 11.30 a.m.	*Tea Break*	
	11.30 a.m. to 1.10 a.m.	Session 2	Software-defined networking **Mr.R.Parthasarathi**
	1.10 p.m. to 2.00 p.m.	*Lunch Break*	
	2.00 p.m. to 3.40 p.m.	Session 3	Science DMZ **Mr.J.G.Sabarish**
	3.40 p.m. to 3.50 p.m.	*Tea Break*	
	3.50 p.m. to 4.30 p.m.	Session 4	Computational Devices **Mr.S.Sudhakar**
Day 2	9.30 a.m.to 11.10 a.m.	Session 1	Cloud vulnerabilities **Mr.R.Parthasarathi**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Network vulnerabilities **Mr.S.Sudhakar**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	Types of threats threats **Mr.S.Sudhakar**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	Risk and impacts **Mr.J.G.Sabarish**

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Day 3	9.30 a.m.to 11.10 a.m.	Session 1	Cryptography **Mr.R.Parthasarathi**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Firewalls **Mr.J.G.Sabarish**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	Authentication and authorization **Mr.R.Parthasarathi**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	DDoS defense **Mr.J.G.Sabarish**
Day 4	9.30 a.m.to 11.10 a.m.	Session 1	Transistor and Logic Gates **Mr.S.Sudhakar**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	Moving target defense **Mr.R.Parthasarathi**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	Access control schemes **Mr.J.G.Sabarish**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	Application of various Computational Devices **Mr.R.Parthasarathi**
Day 5	9.30 a.m.to 11.10 a.m.	Session 1	Hash Function **Mr.R.Parthasarathi**
	11.10 a.m. to 11.30 a.m.	Tea Break	
	11.30 a.m. to 1.10 p.m.	Session 2	AES **Mr.S.Sudhakar**
	1.10 p.m. to 2.00 p.m.	Lunch Break	
	2.00 p.m. to3.40 p.m.	Session 3	SHA-256 **Mr.S.Sudhakar**
	3.40 p.m. to 3.50 p.m.	Tea Break	
	3.50 p.m. to 4.30 p.m.	Session 4	Applications **Mr.R.Parthasarathi**
	4.30 p.m. to 5.00 p.m.	Valedictory	

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Department of Computer Science & Engineering
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Natham, Dindigul (DT) - 624 401.

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEEIRNG

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

STUDENTS ATTENDANCE

S. NO.	COURSE CODE	NAME OF THE STUDENT	YEAR	05.07.2022		06.07.2022		07.07.2022		08.07.2022		09.07.2022	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	21ECAO04001	ABILASHA.M	IV										
2.	21ECAO04002	ABINAYA .S	IV										
3.	21ECAO04003	BLESSING.X	IV										
4.	21ECAO04004	DHARSHINI.V	IV										
5.	21ECAO04005	DURGADEVI.B	IV										
6.	21ECAO04006	DURGADEVI.S	IV										
7.	21ECAO04007	HARIPRIYA.M	IV										
8.	21ECAO04008	ILAKKIYA.B	IV										
9.	21ECAO04009	JEYARAJ.S	IV										
10.	21ECAO04010	KIRUTHIKA.R	IV										
11.	21ECAO04011	MANOJ PRABHAKAR.V	IV										
12.	21ECAO04012	MUKESH KANNA.G	IV										
13.	21ECAO04013	MUTHU VIGNESH.M	IV										
14.	21ECAO04014	NISHA.M	IV										
15.	21ECAO04015	NIVETHA.K.S	IV										
16.	21ECAO04016	PUSHPA PRIYADHARSHINI.R	IV	AB	AB								
17.	21ECAO04017	RAJKUMAR.K	IV										
18.	21ECAO04018	SARITHA RANI.K	IV										
19.	21ECAO04019	SARUMATHI.R	IV										
20.	21ECAO04020	SATHISH KUMAR.G	IV										
21.	21ECAO04021	SEEMA FATHIMA.S	IV										
22.	21ECAO04022	SOWMIYA.P	IV										
23.	21ECAO0403	SREE RAGA SUDHA.K	IV										
24.	21ECAO04024	SWETHA.M	IV										
25.	21ECAO04025	VARSHIINI.B	IV										
26.	21ECAO04026	VENNILA.A	IV										
27.	21ECAO04027	VIGNESH.R	IV										
28.	21ECAO04028	VISHALINI.B	IV										
29.	21ECAO04029	VIVEKA.S	IV										
30.	21ECAO04030	VIGNESH.S	IV										
31.	21ECAO04031	ASMA ROSHAN T	III										
32.	21ECAO04032	BALAJI M (2001)	III										
33.	21ECAO04033	BALAJI M(2002)	III										
34.	21ECAO04034	BLESSY JEBAMANI G	III										
35.	21ECAO04035	CHRISTIYA I	III			AB	AB						
36.	21ECAO04036	DEVI SRI S	III										

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37.	21ECAO04037	DHANALAKSHMI P	III											
38.	21ECAO04038	DHATH VETHA S	III											
39.	21ECAO04039	DHINESH M	III					AB	AB					
40.	21ECAO04040	DIVESH V	III											
41.	21ECAO04041	DIVYA DHARSHINI S	III											
42.	21ECAO04042	HARISHWAR S	III											
43.	21ECAO04043	JOSEPHRUMSBILT R	III											
44.	21ECAO04044	JYOTHIKA B	III											
45.	21ECAO04045	KAMALESH K	III											
46.	21ECAO04046	KARUNIAA J S	III											
47.	21ECAO04047	KEERTHI M	III											
48.	21ECAO04048	KIRTHICK N	III											
49.	21ECAO04049	KISHOREKRISHNAA J	III											
50.	21ECAO04050	MADHUMITHA P	III											
51.	21ECAO04051	MANOJKUMAR A	III											
52.	21ECAO04052	MANOJ KUMAR S	III											
53.	21ECAO04053	MOHAMED ASIF M	III											
54.	21ECAO04054	MOHAMEDIBRAHIM J	III											
55.	21ECAO04055	MOHAN S	III											
56.	21ECAO04056	RENUGA DEVI N	III											
57.	21ECAO04057	RIFAYA S	III											
58.	21ECAO04058	RISHWANA BURVEEN S	III											
59.	21ECAO059	SANO NISHA N	III											
60.	21ECAO04060	SARAN G V	III											
61.	21ECAO04061	SASMITHA PARVEEN K	III											
62.	21ECAO04062	SHAM HIRUTHIK R	III											
63.	21ECAO04063	SHARMILA DEVI G	III											
64.	21ECAO04064	SHINY RESHMA J	III											
65.	21ECAO04065	SINGARABRINDHA N	III											
66.	21ECAO04066	SNEHA P	III											
67.	21ECAO04067	SOUNDHARYA S	III											
68.	21ECAO04068	SUMUGAPRIYA M	III											
69.	21ECAO04069	THAMBI DURAI P K	III											
70.	21ECAO04070	THARSHITHA S	III											
71.	21ECAO04071	THARUNKUMAR M	III											
72.	21ECAO04072	UMA NANTHINI N	III											
73.	21ECAO04073	VENKATESH P	III											
74.	21ECAO04074	VIKRAM S	III											
75.	21ECAO04075	VISHALI K	III											
76.	21ECAO04076	YASHICA S	III											
77.	21ECAO04077	MAHAVARSHINI S	II											
78.	21ECAO04078	MAHESWARI R	II											
79.	21ECAO04079	MALAVIKA A	II											

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80.	21ECAO04080	MANIYAMMAIYAR N	II	1	1	1	1	1	1	AB	AB	1	1
81.	21ECAO04081	MANOJ S	II	1	1	1	1	1	1	1	1	1	1
82.	21ECAO04082	MEERA JAFRIN A	II	1	1	1	1	1	1	1	1	1	1
83.	21ECAO04083	MOHAMMED THOUFIQ AGARISH R	II	1	1	1	1	1	1	1	1	1	1
84.	21ECAO04084	MUNEESWARI L	II	1	1	1	1	1	1	1	1	AB	AB
85.	21ECAO04085	NANDHINI A	II	1	1	1	1	1	1	1	1	1	1
86.	21ECAO04086	NIVETHITHA V	II	1	1	1	1	1	1	1	1	1	1
87.	21ECAO04087	PRAVEENKUMAR P	II	1	1	1	1	1	1	1	1	1	1
88.	21ECAO04088	ROHITH ABRAHAM J	II	1	1	1	1	1	1	1	1	1	1
89.	21ECAO04089	SABEER AHAMED T	II	1	1	1	1	1	1	1	1	1	1
90.	21ECAO04090	SAI SANKARA NARAYANAN S	II	1	1	1	1	1	1	1	1	1	1
91.	21ECAO04091	SANDHIYA D	II	1	1	1	1	1	1	1	1	1	1
92.	21ECAO04092	SANJAY KUMAR S	II	1	1	1	1	1	1	1	1	1	1
93.	21ECAO04093	SANTHINI R	II	1	1	1	1	1	1	1	1	1	1
94.	21ECAO04094	SELVA KUMAR M	II	1	1	1	1	1	1	1	1	1	1
95.	21ECAO04095	UDAIYAPPAN N	II	1	1	1	1	1	1	1	1	1	1
96.	21ECAO04096	VASANTHAKUMAR M	II	1	1	1	1	1	1	1	1	1	1
97.	21ECAO04097	A.ASWATHAMAN	II	1	1	1	1	1	1	1	1	1	1
98.	21ECAO04098	N.S.DURGADEVI	II	1	1	1	1	1	1	1	1	1	1
99.	21ECAO04099	N.GAYATHRI	II	1	1	1	1	1	1	1	1	1	1
100.	21ECAO04100	PARTHIBAN	II	1	1	1	1	1	1	1	1	1	1
		PRESENT		99	99	99	99	99	99	99	99	99	99
		ABSENT		1	1	1	1	1	1	1	1	1	1
		COORDINATOR SIGNATURE											

HoD/ECE

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

21ECC04- CRPTOGRAPHY AND NETWORK SECURITY

SAMPLE QUESTION PAPER WITH ANSWER KEY

1. _____ is the science and art of transforming messages to make them secure and immune to attacks

A. Cryptography
B. Calligraphy
C. Cryptanalysis
D. None of the above

Answer: A

2. In symmetric-key cryptography, the key locks and unlocks the box is

A. Shared
B. Same
C. Private
D. Public
E.

Answer : B

3. The acronym DES stands for

A. Digital Evaluation System
B. Digital Encryption System
C. Digital Encryption Standard
D. Double Encryption Standard

Answer: C

4. Which of the following is not a physical layer vulnerability?

A. Physical damage or destruction of data and hardware
B. Keystroke and other input logging
C. Physical theft of data and hardware
D. Unauthorized network access

Answer: D

5. Encryption Strength is based on

A. Length of key
B. Secrecy of key
C. Strength of algorithm
D. All of the above

Answer: D

6. An asymmetric-key (or public-key) cipher uses

A. 2 Key
B. 4 Key
C. 3 Key
D. 1 Key
Answer : A

7. In asymmetric key cryptography, the private key is kept by _____

A. Sender
B. Receiver
C. All the connected devices to the network
D. Sender and receiver
Answer: B

8. The keys used in cryptography are

A. Private Key
B. Public Key
C. Secret Key
D. All of the above
Answer : D

9. The _____ is the original message before transformation

A. Secret-text
B. Plaintext
C. Ciphertext
D. None of the above
Answer : B

10. The _____ is the message after transformation

A. Plaintext
B. Secret-text
C. Ciphertext
D. None of the above
Answer : C

PROGRAM COORDINATOR

COLLEGE OF ENGG. & TECHNOLOGY ★ NPR NATHAM

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

STUDENT'S FEEDBACK FORM

Name of the Student: K. Sarithanani	Year / Semester: IV - 8
Name of the Program: Cryptography and Network security	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples provided during this course	✓				
4	Course delivered by Resource Person		✓			
5	Time Management	✓				
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	This course is very helpful to gain more knowledge.				

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

STUDENT'S FEEDBACK FORM

Name of the Student: Keerthi. M	Year / Semester: III - 6
Name of the Program: Cryptography and Network Security	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices		✓			
3	Examples provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this course	✓				
7	Any other Comments / Suggestions	I have utilized this course to learn lot about Network Security				

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

STUDENT'S FEEDBACK FORM

Name of the Student: D. Sandhuja	Year / Semester: II – 4
Name of the Program: Cryptography and Network Security	

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1	Course Content	✓				
2	Way of exposed new knowledge and practices	✓				
3	Examples provided during this course	✓				
4	Course delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this course		✓			
7	Any other Comments / Suggestions	This course is very useful to me to learn about Network Security.				

PROGRAM COORDINATOR

HoD/ECE

Head of the Department
Department of Electronics & Communication Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) 624 401.

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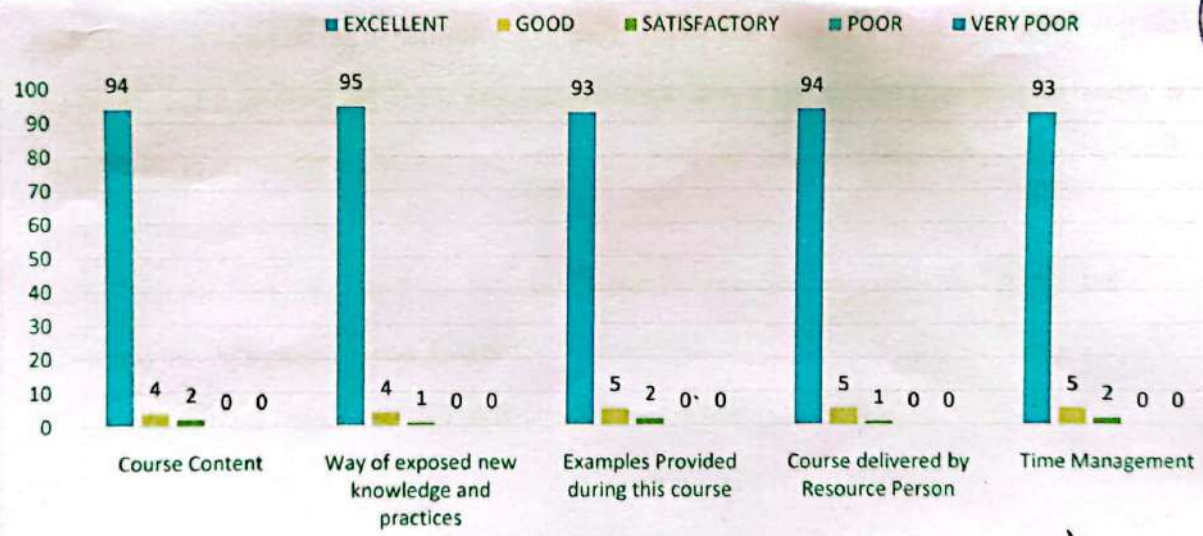
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

STUDENT FEEDBACK SUMMARY REPORT

TOTAL STRENGTH: 100 **DATE: 09.07.2022**

S.NO.	CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
1.	Course Content	94	4	2	0	0
2.	Way of exposed new knowledge and practices	95	4	1	0	0
3.	Examples Provided during this course	93	5	2	0	0
4.	Course delivered by Resource Person	94	5	1	0	0
5.	Time Management	93	5	2	0	0
6.	Average	**93.8**	**4.6**	**1.6**	**0**	0



PROGRAM COORDINATOR HoD/ECE IQAC PRINCIPAL

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

SUMMARY REPORT

`The Department of Electronics and Communication Engineering organized a Certificate program on **"CRPTOGRAPHY AND NETWORK SECURITY"** from 05.07.2022 to 09.07.2022 (5 Days) at ECE DSP Laboratory.

Ms.Ilakkiya.B , IV ECE delivered the welcome address during the inauguration function.

Dr.J.Sundararajan, Principal of our college inaugurated the program delivered the inaugural address. Resources Person Mr.R.Parthasarathi shared their knowledge with our students. This five days course gave over view about Crptography and Network Security.

This program also taught the fundamentals and principles of Network security combines multiple layers of defenses at the edge and in the network. Each network security layer implements policies and controls. Authorized users gain access to network resources, but malicious actors are blocked from carrying out exploits and threats and It involves physically protecting network servers and devices from external threats, as well as taking steps to secure the digital network. The students learnt about existing and proposed technologies of computer Network security.

100 Students attended from ECE II, III and IV year. Students who participated and successfully completed the Quiz program were awarded with certificates.

Ms. Renuga Devi. N, III ECE delivered the vote of thanks address.

PROGRAM COORDINATOR | HoD/ECE | IQAC | PRINCIPAL

Head of the Department
Department of Electronics & Communication Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) 624 401.

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD ON COURSE ON CRPTOGRAPHY AND NETWORK SECURITY

COURSE MATERIAL

MATERIAL LINK:

CHAPTER1: https://www.geeksforgeeks.org/cryptography-and-network-security-principles/

CHAPTER2: Cryptography | BOOKS BY WILLIAM STALLINGS

CHAPTER3: https://www.tutorialspoint.com/what-is-cryptography-in-computer-network

CHAPTER4:https://hackr.io/tutorials/learn-deep

CHAPTER5:https://www.coursera.org/learn/deep

FURTHER STUDY:

1.Programming cryptography Getting Started with Sketches (Tab) 2nd Edition, Kindle Edition by Simon monk
2. Exploring Network security 1st Edition by Jeremy Blum
3. Getting Started with network security: The Open-Source Electronics Prototyping Platform (Make) 3rd Edition by Massimo Banzi
4 Cryptography and Network security: A Hands-On Introduction with 65 Projects 1st Edition by John Boxall
5.Learn Networking essential for the Arduino 2nd ed. Edition by Jack Purdum

PROGRAM COORDINATOR

HoD/ECE

PRINCIPAL
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Head of the Department
Department of Electronics & Communication Engineering
NPR College of Engineering & Technology
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

Ms.D.Sandhiya, II - ECE

for the successful completion of Add on Course on

"CRPTOGRAPHY AND NETWORK SECURITY"

Conducted on 05.07.2022 to 09.07.2022(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

Mr. V. Dinesh III-ECE

for the successful completion of Add on Course on

"CRPTOGRAPHY AND NETWORK SECURITY"

Conducted on 05.07.2022 to 09.07.2022(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt), 624401

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE OF COMPLETION

This certificate is presented to

Ms. S. Abinaya, IV - ECE

for the successful completion of Add on Course on

"CRPTOGRAPHY AND NETWORK SECURITY"

Conducted on 05.07.2022 to 09.07.2022(5 days)

HOD-ECE
Dr.A.Gopisaminathan

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt.) 624 401

PRINCIPAL
Dr.J.Sundararajan

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE

INDEX

COURSE NAME: **21EEAO01 & DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM**

ACADEMIC YEAR: 2021-22 **SEMESTER:** ODD **DURATION:** 35 HOURS

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PROGRAM CO-ORDINATOR

HOD/EEE

IQAC Coordinator - IQAC
NPR College of Engineering & Technology
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PRINCIPAL

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DATE: 18/08/2021

From:

Dr.M.Iyappan,
Head of the Department,
Electrical and Electronics Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Request for permission to conduct an Add on Course for EEE students – Regarding.

With reference to the above subject, the application is hereby submitted for your approval to conduct an Add on Course on "**Design of Industrial Power Distribution and Lighting System**" to our students from 25/08/2021 to 30/08/2021 (5 Days) in our college premises. In this regard, we have proposed **Mr. C.Divakar, SEN Electrical Design Systems.** Chennai and his team as the resource persons for this Add on Course. Kindly permit us to conduct the same.

Thanking you,.

Yours faithfully,

NPR COLLEGE OF ENGG. & TECHNOLOGY NATHAM

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

RESOURCE PERSON'S PROFILE

Name	:	**Mr. C.Divakar**
Designation	:	Design Engineer
Name of the Company	:	SEN Electrical Design Systems, Chennai.
About Resource Person	:	He is having 19 years Experience in Managing Projects and Resources in Electrical System Design and Control Systems, Knowledge of low and medium voltage power systems and applicable standards.

Name	:	**Mr.K.Manojkumar**
Designation	:	Field Application Engineer cum Consultant.
Name of the Company	:	SEN Electrical Design Systems. Chennai
About Resource Person	:	His Experience in designing, developing and maintaining electrical systems and components and Lead design engineer and consultant

PROGRAM COORDINATOR

HOD/EEE

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NPRCET/OFF/EEE/VAC/2021-22

DATE: 19/08/2021

CIRCULAR

This is to inform that Department of Electrical and Electronics Engineering has planned to conduct an Add on Course on "**Design of Industrial Power Distribution and Lighting System**" for our EEE students in our college campus during this odd semester 2021-2022. Interested students can enroll their name to the program coordinator on or before 23/08/2021.

The details of the training program are given below:

COURSE NAME	:	**Design of Industrial Power Distribution & Lighting System**
RESOURCE PERSONS	:	1.Mr. C.Divakar 2.Mr.K.Manoj Kumar SEN Electrical Design Systems. Chennai.
VENUE	:	PSS Main Lab
DATE & DURATION	:	25/08/2021 to 30/08/2021 & 35 Hours

PROGRAM COORDINATOR : Mr.T.Sivakumar, AP/EEE

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. All the HoDs
2. IQAC
3. Notice Board
4. File
5. All the class rooms
6. Program Coordinator

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

Add on Course on

DESIGN OF INDUSTRIAL POWER

DISTRIBUTION AND LIGHTING SYSTEM

On 25th August, 2021

Venue: RearBlock First Floor Seminar Hall at 9.30 a.m.

CHIEF GUEST

Mr. C. Divakar

SEN Electrical Design Systems. Chennai.

Dr.J.SUNDARARAJAN

Principal

NPR College of Engineering & Technology

Felicitates the Function

Organized By

Department of Electrical and Electronics Engineering,

NPR College of Engineering & Technology, NPR Nagar,

Natham.

NPR COLLEGE OF ENGG. & TECHNOLOGY ★ NATHAM

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

AGENDA

- Inauguration on 25th August, 2021
- Prayer song
- Welcome address by Ms.C.Ushadevi, Third Year student.
- Felicitation address by Dr.J.Sundararajan, Prncipal, NPRCET.
- Chief Guest honoring
- Chief Guest introduction
- Chief Guest address

- Valedictory on 30th August, 2021
- Introduction
- Certificate distribution
- Feedback session
- Vote of thanks by Mr.R.B.Saran, Final year student.
- National Anthem

NPR COLLEGE OF ENGG & TECHNOLOGY NATHAM

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

COURSE CONTENT

CHAPTER-1: SYSTEM PLANNING

- Basic design considerations
- Planning guide for the supply and distribution system
- Power system modernization and evaluation studies/programs
- Voltage considerations
- Voltage control in electric power systems
- Voltage selection
- Voltage ratings for low-voltage utilization equipment
- Voltage drop considerations in locating the low-voltage/ high-voltage
- Calculation of voltage drops

CHAPTER-2: COST ESTIMATING OF INDUSTRIAL POWER SYSTEMS

- Preparing the cost estimate
- Classes of estimates
- Equipment and material costs
- installation costs
- Other costs

CHAPTER-3 LIGHTING DESIGN

- Different entities of illuminating systems
- Light sources: daylight, incandescent, electric discharge, fluorescent, arc lamp and Lasers
- Luminaries, wiring, switching & control circuits
- 76 Interior lighting – industrial, residential, office departmental stores, indoor stadium, theatre and hospitals.
- Exterior lighting- flood, street, aviation and transport lighting, lighting for displays and signaling-neon signs, LED-LCD displays beacons and lighting for surveillance
- Different type of loads and their individual protections
- Selection of cable/wire sizes; potential sources of fire hazards and precautions.
- Prepare layout of Different type lights
- Luminaries for road and street lighting

NPR COLLEGE OF ENGG. & TECHNOLOGY NATHAM

CHAPTER-4 CABLE SIZING AND SELECTION OF SINGLE PHASE AND THREE PHASE

- Load Details Calculation
- Cable type and Construction features
- Site Installation Conditions
- Cable Selection Based on Current Rating of feeder
- Base Current Ratings of feeder
- Installed Current Ratings of Cable
- Cable Selection and Coordination with Protective Devices
- Feeders load detail
- Motors load detail
- Voltage Drop of cable
- Cable Impedances
- Maximum Permissible Voltage Drop by ANSI and IEC std.
- Calculating Maximum Cable Length due to Voltage Drop
- Short Circuit Temperature Rise calculation of cable
- selection Minimum Cable Size Due to Short Circuit Temperature Rise

CHAPTER-5 INTERNAL ELECTRIFICATION DESIGN

- Electrical Layout in residential building using Auto CAD
- Selection of house wiring
- Sizing and Selection of Conduit
- Sizing and selection of Switch Socket
- Calculation of load on circuit
- Design of sub circuit (Lighting Circuit and Power Circuit)
- Calculation of Earthing for residential buildings
- Sizing and selection of low voltage switchgears (MCB, MCCB, RCB, RCBO MPCB) Refer Std. IS 4648, CPWD

CHAPTER-6 PROTECTION OF BUILDINGS AND ALLIED STRUCTURES AGAINST LIGHTNING

- Method of Lightening protection
- Basic Consideration for Protection
- Calculations for Evaluating the Need for Protection
- Calculation of Protective Angles And Zone of Protection For Various Forms of Air Termination
- Selection of lightening protection device
- Selection of ESE type Lightening Protection

CHAPTER-7 DESIGN AND ENGINEERING OF TRANSMISSION LINE

- Transmission Planning
- Indian Electricity Rules and State Regulations for transmission line
- Choice of Route of transmission line
- Selection of conductors for over head transmission
- Spacing of Conductors in transmission lines
- Calculation of SAG and Tension
- Overhead transmission line Clearance
- Selection of structure Pole, Lattice, Tower
- Survey of transmission line upto 220KV
- Sag Template and Tower Spotting
- Tower Erection at Site Condition
- Choice of Spans for 440kV transmission
- Transmission line Earthing Calculation
- Selection of Transmission line Insulator and fittings

CHAPTER-8 DESIGN AND ENGINEERING OF SWITCH YARD

- Electrical Clearance of substation
- Insulation Coordination calculation of Equipment
- Outdoor Substation Layout
- Types of bus-bar schemes of Substation
- Substation Main Equipment
- sizing of Transformers
- Shunt Capacitors
- Static VAR Systems
- Selection and Sizing of Voltage Transformers (VT) for switchyards
- Selection and Sizing of Current Transformers (CT)
- HT/LT Circuit Breaker Selection and Sizing
- Control & Relay Panels
- Benefits of Substation Automation system
- selection and sizing of Disconnections and earth switches (isolators)
- selection and sizing of Lightning Protection
- Selection and sizing of Bus Support Insulators



40

CRITERIA TO GET CERTIFICATE

- Students should register their names for this course
- Students must have 85% attendance
- Students should secure 50% marks in the exam

Prepared By: Mr.T.SIVAKUMAR, AP/EEE

HOD/EEE

IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401.

PRINCIPAL

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

REGISTERED STUDENT'S NAME LIST

S.No.	Reg. No.	Name of the student
1.	920818105001	Arivuselvan S
2.	920818105002	Deena Karthick.M
3.	920818105003	Dinesh Kumar.M
4.	920818105004	Manivel.C
5.	920818105005	Monika.V
6.	920818105006	Sanjay Kishore K.M
7.	920818105007	Saran R.B
8.	920818105701	Vigneshwaran.K
9.	920819105001	Ahamed Afzar A
10.	920819105002	Aravindkumar K
11.	920819105003	Guru Prasath A
12.	920819105004	Karthi Keyan R
13.	920819105005	Kasthuri M
14.	920819105006	Lakshmi Priya A
15.	920819105007	Logeshwaran N
16.	920819105009	Pitchiyatha D
17.	920819105010	Poornakumar V
18.	920819105011	Pradapkannan B
19.	920819105012	Rajamurugan M
20.	920819105013	Rajasekar M
21.	920819105014	Sujeethran S
22.	920819105015	Ushadevi C
23.	920819105016	Vignesh M
24.	920820105301	Arunkumar.S

PROGRAM COORDINATOR

HOD/EEE

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

Venue: PSS LAB **Date: 25/08/2021**

External Resource Persons:	**Internal Resource Persons:**
1. Mr. C. Divakar, 2. Mr.K.Manojkumar, SEN Electrical Design Systems. Chennai.	1.Mr.T.Sivakumar, AP/EEE 2.Mr.S.Sathiyamoorthi, AP/EEE

Day 1 **25.08.2021**	9.00 a.m	Registration	
	9.30 a.m to 10.00 a.m	Inauguration	
	10. 00 a.m to11.10 a.m	Session 1	System Planning-Basic design considerations, Planning guide for the supply and distribution system Mr. C. Divakar
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Power system modernization and evaluation studies/programs Voltage control in electric power systems. Mr. C.Divakar
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to3.40 p.m	Session 3	Voltage selection Voltage ratings for low-voltage utilization equipment Mr.T.Sivakumar,AP/EEE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Voltage drop considerations in locating the low-voltage/ high-voltage Mr.K.Manojkumar

NPRCET COLLEGE OF ENGG & TECHNOLOGY NATHAM

Day 2 **26.08.2021**	9.30 a.m to 11.10 a.m	Session 1	Cost Estimating of Industrial Power Systems-Preparing the cost estimate Classes of estimates Mr.K.Manojkumar
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Equipment and material costs, installation costs, other costs Mr. C.Divakar
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Lighting Design-Different entities of illuminating Mr.K.Manojkumar
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Luminaries, wiring, switching & control circuits Mr. C.Divakar

Day 3 **27.08.2021**	9.30 a.m to 11.10 a.m	Session 1	Design of sub circuit (Lighting Circuit and Power Circuit) Mr.S.Sathyamoorthi,AP/EEE
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Site Installation Conditions,Cable Selection Based on Current Rating of feeder Mr.T.Sivakumar,AP/EEE,AP/EEE
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Cable Sizing and selection of Single Phase and Three Phase Load Details Calculation Mr.S.Sathyamoorthi ,AP/EEE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Internal Electrification Design Electrical Layout in residential building using Auto CAD Mr.T.Sivakumar,AP/EEE,
Day 4 **28.08.2021**	9.30 a.m to 11.10 a.m	Session 1	Design And Engineering Of Transmission Line Mr.S.Sathyamoorthi ,AP/EEE
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Calculation of SAG and Tension Survey of transmission line upto 220KV Mr.T.Sivakumar,AP/EEE
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Sag Template and Tower Spotting Tower Erection at Site Condition Mr.S.Sathyamoorthi ,AP/EEE
	3.40 p.m to 3.50 p.m	*Tea Break*	

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	3.50 p.m to 4.30 p.m	Session 4	Transmission line Earthing Calculation,SelectionofTransmission line Insulator and fittings Mr.T.Sivakumar,AP/EEE
Day 5 **30.08.2021**	9.30 a.m to 11.10 a.m	Session 1	Design and Engineering of Switchyard, Electrical Clearance of substation Mr. C.Divakar
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Outdoor Substation Layout, Substation Main Equipment sizing of Transformer, shunt capacitors, Static VAR Systems Mr.K.Manojkumar
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Selection and Sizing of Voltage Transformers (VT), Current Transformers (CT) for switchyards Benefits of Substation Automation system Mr. C.Divakar
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	selection and sizing of Disconnections and earth switches Lightning Protection Bus& Support Insulators Mr.K.Manojkumar
	4.30 p.m to 5.00 p.m	Valedictory	

PROGRAM COORDINATOR **HOD/EEE** **IQAC** **PRINCIPAL**

Coordinator - IQAC
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Principal
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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

STUDENT'S ATTENDANCE

S.No.	Reg.No.	Name of the student	25.08.2021		26.08.2021		27.08.2021		28.08.2021		30.08.2021	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	920818105001	Arivuselvan S	/	/	/	/	/	/	/	/	/	/
2.	920818105002	Deena Karthick.M	/	/	/	/	/	/	/	/	AB	AB
3.	920818105003	Dinesh Kumar.M	/	/	/	/	/	/	/	/	/	/
4.	920818105004	Manivel.C	/	/	/	/	AB	AB	/	/	/	/
5.	920818105005	Monika.V	/	/	/	/	/	/	/	/	/	/
6.	920818105006	Sanjay Kishore K.M	/	/	/	/	/	/	/	/	/	/
7.	920818105007	Saran R.B	/	/	/	/	/	/	/	/	/	/
8.	920818105701	Vigneshwaran.K	/	/	/	/	/	/	/	/	/	/
9.	920819105001	Ahamed Afzar A	/	/	AB	AB	/	/	/	/	/	/
10	920819105002	Aravindkumar K	/	/	/	/	/	/	/	/	/	/
11	920819105003	Guru Prasath A	/	/	/	/	/	/	/	/	/	/
12	920819105004	Karthi Keyan R	/	/	/	/	/	/	/	/	AB	AB
13	920819105005	Kasthuri M	/	/	/	/	/	/	/	/	/	/
14	920819105006	Lakshmi Priya A	/	/	/	/	/	/	/	/	/	/
15	920819105007	Logeshwaran N	/	/	/	/	/	/	/	/	/	/
16	920819105009	Pitchiyatha D	/	/	/	/	/	/	/	/	/	/
17	920819105010	Poornakumar V	/	/	/	/	/	/	/	/	/	/
18	920819105011	Pradapkannan B	/	/	/	/	/	/	/	/	/	/
19	920819105012	Rajamurugan M	/	/	/	/	/	/	/	/	/	/
20	920819105013	Rajasekar M	/	/	/	/	/	/	AB	AB	/	/
21	920819105014	Sujeethran S	/	/	/	/	/	/	/	/	/	/
22	920819105015	Ushadevi C	/	/	/	/	/	/	/	/	/	/
23	920819105016	Vignesh M	/	/	/	/	/	/	/	/	/	/
24	920820105301	Arunkumar.S	/	/	/	/	/	/	/	/	/	/
PRESENT			24	24	23	23	23	23	23	23	22	22
ABSENT			-NIL-	-NIL-	01	01	01	01	01	01	02	02
TOTAL			24	24	24	24	24	24	24	24	24	24
PROGRAM COORDINATOR												

PROGRAM CO ORDINATOR

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

QUIZ QUESTION PAPER WITH ANSWER KEY

1. By which of the following methods motor rating for variable load drives can be determined?

A) Method of average losses
B) Equivalent current method
C) Equivalent torque method
D) All of the above

2. _____ are used for construction of core of electromagnets.

A) Soft magnetic materials
B) Hard magnetic materials
C) Either A or B
D) None of the above

3. _____ are always double layer type.

A) Closed windings
B) Open windings
C) Either A or B
D) None of the above

4. Power transformers should be designed to have maximum efficiency.

A) At one-fourth load
B) At one-half load
C) At or near full load
D) Any of the above

5. _____ is the common method of applying brushes to the commutator.

A) Radial
B) Trailing
C) Reaction
D) All of the above

6. The cold rolled grain oriented steel has _____ permeability in the direction of the grain orientation.

A) Minimum
B) Maximum
C) Nil
D) None of the above

7. The voltage control in electric supply networks in required on account of which of the following reasons?

A) Adjustment of voltage at consumers premises within statutory limits
B) Control of active and reactive power
C) Adjustment of short period daily and seasonal voltage variations in accordance with the variations of the load.
D) All of the above

8. For large power transformers, self oil cooled type or air blast type which of the following values of current density may be used?

A) 1.0 to 1.2 A/mm^2
B) 1.5 to 2.0 A/mm^2
C) 2.2 to 3.2 A/mm^2
D) 3.2 to 4.2 A/mm^2

9. Which of the following in an application of D.C. motors?

A) Traction
B) Drives for process industry
C) Battery driven vehicles
D) All of the above

10. _____ brushes are fragile and cause excessive wear of commutator.

A) Natural graphite
B) Hard carbon
C) Electro graphite
D) Metal graphite

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ANSWERS:

1) D

2) A

3) A

4) C

5) D

6) B

7) D

8) C

9) D

10) A

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ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

STUDENT'S FEEDBACK FORM

Name of the Student : M. Dinesh Kumar	Year / Semester: IV / 07

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices	✓				
3	Examples Provided during this Course	✓				
4	Course Delivered by Resource Person		✓			
5	Time Management	✓				
6	Overall rating of this Course	✓				
7	Any Other Comments / Suggestions	—				

PROGRAM COORDINATOR

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ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

STUDENT'S FEEDBACK FORM

Name of the Student : K. Aravind Kumar	Year / Semester: III / 05

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices	✓				
3	Examples Provided during this Course	✓				
4	Course Delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this Course		✓			
7	Any Other Comments / Suggestions	NA				

PROGRAM COORDINATOR

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ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

STUDENT'S FEEDBACK FORM

Name of the Student : B. Pradapkannan	**Year / Semester:** III / 05

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices		✓			
3	Examples Provided during this Course	✓				
4	Course Delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this Course	✓				
7	Any Other Comments / Suggestions	Nil				

PROGRAM COORDINATOR

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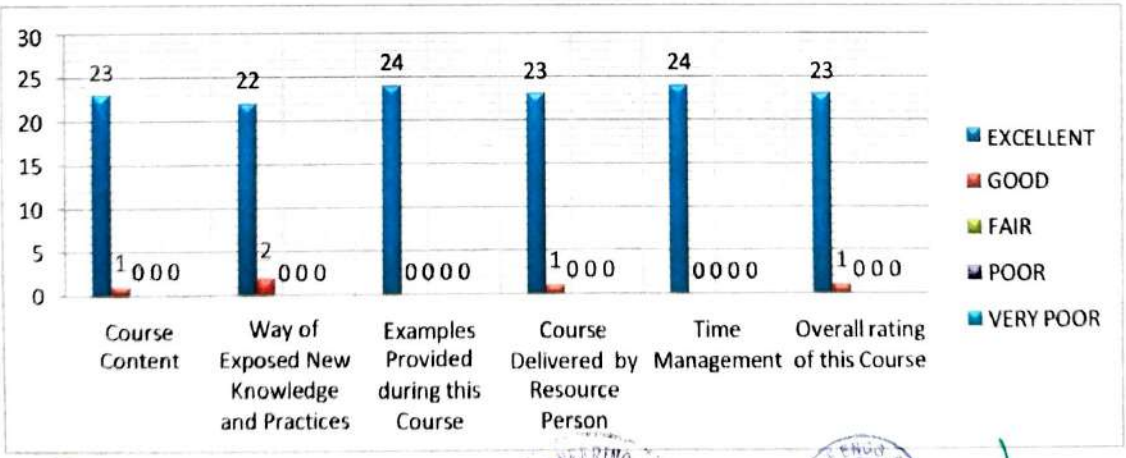
ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM
STUDENT'S FEEDBACK ANALYSIS REPORT

TOTAL STRENGTH: 24 **DATE: 30-08-2021**

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	23	01	00	00	00
2	Way of Exposed New Knowledge and Practices	22	02	00	00	00
3	Examples Provided during this Course	24	00	00	00	00
4	Course Delivered by Resource Person	23	01	00	00	00
5	Time Management	24	00	00	00	00
6	Overall rating of this Course	23	01	00	00	00
	Average	23.16	0.833	00	00	00

Total number of students successfully completed the course: 24



PROGRAM COORDINATOR

HOD/EEE

IQAC Coordinator - IQAC
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PRINCIPAL
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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

SUMMARY REPORT

The Department of Electrical and Electronics Engineering Organized an Add on Course on **"Design of Industrial Power Distribution and Lighting System"** from 25-08-2021 to 30-08-2021 (5 days) at PSS Lab, during the inauguration function on 25 th August, 2021 third year student Ms.C.Ushadevi delivered welcome address.

Dr.J.Sundararajan, Principal of our college inaugurated the function and delivered the inaugural address. **Mr.C.Divakar and Mr.K.Manojkumar,** SEN Electrical Design Systems. Chennai had participated with us and shared their knowledge with our students.

These five days course gave a good overview on **Electrical System Design** and provided lots of information regarding the topic. In addition to this, also they gave Hands on training for Electrical Design the information on Design for various types of **Electrical Systems**.

They shared their knowledge of **Analysis, Detection and Remedies of** Electric Faults Computer based power system which enables the students to have skills to resolve complex real Power system problems in for Electric systems. Our students learnt various existing and emerging technologies of **Electrical Design** 24 students participated and completed it successfully and awarded with certificates by answering the quiz.

On 30/08/2021 during the valedictory function final year student Mr.R.B.Saran, delivered the vote of thanks.

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM

COURSE MATERIAL / MANUAL

1. https://www.engineering.unsw.edu.au/electricalengineering/sites/elec/files/u12/S12016/ELEC2117Course%20Outline%20Semester%201%202016.pdf

2. https://easysiteact.weebly.com/blog/electrical-installation-design-lecture-notes

3. https://www.sps.nyu.edu/professional-pathways/topics/building-design/electrical-systems-design.html

4. http://philosophy.coas.howard.edu/cgi/viewcontent.php?article=lecture.notes.on.electrical.wiring.plan&context=libpubs

5 https://www.technicaltrainingsolutions.co.uk/courses/electrical-design-2396-course.html

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF PARTICIPATION

This is to certify that

Mr. A. GURUPRASATH, III YEAR, EEE

has successfully completed an Add on Course on

'DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM'

From 25/08/2021 to 30/08/2021.

HOD/EEE
DR.M.IYAPPAN

PRINCIPAL
DR.J.SUNDARARAJAN

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF PARTICIPATION

This is to certify that

Mr. S. ARUNKUMAR. II YEAR EEE

has successfully completed an Add on Course on

'DESIGN OF INDUSTRIAL POWER DISTRIBUTION AND LIGHTING SYSTEM'

From 25/08/2021 to 30/08/2021.

HOD/EEE
DR.M.IYAPPAN

PRINCIPAL
DR.J.SUNDARARAJAN

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DEPARTMENT OF ELECTRICAL& ELECTRONICS ENGINEERING

CERTIFICATE COURSE

INDEX

COURSECODE & NAME: 21EECC01 & PSCAD FOR SYSTEM DESIGN

ACADEMIC YEAR: 2021-2022 **SEMESTER:** ODD **DURATION:** 35 HOURS

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PROGRAM CO-ORDINATOR

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DATE:02/10/2021

From

Dr.M. Iyyappan,
Head of the Department,
Electrical and Electronics Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Request for permission to conduct Certificate Course for EEE students – Regarding.

With reference to the above subject, the application is hereby submitted for your approval to conduct Certificate Course on **"PSCAD FOR SYSTEM DESIGN"** to our students on 16/10/2021; 23/10/2021; 30/10/2021; 13/11/2021 & 27/11/2021 (5 Days) in our college premises. In this regard we have proposed, **Mr.K.Thirupathyraja, Hi-Tech CAD CAM Centre. Madurai and his team** as the resource persons for this Certificate Course. Kindly permit us to conduct the same.

Thanking you.

Yours faithfully,

(Dr. M. Iyyappan)



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

RESOURCE PERSON'S PROFILE

Name	:	**Mr.K.Thirupathyraja**
Designation	:	Course Trainer
Name of the Company	:	Hi-Tech CAD CAM Centre. Madurai.
About Resource Person	:	He is working as a Course Trainer at Hi-Tech CAD CAM Centre. Madurai. with more knowledge in Software Design, ECAD MATLAB Programming

Name	:	**Mr.M. Praveenkumar**
Designation	:	Course Trainer
Name of the Company	:	Hi-Tech CAD CAM Centre. Madurai.
About Resource Person	:	He is working as a Course Trainer at Hi-Tech CAD CAM Centre. Madurai. with more knowledge in Software Design, ECAD and SCADA

PROGRAM COORDINATOR

HOD/EEE

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NPRCET/OFF/EEE/VAC/2021-2022

DATE: 05/10/2021

CIRCULAR

This is to inform that Department of Electrical and Electronics Engineering has planned to conduct a Certificate Course on **"PSCAD FOR SYSTEM DESIGN"** for EEE students in our college campus during this even semester 2021-2022. Interested students can enroll their name to the program coordinator on or before 09.10.2021.

The details of the training program are given below:

COURSE NAME	:	**PSCAD FOR SYSTEM DESIGN**
RESOURCE PERSONS	:	1. Mr.K.Thirupathyraja 2.Mr.M..Praveenkumar Hi-Tech CAD CAM Centre. Madurai
VENUE	:	PSS Main Lab
DATE & DURATION	:	16/10/2021;23/10/2021;30/10/2021;13/11/2021&27/11/2021 & 35 Hours

COLLEGE OF ENGG. & TECHNOLOGY NATHAM NPR

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Copy to:

1. All the HoDs
2. IQAC
3. Notice Board
4. All the class Rooms
5. File
6. Program Coordinator

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

Certificate Course on

"PSCAD FOR SYSTEM DESIGN"

On 16th October, 2021

Venue: PSS Lab at 9.30 a.m.

CHIEF GUEST

Mr.K.Thirupathyraja,

Hi-Tech CAD CAM Centre. Madurai.

Dr.J.Sundararajan,

Principal

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Electrical and Electronics Engineering,

NPR College of Engineering & Technology, NPR Nagar,

Natham.

NATHAM

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE

COURSECODE & NAME: 21EECC01& PSCAD FOR SYSTEM DESIGN

AGENDA

- Inauguration on 16th October, 2021
- Prayer song
- Welcome address by Ms.V.Monika, Final Year student.
- Felicitation address by Dr.J.Sundararajan, Prncipal, NPRCET.
- Chief Guest honoring
- Chief Guest introduction
- Chief Guest address

- Valedictory on 27th November, 2021
- Introduction
- Certificate distribution
- Feedback session
- Vote of thanks by Mr.A.Baskar, Second year student.
- National Anthem

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE

COURSECODE & NAME: 21EECC01& PSCAD FOR SYSTEM DESIGN

COURSE CONTENT

CHAPTER 1: INTRODUCTION
• PSCAD
• GUI
Project
• Introduction to Project Manager
• Working with Projects
Drawing
• Adding a Drawing
• Create a new Drawing
• Drawing Properties
• Insert a Component
• Connecting a component
CHAPTER 2: CREATE A LIBRARY SYMBOL
• Symbol Builder
Circuit Builder
• Inserting a One-line Motor Circuit
• Inserting a Dual One-line Power Feed Circuit
• Copy circuitry
CHAPTER 3: COMPONENT TOOLS
• Inserting Components
• Relocating Components
• Inserting Child Components
• Aligning and Editing the Components
• Catalog Information
CHAPTER 4: COMPONENT ATTRIBUTE TOOLS
• Wires
• Wire layers, Wire types, insert wire, Modify wire
CHAPTER 5: SIGNAL ARROWS
• Source arrow
• Destination arrow
• Ladder tools
Wire numbers
• Automatic wire numbers
• Wire tagging
• PLC I/O wire numbers
• Wire Number Edit
CHAPTER 6: POINT TO POINT WIRING TOOLS
• Introduction to Connector Diagrams
• Inserting Connectors

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• Editing & Modifying Connectors
• Link components by dashed lines
• Grouping Wires
CHAPTER 7: CONVERSION TOOL
• Convert text
• Convert block
• Convert wires
• Convert arrows
• Special Explode
Panel Layout
• Foot Prints
• Footprints from Schematic list
• Footprints from icon menu
• Din rails
• Balloons
• Wire Annotations
• Create Assembly
• Editing & Modifying Footprints
• Creating Own Footprint
Terminals
• Placing a Terminal
• Terminal Editor
• Missing Catalog
• Electrical Audit
• Signal Error/ List
• Drawing Audit
Generate Reports
• Types of schematic reports
• Generate a schematic report
• Types of panel reports
• Generate a panel report
• Run automatic reports
• Automatic report generation
Import/Export
• To Spreadsheet
• From Spreadsheet

CRITERIA TO GET CERTIFICATE

- Students should register their names for this course
- Students must have 85% attendance
- Students should secure 50% marks in the exam

Prepared By: Mrs.S.T.Saranya,AP/EEE

HOD/EEE

IQAC

IQAC Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

PRINCIPAL

Dr. J.SUNDARARAJAN
B.E., M.Tech., Ph.D
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt)-624 401.

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN

REGISTERED STUDENT'S NAME LIST

Sl. No.	Reg. No.	Name of the Student
1	920818105001	Arivuselvan.S
2	920818105002	Dheenakarthik.M
3	920816105003	Dinesh Kumar.M
4	920816105004	Manivel.C
5	920816105005	Monika.V
6	920816105006	Sanjay Kishore.K.M
7	920816105007	Saran.R.B
8	920817105701	Vigneshwaran.K
9	920819105001	Ahamed Afzar A
10	920819105002	Aravindkumar K
11	920819105003	Guru Prasath A
12	920819105004	Karthi Keyan R
13	920819105005	Kasthuri M
14	920819105006	Lakshmi Priya A
15	920819105007	Logeshwaran N
16	920819105009	Pitchiyatha D
17	920819105010	Poornakumar V
18	920819105011	Pradapkannan B
19	920819105012	Rajamurugan M
20	920819105013	Rajasekar M
21	920819105014	Sujeethran S
22	920819105015	Ushadevi C
23	920819105016	Vignesh M
24	920820105001	Baskar A
25	920820105002	Bharathiraja C
26	920820105003	Govinthavasan A
27	920820105004	Harish G
28	920820105005	Ishas Ahamed A
29	920820105007	Jeyaram M
30	920820105008	Justin Thiraviyam A

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN
COURSE SCHEDULE

Venue: PSS LAB

External Resource Persons
1. Mr.K.Thirupathyraja 2.Mr.M. Praveenkumar Hi-Tech CAD CAM Centre. Madurai

Day 1 **16.10.2021**	9.00 a.m	Registration	
	9.30 a.m – 10.00 a.m	Inauguration	
	10. 00 a.m - 11.10 a.m	Session 1	Introduction Create A Library Symbol Mr.K.Thirupathyraja
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Drawing Properties Mr.M. Praveenkumar
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Insert a Component Mr.K.Thirupathyraja
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Connecting a component. Mr.M. Praveenkumar
Day 2 **23.10.2021**	9.30 a.m – 11.10 a.m	Session 1	Inserting a One-line Motor Circuit Mr.K.Thirupathyraja
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Inserting a Dual One-line Power Feed Circuit Mr.M. Praveenkumar
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Component Tools Mr.K.Thirupathyraja
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Aligning and Editing the Components Mr.M. Praveenkumar
Day 3 **30.10.2021**	9.30 a.m – 11.10 a.m	Session 1	Insert PLC Modules
			Mr.K.Thirupathyraja
	11.10 a.m to 11.30 a.m	Tea Break	
	11.30 a.m to 1.10 p.m	Session 2	Point to Point Wiring Tools Mr.M. Praveenkumar
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Introduction to Connector Diagrams Mr.K.Thirupathyraja
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Conversion Tool Mr.M. Praveenkumar

Day 4 **13.11.2021**	9.30 a.m – 11.10 a.m	Session 1	Panel Lay out Mr.K.Thirupathyraja
	11.10 a.m to 11.30 a.m	Tea Break	
	11.30 a.m to 1.10 p.m	Session 2	Editing & Modifying Footprints Mr.M. Praveenkumar
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Placing Terminals Mr.M. Praveenkumar
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Electrical Audit, Drawing Audit Mr.K.Thirupathyraja
Day 5 **27.11.2021**	9.30 a.m – 11.10 a.m	Session 1	Generate a Panel Report Mr.M. Praveenkumar
	11.10 a.m to 11.30 a.m	Tea Break	
	11.30 a.m to 1.10 p.m	Session 2	Automatic Report Generation Mr.K.Thirupathyraja
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Run automatic reports Mr.M. Praveenkumar
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Import/Export, From spread sheet, to spread sheet Mr.K.Thirupathyraja
	4.30 p.m to 5.00 pm	Valedictory	

PROGRAM COORDINATOR **HOD/EEE** **PRINCIPAL**

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN

STUDENT'S ATTENDANCE

S.No	Roll No.	Name of the student	16.10.21		23.10.21		30.10.21		13.11.21		27.11.21	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	920818105001	Arivuselvan.S	/	/	/	/	/	/	/	/	/	/
2	920818105002	Dheenakarthik.M	/	/	/	/	/	/	/	/	/	/
3	920816105003	Dinesh Kumar.M	/	/	/	/	/	/	AB	AB	/	/
4	920816105004	Manivel.C	/	/	/	/	/	/	/	/	/	/
5	920816105005	Monika.V	/	/	/	/	/	/	/	/	/	/
6	920816105006	Sanjay Kishore.K.M	/	/	AB	AB	/	/	/	/	/	/
7	920816105007	Saran.R.B	/	/	/	/	/	/	/	/	/	/
8	920817105701	Vigneshwaran.K	/	/	/	/	/	/	/	/	/	/
9	920819105001	Ahamed Afzar A	/	/	/	/	/	/	/	/	/	/
10	920819105002	Aravindkumar K	/	/	/	/	/	/	/	/	/	/
11	920819105003	Guru Prasath A	/	/	/	/	/	/	/	/	/	/
12	920819105004	Karthi Keyan R	/	/	/	/	/	/	/	/	/	/
13	920819105005	Kasthuri M	/	/	/	/	AB	AB	/	/	/	/
14	920819105006	Lakshmi Priya A	/	/	/	/	/	/	/	/	/	/
15	920819105007	Logeshwaran N	/	/	/	/	/	/	/	/	/	/
16	920819105009	Pitchiyatha D	/	/	/	/	/	/	/	/	/	/
17	920819105010	Poornakumar V	/	/	/	/	/	/	/	/	/	/
18	920819105011	Pradapkannan B	/	/	/	/	/	/	/	/	AB	AB
19	920819105012	Rajamurugan M	/	/	/	/	/	/	/	/	/	/
20	920819105013	Rajasekar M	/	/	/	/	/	/	/	/	/	/
21	920819105014	Sujeethran S	/	/	/	/	/	/	/	/	/	/
22	920819105015	Ushadevi C	/	/	/	/	/	/	/	/	/	/
23	920819105016	Vignesh M	/	/	/	/	/	/	/	/	/	/
24	920820105001	Baskar A	/	/	/	/	/	/	/	/	/	/
25	920820105002	Bharathiraja C	/	/	/	/	/	/	/	/	/	/
26	920820105003	Govinthavasan A	/	/	/	/	AB	AB	/	/	/	/
27	920820105004	Harish G	/	/	/	/	/	/	/	/	/	/
28	920820105005	Ishas Ahamed A	/	/	/	/	/	/	/	/	/	/
29	920820105007	Jeyaram M	/	/	/	/	/	/	/	/	/	/
30	920820105008	Justin Thiraviyam A	\	\	\	\	\	\	\	/	/	/
PRESENT			30	30	29	29	28	28	29	29	29	29
ABSENT			NIL	NIL	01	01	02	02	01	01	01	01
TOTAL			30	30	30	30	30	30	30	30	30	30
PROGRAM COORDINATOR												

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN

QUIZ QUESTION PAPER WITH ANSWER KEY

1. **The computer-aided design (CAD) hardware doesn't include.**
   - **A)** Graphic display terminals
   - **B)** Computer
   - **C)** Computer programmes
   - **D)** Keyboard

2. **How many types of CAD are there?**
   - **A)** 6
   - **B)** 4
   - **C)** 2
   - **D)** 5

3. **Modem CAD systems are based on:**
   - **A)** ICG
   - **B)** GCI
   - **C)** GIF
   - **D)** IFG

4. **The computer communicates with the user via:**
   - **A)** CPU
   - **B)** CRT
   - **C)** Graphics
   - **D)** Display button

5. The process of designing consists of _____ identifiable steps.

A) 8

B) 5

C) 4

D) 6

6. Implementing CAD improves communications.

A) True

B) False

7. The functionality areas of CAD application can be grouped into _____ categories.

A) 2

B) 3

C) 4

D) 5

8. The colour on CRT screen is obtained by the combination of:

A) Red, yellow, blue

B) Red, green, blue

C) Green, black, yellow

D) Red, black, yellow

9. Who formulated the six ground rules to be considered in designing graphics software?

A) Newman and Sproull

B) Schaffer G

C) Fitzgerald W

D) Krouse and Lerro

10. The input devices in CAD can be divided into:

A) 2

B) 5

C) 3

D) 4

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NATHAM

ANSWERS:

1) C

2) D

3) A

4) B

5) D

6) A

7) C

8) B

9) A

10) C

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN

STUDENT'S FEEDBACK FORM

Name of the Student : R. B. Saran	**Year / Semester:** IV / 07

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices	✓				
3	Examples Provided during this Course		✓			
4	Course Delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this Course	✓				

PROGRAM COORDINATOR **HOD/EEE**

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN

STUDENT'S FEEDBACK FORM

Name of the Student : V. Poornakumar	Year / Semester: III / 05

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices	✓				
3	Examples Provided during this Course	✓				
4	Course Delivered by Resource Person	✓				
5	Time Management	✓				
6	Overall rating of this Course		✓			

PROGRAM COORDINATOR

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN

STUDENT'S FEEDBACK FORM

Name of the Student : A. Ishan Ahamed	Year / Semester: II / 03

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content		✓			
2	Way of Exposed New Knowledge and Practices	✓				
3	Examples Provided during this Course	✓				
4	Course Delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this Course	✓				

PROGRAM COORDINATOR

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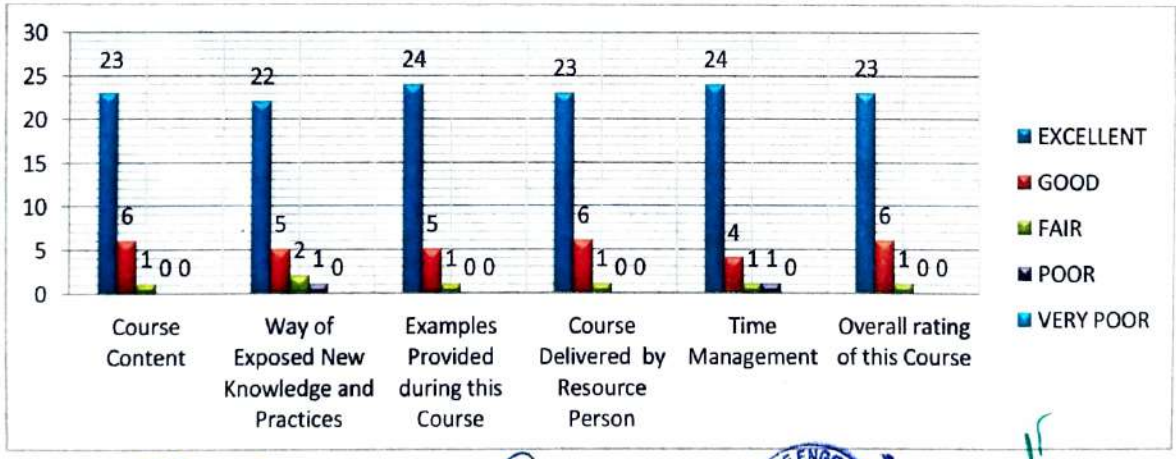
CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN

STUDENT'S FEEDBACK ANALYSIS REPORT

TOTAL STRENGTH: 30 **DATE:16.10.2021**

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	23	06	01	00	00
2	Way of Exposed New Knowledge and Practices	22	05	02	01	00
3	Examples Provided during this Course	24	05	01	00	00
4	Course Delivered by Resource Person	23	06	01	00	00
5	Time Management	24	04	01	01	00
6	Overall rating of this Course	23	06	01	00	00
	Average	23.16	5.33	1.16	0.33	00

NUMBER OF STUDENTS SUCCESSFULLY COMPLETED THE COURSE: 30



PROGRAM COORDINATOR **HOD/EEE** **IQAC** **PRINCIPAL**

IQAC Coordinator - IQAC NPR College of Engineering & Technology Natham, Dindigul (Dt)-624 401

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D., Principal, N.P.R. College of Engineering & Technology, Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN

SUMMARY REPORT

The Department of Electrical and Electronics Engineering Organized a Certificate course on **"PSCAD FOR SYSTEM DESIGN"** on 16/10/2021; 23/10/2021; 30/10/2021; 3/11/2021&27/11/2021 (5 days) at PSS Lab, During the inauguration function on 16th October, 2021 final year student Ms.V.Monika delivered the welcome address.

Dr.J.Sundararajan, Principal of our college inaugurated the program and delivered the inaugural address. **Mr.K.Thirupathyraja** from Hi-Tech CAD CAM Centre, Madurai participated with us and shared his knowledge with our students. These five days course gave a good overview on PSCAD and provided lots of information regarding the topic. In addition to this, it also gave the information on future outcomes.

They shared their knowledge of fundamentals and how to work with PSCAD and Program techniques which enables the students to have skills to create and modify both diagrams and layouts, including both 2D and 3D, in order to design, assess and document electrical Printed Circuit Boards (PCB). Our students learnt various existing and emerging technologies of PSCAD in Electrical and Electronics Engineering Circuits. 30 students participated and completed it successfully and awarded with certificates after answering the quiz.

On 27/11/2021 during the valedictory function second year student Mr.A.Baskar, delivered vote of thanks.

PROGRAM COORDINATOR **HOD/EEE** **IQAC** **PRINCIPAL**

Coordinator IQAC
NPR College of Engineering & Technology
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON PSCAD FOR SYSTEM DESIGN

COURSE MATERIAL/ MANUAL

1.https://www.slideshare.net/hsoundarya/my-ppt-for-autocad-autocad-electrical

2.http://cad.amsystems.com/products/docs/autocad-electrical-2006.ppt

3.https://www.slideshare.net/rahul_9463/autocad-electrical-35816113

4.https://www.autodesk.in/products/autocad/included-toolsets/autocad-electrical

5.http://universa.unijales.edu.br/electrical_control_panel_design_ppt.pdf

6.https://slidemodel.com/templates/electric-circuit-symbols-element-set-for-powerpoint/

PROGRAM COORDINATOR **HOD/EEE**

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF COMPLETION

This is to certify that

Mr. C. MANIVEL, IV YEAR, EEE

has successfully completed the Certificate Course on

'PSCAD FOR SYSTEM DESIGN'

On 16/10/2021; 23/10/2021; 30/10/2021; 13/11/2021 & 27/11/2021

HOD/EEE
DR.M.IYYAPPAN

PRINCIPAL
DR.J.SUNDARARAJAN

Dr. J. SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF COMPLETION

This is to certify that

Mr. G. HARISH, II YEAR EEE

has successfully completed the Certificate Course on

'PSCAD FOR SYSTEM DESIGN'

On 16/10/2021; 23/10/2021; 30/10/2021; 13/11/2021 & 27/11/2021

HOD/EEE
DR.M.IYYAPPAN

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE

INDEX

COURSE CODE & NAME: **21EECC02 & STAR LABELING AND ENERGY CONSERVATION**

ACADEMIC YEAR: 2021-22 **SEMESTER:** EVEN **DURATION:** 35 HOURS

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PROGRAM CO-ORDINATOR
T. SIVAKUMAR, AP/EEE

HOD/EEE
[illegible]

IQAC
[illegible]
Coordinator - IQAC
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PRINCIPAL
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DATE: 01/03/2022

From

Dr.P.Kanirajan,
Head of the Department,
Electrical and Electronics Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Request for permission to conduct Certificate Course for EEE students – Regarding.

With reference to the above subject, the application is hereby submitted for your approval to conduct Certificate Course on **"Star Labeling and Energy Conservation"** to our students on 12/03/2022; 14/05/2022; 21/05/2022; 04/06/2022 & 18/06/2022 (5 Days) in our college premises. In this regard, we have proposed **Mr.N.Balamurugan, Proserv Electric Pvt. Ltd. Madurai** and his team as the resource persons for this Certificate Course. Kindly permit us to conduct the same.

Thanking you.

Yours faithfully,

[Dr. P. KANIRAJAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON

STAR LABELING AND ENERGY CONSERVATION

RESOURCE PERSON'S PROFILE

Name	:	Mr.N.Balamurugan
Designation	:	Electrical Engineer
Company Name	:	PROSERV Electric Pvt.Ltd. Madurai.
About Resource Person	:	He is qualified'A'Grade License Holder Electrical Engineer with 20 years experience in power industries electrical engineer. He is doing Electrical Erection works in textile industries and 'A' Grade Electrical contractor for Electrical Installations.

PROGRAM COORDINATOR
(T. Sivakumar, AP/EEE)

NPR COLLEGE OF ENGG. & TECHNOLOGY NATHAM

HOD/EEE
[Dr. Y. ILANIRAJAN]

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NPRCET/OFF/VAC/2021-2022

DATE: 02.03.2022

CIRCULAR

This is to inform that Department of Electrical and Electronics Engineering has planned to conduct a Certificate Course on **"Star Labeling and Energy Conservation"** for our EEE students in our college campus during this even semester 2021-2022. Interested students can enroll their name to the program coordinator on or before 08.03.2022.

.The details of the training program are given below:

COURSE NAME	:	**Star Labeling And Energy Conservation**
RESOURCE PERSON	:	Mr.N.Balamurugan
VENUE	:	Electrical Machines Lab
DATE & DURATION	:	12/03/2022;14/05/2022;21/05/2022;04/06/2022 & 18/06/2022 (35Hours)

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. All the HoDs
2. IQAC
3. Notice board
4. All the class rooms
5. File
6. Program coordinator

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

Certificate Course on

Star Labeling and Energy Conservation

On 12th March, 2022

Venue: Rear Block First Floor seminar Hall at 9.30 a.m.

CHIEF GUEST

Mr.N.Balamurugan

Proserv Electric Pvt. Ltd. Madurai.

Dr.J.Sundararajan

Principal

NPR College of Engineering & Technology

Felicitates the function

Organized By

Department of Electrical and Electronics Engineering,

NPR College of Engineering & Technology, NPR Nagar,

Natham.

NPR College of Engineering & Technology
NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON

STAR LABELING AND ENERGY CONSERVATION

AGENDA

- Inauguration on 12th March, 2022
- Prayer song
- Welcome address by Ms.R.Brintha Second Year student.
- Felicitation address by Dr.J.Sundararajan, Prncipal, NPRCET.
- Chief Guest honoring
- Chief Guest introduction
- Chief Guest address

- Valedictory on 12th June, 2022
- Introduction
- Certificate distribution
- Feedback session
- Vote of thanks by Mr.R.Karthikeyan, Third year student.
- National Anthem

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON

Star Labeling and Energy Conservation

COURSE CONTENT

Course Duration = 35 Hrs

CHAPTER I: INTRODUCTION TO FAULT ANALYSIS

- Introduction
- Goals - discussion
- Source of fault current
- Fault statistics
- Basic assumptions
- Short-circuit rating of equipment
- Selecting the correct switchgear rating for fault duties
- Overview of per-unit system
- One-line diagrams
- Sources of impedance data for all items of plant
- Tutorial to demonstrate preparation of a system for study
- Introduction to the engineering software used throughout the course to make complex and repetitive calculations as accurate as possible
- Closing discussion

CHAPTER 2: THREE-PHASE SHORT-CIRCUIT CURRENTS

- Review – summary - discussion
- Manual calculation of three-phase short-circuit current
- Circuit reduction techniques
- Industrial systems
- Electricity supply systems
- Tutorial - based on attendees plant
- Cables subjected to short-circuit currents
- Compliance with regulations
- Closing discussion

CHAPTER 3: UNSYMMETRICAL FAULT CONDITIONS

- Review – summary - discussion
- Overview of symmetrical components
- Consideration of various fault types
- Sequence networks

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- Consideration of phase shift in two-winding transformers
- Consideration of earth impedance
- Consideration of three-winding transformers
- Closing discussion

CHAPTER 4: REPRESENTATION OF UNSYMMETRICAL FAULTS IN POWER SYSTEMS

- Review – summary - discussion
- Fault diagrams
- Interconnected sequence networks
- Special considerations with reference to limitation of earth fault current
- Demonstration examples based on industrial power systems
- Closing discussion

CHAPTER 5 :COMPUTER BASED CALCULATION OF FAULTS

- Review – summary - discussion
- Introduction to a scaled down industrial programme capable to model complex power systems under fault conditions
- Use of the software program in practical studies (checking manual calculations)
- Industrial standards
- Case studies of faults in a high voltage network
- Case study of faults in a low voltage network

Criteria to get certificate

- Students should register their names for this course
- Students must have 85% attendance
- Students should secure 50% marks in the exam

Prepared By: Mr.S.Sathyamoorthi, AP/EEE [S.SATHYAMOORTHI]

HOD/EEE [Dr. P. MANI RAJAN]

IQAC

Coordinator - IQAC
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PRINCIPAL

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CERTIFICATE COURSE ON

STAR LABELING AND ENERGY CONSERVATION

REGISTERED STUDENT'S NAME LIST

S.No.	Reg.No.	Name of the Student
1.	920820105001	Baskar.A
2.	920820105002	Bharathiraja.C
3.	920820105003	Govinthavasan .A
4.	920820105004	Harish.G
5.	920820105005	Ishas ahamed A
6.	920820105007	Jeyaram.M
7.	920820105008	Justin thiraviyam.A
8.	920820105009	Kabil Sharma.M
9.	920820105010	Logesh kumar.M
10.	920820105011	Mahendra.S
11.	920820105012	Mohammed ashik.S
12.	920820105013	Ramar.V
13.	920820105014	Saravanakumar.S
14.	920820105015	Saravana muthu.K
15.	920820105016	Sarwesh.R
16.	920820105017	Tharun.N
17.	920820105018	Thavamani.A
18.	920820105019	Venkatesh.V
19.	920820105301	Arunkumar.S
20.	920820105302	Bharatha raja.S
21.	920820105303	Brintha.R
22.	920820105304	Ganesh.S
23.	920820105305	Geethanjali devi.M
24.	920820105306	Hareesh.K.S
25.	920820105307	Kalai selvi.S
26.	920820105308	Krishna pandiyan .S
27.	920820105309	Lakshmanan .T
28.	920820105310	Loganathan.M

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CERTIFICATE COURSE ON

STAR LABELING AND ENERGY CONSERVATION

REGISTERED STUDENT'S NAME LIST

S.No.	Reg.No.	Name of the Student
29	920820105311	Mohammedharish.H
30	920820105312	Monika.K
31	920820105313	Poovarasan.R
32	920820105314	Praveenkumar.R
33	920820105315	Reegan.S
34	920820105316	Sanron mathi.S
35	920820105317	Shyleshkumar.V
36	920820105318	Siva.S
37	920819105001	Ahamed afzar.A
38	920819105002	Aravindkumar.K
39	920819105003	Guru prasath.A
40	920819105004	Karthikeyan.R

PROGRAM COORDINATOR
(T. SIVAKUMAR, AP/EEE)

HOD/EEE
[Dr. P. KANNADASAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON

STAR LABELING AND ENERGY CONSERVATION

COURSE SCHEDULE

EXTERNAL RESOURCE PERSON	INTERNAL RESOURCE PERSONS
Mr.N.Balamurugan Proserv Electric Pvt. Ltd. Madurai.	1. Mr.S.Sathyamoorthi, AP/EEE
	2. Mr.T.Sivakumar, AP/EEE

Day 1 **12.03.2022**	9.00 a.m	Registration	
	9.30 a.m – 10.00 a.m	Inauguration	
	10. 00 a.m - 11.10 a.m	Session 1	Introduction to Fault Analysis Mr.N.Balamurugan
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Short-circuit rating of equipment Mr.N.Balamurugan
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Overview of per-unit system Mr.T.Sivakumar, AP/EEE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Selecting the correct switchgear rating for fault duties Mr.N.BalaMurugan
Day 2 **14.05.2022**	9.30 a.m – 11.10 a.m	Session 1	Manual calculation of three-phase short-circuit current Mr.T.Sivakumar, AP/EEE
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Circuit reduction techniques Mr.S.Sathyamoorthi, AP/EEE
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Cables subjected to short-circuit currents Mr.T.Sivakumar, AP/EEE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Compliance with regulations interchange Mr.S.Sathyamoorthi, AP/EEE

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Day 3 **21.05.2022**	9.30 a.m – 11.10 a.m	Session 1	Unsymmetrical Fault Conditions Review – summary - discussion Mr.N.Balamurugan
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Overview of symmetrical components, Consideration of various fault types Mr.N.Balamurugan
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Sequence networks, Consideration of phase shift in two-winding transformers Mr.S.Sathyamoorthi, AP/EEE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Consideration of earth impedance Consideration of three-winding transformers Mr.S.Sathyamoorthi, AP/EEE
Day 4 **04.06.2022**	9.30 a.m – 11.10 a.m	Session 1	Representation of Unsymmetrical Faults In Power Systems, Review summary - discussion Mr.T.Sivakumar, AP/EEE
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Fault diagrams,Interconnected sequence networks Mr.T.Sivalkumar, AP/EEE
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Special considerations with reference to limitation of earth fault current Mr.S.Sathyamoorthi, AP/EEE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Demonstration examples based on industrial power systems. Mr.T.Sivakumar, AP/EEE
Day 5 **18.06.2022**	9.30 a.m to 11.10 a.m	Session 1	Computer Based Calculation of faults Review – summary - discussion under fault conditions Mr.N.Balamurugan
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Introduction to a scaled down industrial programme capable to model complex power systems Mr.N.Balamurugan

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	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to 3.40 p.m	Session 3	Use of the software program in practical studies (checking manual calculations) Mr.T.Sivakumar, AP/EEE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Industrial standards, Case studies of faults in a high voltage network Mr.N.BalaMurugan
	4.30 p.m to 5.00 p.m	Valedictory	

PROGRAM COORDINATOR
(T.SIVAKUMAR, AP/EEE)

HOD/EEE
[Dr. P. KANIRAJAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON
STAR LABELING AND ENERGY CONSERVATION

STUDENT'S ATTENDANCE

S.No.	Reg.No.	Name of the student	12.03.2022		14.05.2022		21.05.2022		04.06.2022		18.06.2022	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	920820105001	Baskar.A	/	/	/	/	/	/	/	/	/	/
2.	920820105002	Bharathiraja.C	/	/	/	/	/	/	/	/	/	/
3.	920820105003	Govinthavasan .A	/	/	/	/	/	/	/	/	/	/
4.	920820105004	Harish.G	/	/	/	/	/	/	/	/	/	/
5.	920820105005	Ishas ahamed A	/	/	/	/	/	/	/	/	/	/
6.	920820105007	Jeyaram.M	/	/	/	/	/	/	/	/	/	/
7.	920820105008	Justin thiraviyam.A	/	/	/	/	/	/	AB	AB	/	/
8.	920820105009	Kabil Sharma.M	/	/	/	/	/	/	/	/	/	/
9.	920820105010	Logesh kumar.M	/	/	/	/	/	/	/	/	/	/
10.	920820105011	Mahendra.S	/	/	/	/	/	/	/	/	/	/
11.	920820105012	Mohammed ashik.S	/	/	/	/	/	/	/	/	/	/
12.	920820105013	Ramar.V	/	/	/	/	/	/	/	/	/	/
13.	920820105014	Saravanakumar.S	/	/	/	/	/	/	/	/	/	/
14.	920820105015	Saravana muthu.K	/	/	/	/	/	/	/	/	/	/
15.	920820105016	Sarwesh.R	/	/	/	/	/	/	/	/	/	/
16.	920820105017	Tharun.N	/	/	/	/	/	/	/	/	/	/
17.	920820105018	Thavamani.A	/	/	/	/	/	/	/	/	/	/
18.	920820105019	Venkatesh.V	/	/	/	/	/	/	/	/	/	/
19.	920820105301	Arunkumar.S	/	/	/	/	/	/	/	/	/	/
20.	920820105302	Bharatha raja.S	/	/	/	/	AB	AB	/	/	/	/
21.	920820105303	Brintha.R	/	/	/	/	/	/	/	/	/	/
22.	920820105304	Ganesh.S	/	/	/	/	/	/	/	/	/	/
23.	920820105305	Geethanjali devi.M	/	/	/	/	/	/	/	/	/	/
24.	920820105306	Hareesh.K.S	/	/	/	/	/	/	/	/	/	/
25.	920820105307	Kalai selvi.S	/	/	/	/	/	/	/	/	/	/
26.	920820105308	Krishna pandiyan .S	/	/	/	/	/	/	/	/	/	/
27.	920820105309	Lakshmanan .T	/	/	/	/	/	/	/	/	/	/
28.	920820105310	Loganathan.M	/	/	AB	AB	/	/	/	/	/	/

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S.No.	Reg.No.	Name of the student	12.03.2022		14.05.2022		21.05.2022		04.06.2022		18.06.2022	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
29.	920820105311	Mohammed harish.H	/	/	/	/	/	/	/	/	/	/
30.	920820105312	Monika.K	/	/	/	/	/	/	/	/	AB	AB
31.	920820105313	Poovarasan.R	/	/	/	/	/	/	/	/	/	/
32.	920820105314	Praveen kumar.R	/	/	/	/	/	/	/	/	/	/
33.	920820105315	Reegan.S	/	/	/	/	/	/	/	/	/	/
34.	920820105316	Sanron mathi.S	/	/	/	/	/	/	/	/	/	/
35.	920820105317	Shylesh kumar.V	/	/	/	/	/	/	/	/	/	/
36.	920820105318	Siva.S	/	/	/	/	/	/	/	/	/	/
37.	920819105001	Ahamed afzar.A	/	/	/	/	/	/	/	/	/	/
38.	920819105002	Aravindkumar.K	/	/	/	/	/	/	/	/	/	/
39.	920819105003	Guru prasath.A	/	/	/	/	AB	AB	/	/	/	/
40.	920819105004	Karthi keyan.R	/	/	/	/	/	/	/	/	/	/
Number of students Present			40	40	39	39	38	38	39	39	39	39
Number of students Absent			-NIL-	-NIL-	01	01	02	02	01	01	01	01
Program coordinator signature												

PROGRAM COORDINATOR
(T. Sivakumar, AP/EEE)

HOD/EEE
[Dr. P. Kanimozhi]

NPR COLLEGE OF ENGG. & TECHNOLOGY * NATHAM

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON

STAR LABELING AND ENERGY CONSERVATION

QUIZ QUESTION PAPER WITH ANSWER KEY

NAME OF THE STUDENT:

DURATION: 10 MINUTES **MARKS: 10**

1. Various power system faults in increasing order of severity are

A) LG,LL,LLG,LLLG
B) LLLG,LLG,LG,LL
C) LLG,LLLG,LL,LG
D) LL,LG,LLLG,LLG

2. Which of following are used to reduce short circuit fault currents

A) Reactors
B) Resistors
C) Capacitors
D) Parallel combination of all these

3. Which of the following type of reactors are popularly used in power systems?

A) Compensation reactors
B) Current limiting factors
C) Suppression or Peterson reactors
D) All of these

4. Oil immersed type reactor has the advantage of

A) Higher safety against flashover
B) Smaller size with large thermal capacity

C) Limiting the fault voltage
D) Both (A) and (B)

5. Shunt reactors are connected with transmission lines for

A) Limiting fault current
B) Absorbing reactive power
C) Absorbing high voltage surges
D) Limiting fault current

6. Which of the following method of protection is used to achieve earth fault operation?

A) Core balance method
B) Relay connected with neutral to ground
C) Frame leakage method
D) None of these

7. Minimum faults occur in which of the following power system equipment?

A) Transformer
B) Switch gear
C) CT, PT
D) Alternator

8. Large internal faults below oil level are protected by

A) Mho and ohm relays
B) Horn gap and temperature relay
C) Merz Price percentage differential relay
D) Earth fault and positive sequence relay

9. Interruption due to fault and maintenance is minimum in

A) Main and transfer bus arrangement
B) Single bus arrangement
C) Sectionalized single bus arrangement
D) Double bus, double breaker arrangement

10. When a line-to-line fault occurs, the short circuit current of an alternator depends upon its

A) Sub transient reactance
B) Transient reactance
C) Synchronous reactance
D)Short circuit reactance

ANSWERS:

1) A

2) A

3) D

4) A

5) B

6) A

7) D

8) B

9) D

10) C

PROGRAM COORDINATOR
(T. JIVAKUMAR, AP/EEE)

HOD/EEE
[Dr. P. KANNIRAJAN]

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON
STAR LABELING AND ENERGY CONSERVATION

STUDENT'S FEEDBACK FORM

Name of the Student: A. Ahamed afzar	**Year / Semester:** III / 06

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices		✓			
3	Examples Provided during this Course	✓				
4	Course Delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this Course	✓				

PROGRAM COORDINATOR
(T. SIVAKUMAR, AP/EEE)

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[Dr. P. KANIMOZHI]

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON
STAR LABELING AND ENERGY CONSERVATION

STUDENT'S FEEDBACK FORM

Name of the Student : Lakshmanan . T	Year / Semester: II / 04

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices		✓			
3	Examples Provided during this Course	✓				
4	Course Delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this Course	✓				

PROGRAM COORDINATOR
(T. SIVAKUMAR, AP/EEE)

HOD/EEE
[Dr. P. KANNADASAN]

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON
STAR LABELING AND ENERGY CONSERVATION

STUDENT'S FEEDBACK FORM

Name of the Student: Mohammedbasith. H	Year / Semester: II / 04

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices		✓			
3	Examples Provided during this Course	✓				
4	Course Delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this Course	✓				

PROGRAM COORDINATOR
(T. SIVAKUMAR, AP/EEE)

HOD/EEE
[DR. P. KANIRAJAN]

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

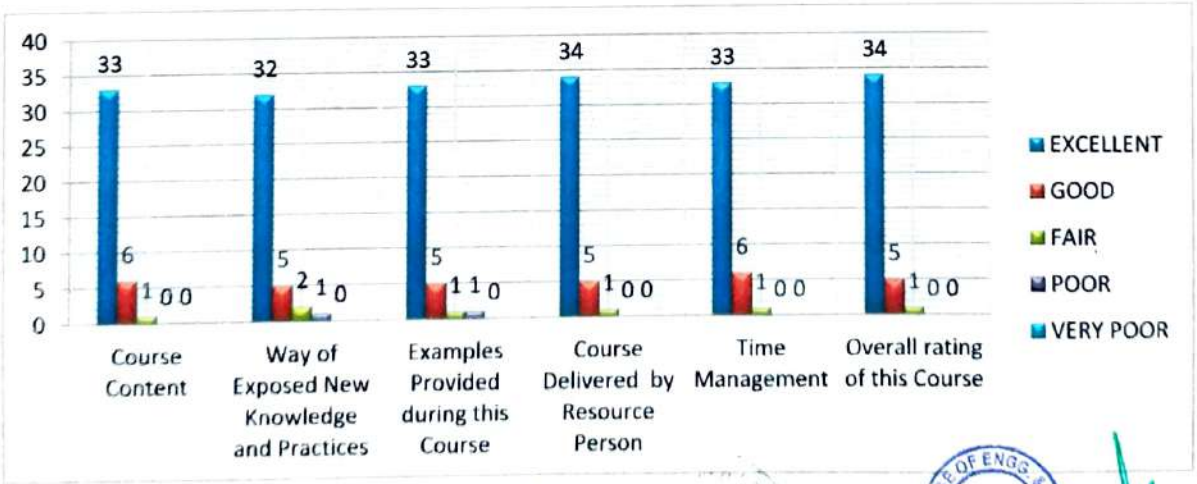
CERTIFICATE COURSE ON

STAR LABELING AND ENERGY CONSERVATION

STUDENT'S FEEDBACK ANALYSIS REPORT

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	33	06	01	00	00
2	Way of Exposed New Knowledge and Practices	32	05	02	01	00
3	Examples Provided during this Course	33	05	01	01	00
4	Course Delivered by Resource Person	34	05	01	00	00
5	Time Management	33	06	01	00	00
6	Overall rating of this Course	34	05	01	00	00
7	Average	33.16	5.33	1.16	0.33	00

Total number of students successfully completed the course: 40



PROGRAM COORDINATOR
(T.SIVAKUMAR, AP/EEE)

HOD/EEE

IQAC

[Dr. P. ICANI] Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401.

PRINCIPAL
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B.E., M.Tech., Ph.D.,
Principal
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON

STAR LABELING AND ENERGY CONSERVATION

SUMMARY REPORT

The Department of Electrical and Electronics Engineering Organized a Certificate Course on **"Star Labeling and Energy Conservation"** on 12/03/2022; 14/05/2022; 21/05/2022; 04/06/2022 & 18/06/2022 (5days) at Electrical Machines Lab, During the inauguration function on 12th March, 2022 second year student Ms.R.Brintha delivered welcome address.

Dr.J.Sundararajan, Principal of our college inaugurated the function and delivered the inaugural address. **Mr.N.Balamurugan, ProservElectric** Pvt.Ltd, Madurai participated with us and shared his knowledge with our students. These five days course gave good overview on Electrical Faults Causes, Analysis, Detection and Remedies and provided lots of information regarding the topic. In addition to this, it also gave the information on remedies for various types of Electrical Faults.

They shared their knowledge of **Star Labeling and Energy Conservation** of electric power system which enables the students to have skills to resolve complex real power system problems for electric systems. Our students learnt various existing and emerging technologies of **Energy Conservation.** 40 students participated and completed it successfully and awarded with certificates by answering the quiz.

On 18/06/2022 during the valedictory function third year student Mr.R.Karthikeyan delivered the vote of thanks.

PROGRAM COORDINATOR (T.SIVAKUMAR EEE)

HOD/EEE (Dr. P.CHANDRASAN)

IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

PRINCIPAL

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON

STAR LABELING AND ENERGY CONSERVATION

COURSE MATERIAL/MANUAL

1.https://www.tristar-me.com/courses/electrical-faults-causes-analysis-detection-remedies-2/

2.http://aztechtraining.com/wp-content/uploads/2014/10/Electrical-Faults-Causes-Analysis-Detection-Remedies.pdf

3.https://nptel.ac.in/content/storage2/courses/108101039/download/Lecture-1.pdf

4.http://www.tnebea.in/association/prabhakarana%20aee%20salem%20-%20tnerc/tn%20erc/consumer%20query%20platform%201-349.doc

PROGRAM COORDINATOR
(T. SIVAKUMAR, AP/EEE)

HOD/EEE
[Dr. P. KANNIYAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF COMPLETION

This is to certify that

MR. S. SANROY MATHI, II-YEAR EEE

has successfully completed the Certificate Course on

'STAR LABELING AND ENERGY CONSERVATION'

on 12/03/2022, 14/05/2022, 21/05/2022, 04/06/2022, &18/06/2022.

HOD/EEE
DR.P.KANIRAJAN

PRINCIPAL
DR.J.SUNDARARAJAN

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF COMPLETION

This is to certify that

Mr. V. SHYLESH KUMAR, II YEAR, EEE

has successfully completed the Certificate Course on

'STAR LABELING AND ENERGY CONSERVATION'

on 12/03/2022, 14/05/2022, 21/05/2022, 04/06/2022, &18/06/2022.

HOD/EEE
DR.P.KANIRAJAN

PRINCIPAL
DR.J.SUNDARARAJAN

Dr. J. SUNDARARAJAN, B.E., M.Tech., Ph.D.
Principal
N.P.R. College of Engineering & Technology

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE

INDEX

COURSE NAME: 21EEAO02 & EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

ACADEMIC YEAR: 2021-2022 **SEMESTER:** EVEN **DURATION:** 35 HOURS

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1	PERMISSION LETTER	02
2	RESOURCE PERSON'S PROFILE	03
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5	COURSE CONTENT	07
6	REGISTERED STUDENT'S NAME LIST	09
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PROGRAM CO-ORDINATOR [S. SATHYANARAYANA] AP/EEE

HOD/EEE [Dr. P. Kamaraj]

IQAC

PRINCIPAL

Coordinator - IQAC
NPR College of Engineering & Technology
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DATE: 11/07/2022

From

Dr.P.Kanirajan,
Head of the Department,
Electrical and Electronics Engineering,
NPR College of Engineering & Technology,
Natham.

To

The principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Request for permission to conduct an Add on Course for EEE students – Regarding.

With reference to the above subject, the application is hereby submitted for your approval to conduct an Add on Course on **"Embedded Based Hardware Design Development"** to our EEE students from 21.07.2022 to 26.07.2022 (5 Days) in our college premises. In this regard, we have proposed Dr.M.Iyappan,AP/ECE and Mr.S.Dinesh,AP/EEE, as resource persons for this add on course. Kindly permit us to conduct the same.

Thanking you,

Yours faithfully,

[Dr.P.KANIRAJAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADD ON COURSE ON EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

RESOURCE PERSON'S PROFILE

Dr.Iyappan M is graduated in Electrical and Electronics Engineering and Specialized in the fields of Embedded Systems, Power Systems Optimization, Power Converters, Electric Drives and Control, Soft Computing. He is an enterprising and engaging teaching professional who strongly believes in being a facilitator in the learning process. He has more than ten years of teaching experience and one year of industrial experience. He has the ability to deliver lectures confined to recent technologies and innovations. He has guided many students' projects. He strongly believes in his capability in extensive research and skills in executing internal administrative tasks. He aims to establish himself in the field of education and research by knowledge sharing and development. His approach towards the profession is as a mentor who wanted to spark the logical thinking attitude in students and make them to materialize their simple but valuable ideas themselves; He has mentored many student projects and has offered valuable support and guidance for Technical Project Contests. He has published 7 research papers in Scopus indexed journals, 3 international journals, 5 national journals and has also attended many national-level Workshops and Seminars. He has attended programs such as FDP, STTP, Seminar and training programs.

Academic Qualifications

- Ph.D. (in Electrical Engineering from Anna University, Chennai, Tamilnadu - 2021)
- M.E. (in Embedded System Technologies from Anna University, Coimbatore, Tamilnadu – 2010)
- B.E (in Electrical and Electronics Engineering from Jayam College of Engineering and Technology, Dharmapuri, Anna University, Chennai, Tamilnadu - 2007)

Research ID's

- Orcid ID: https://orcid.org/0000-0003-4624-0264
- Google Scholar ID: https://scholar.google.com/citations?user=VuSTLzkAAAAJ&hl=en&authuser=1
- Scopus ID: https://www.scopus.com/dashboard.uri?origin=&zone=TopNavBar
- Research gate link: https://www.researchgate.net/profile/Iyappan_Murugesan
- Mendeley ID: https://www.mendeley.com/profiles/iyappan-murugesan/
- LinkedIn: https://www.linkedin.com/in/dr-iyappan-m-148807190

PROGRAM COORDINATOR
[S. BATHYAMOORTHY]
AP/EEE

HOD/EEE
[Dr. P. KANIRAJAN]

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NPRCET/OFF/EEE/VAC/2021-2022

DATE: 13/07/2022

CIRCULAR

This is to inform that Department of Electrical and Electronics Engineering has planned to conduct an Add on Course on **"Embedded Based Hardware Design Development"** for EEE students in our college campus during this even semester 2021-2022. Interested students can enroll their name to the program coordinator on or before 18/07/2022.

The details of the training program are given below:

COURSE NAME	:	**Embedded Based Hardware Design Development**
RESOURCE PERSONS	:	1. Dr.M.Iyappan,AP/ECE 2. .Mr.S.Dinesh,AP/EEE
VENUE	:	PSS Main Lab
DATE & DURATION	:	21/07/2022 to 26/07/2022 & 35 Hours

PRINCIPAL

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. All the HoDs
2. IQAC
3. Notice Board
4. All the class Rooms
5. File
6. Program Coordinator

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

Add on Course on

"Embedded Based Hardware Design Development"

On 21st July, 2022

Venue: Rear Block First Floor Seminar Hall at 9.30 a.m.

RESOURCE PERSONS

1. Dr.M. Iyappan, Assistant Professor / ECE,

2.Mr.S. Dinesh, Assistant Professor/ EEE,

NPR College of Engineering & Technology.

Dr.J.SUNDARARAJAN

Principal

NPR College of Engineering & Technology

FELICITATES THE FUNCTION

ORGANIZED BY

Department of Electrical and Electronics Engineering,

NPR College of Engineering & Technology, NPR Nagar,

Natham.

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

AGENDA

- Inauguration on 21st July, 2022
- Prayer song
- Welcome address by Mr.N.Logeshwaran, Third Year student.
- Felicitation address by Dr.J.Sundararajan, Prncipal, NPRCET.
- Chief Guest honoring
- Chief Guest introduction
- Chief Guest address

- Valedictory on 26th July, 2022
- Introduction
- Certificate distribution
- Feedback session
- Vote of thanks by Mr.S.Reegan, Second year student.
- National Anthem

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ADD ON COURSE ON

EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

COURSE CONTENT

CHAPTER 1 INTRODUCTION

- Introduction to Hardware design & development process
- Introduction to analog and digital design world (brief about analog and digital components)
- Active elements
- Passive elements
- Voltage source
- Current source
- Amplifiers
- Op-amps
- Logic Gates
- Flip flops
- Counters.

CHAPTER 2 POWER SUPPLY DESIGN

- Primary supplies
- Secondary supplies
- Static supplies (without Feedback)
- Dynamic supplies (with Feedback)
- Linear supplies
- Switching supplies
- Current controlled supplies
- Voltage controlled supplies
- Over voltage protection
- Under voltage protection
- Over current
- Current control methods
- Surge protection circuits
- EMI/EMC protections

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NATHAM

CHAPTER 3 MICRO CONTROLLERS &PERIPHERALS

- Different types of IC packages
- Identification of Controller
- Reset circuit
- Debugger circuit
- Push pull design of port pins
- Open drain design of port pins
- Memory Technologies (RAM, ROM, EPROM, EEPROM, FLASH)
- Interfacing I/O Interface Technologies.

CHAPTER 4 MICRO CONTROLLER INTERFACINGS

- LEDs, Switches, Relays, DC Motor, Stepper Motor
- ADC, DAC, Temperature Sensor, LCD, Touch Screen, seven segment display… etc,
- Load calculations
- Power requirement calculation methods
- PCB mechanical fixing
- PCB dimension
- PCB external interface connectors

CRITERIA TO GET CERTIFICATE

- Students should register their names for this course
- Students must have 85% attendance
- Students should secure 50 % marks in the exam

Prepared by: Dr.M. Iyappan, AP/ECE

HOD/EEE

[Dr. P. KANIRAJAN]

IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
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PRINCIPAL

Dr. J.SUNDARARAJAN,
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Principal
N.P.R. College of Engineering & Technology
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADD ON COURSE ON EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

REGISTERED STUDENT'S NAME LIST

S.No.	Reg.No.	Name of the student
1	920819105001	Ahamed Afzar A
2	920819105002	Aravindkumar K
3	920819105003	Guru Prasath A
4	920819105004	Karthi Keyan R
5	920819105005	Kasthuri M
6	920819105006	Lakshmi Priya A
7	920819105007	Logeshwaran N
8	920819105009	Pitchiyatha D
9	920819105010	Poornakumar V
10	920819105011	Pradapkannan B
11	920819105012	Rajamurugan M
12	920819105013	Rajasekar M
13	920819105014	Sujeethran S
14	920819105016	Vignesh M
15	920820105001	Baskar A
16	920820105002	Bharathiraja C
17	920820105003	Govinthavasan A
18	920820105004	Harish G
19	920820105005	Ishas Ahamed A
20	920820105007	Jeyaram M
21	920820105008	Justin Thiraviyam A
22	920820105009	Kabil Sharma M
23	920820105010	Logesh Kumar M
24	920820105011	Mahendra S
25	920820105012	Mohammed Ashik S
26	920820105013	Ramar V
27	920820105014	Saravanakumar S
28	920820105015	Saravana Muthu K
29	920820105016	Sarwesh R
30	920820105017	Tharun N

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S.No.	Reg.No.	Name of thestudent
31	920820105018	Thavamani A
32	920820105019	Venkatesh V
33	920820105301	Arunkumar S
34	920820105302	Bharatha Raja S
35	920820105303	Brintha R
36	920820105304	Ganesh S
37	920820105305	Geethanjali Devi S
38	920820105306	Hareesh K.S
39	920820105307	Kalai Selvi S
40	920820105308	Krishna Pandiyan S
41	920820105309	Lakshmanan T
42	920820105310	Loganathan M
43	920820105311	Mohammed Harish H
44	920820105312	Monika K
45	920820105313	Poovarasan R
46	920820105314	Praveen Kumar R
47	920820105315	Reegan S
48	920820105316	Sanron Mathi S
49	920820105317	Shylesh Kumar V
50	920820105318	Siva S

PROGRAM COORDINATOR

[S. SATHYAMOORTHI]
AP/EEE

HOD/EEE

[Dr. P. KANNAPPAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADD ON COURSE ON

EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

COURSE SCHEDULE

Venue: PSS LAB

Date: 21/07/2022

Internal Resource Persons:	
Dr.M.Iyappan,AP/EEE	**AP/ECE**
2.Mr.S.Dinesh	**AP/EEE**

Day 1 **21.07.2022**	9.00 a.m	Registration	
	9.30 a.m – 10.00 a.m	Inauguration	
	10. 00 a.m - 11.10 a.m	Session 1	Introduction to Hardware design & development process Dr.M.Iyappan,AP/ECE
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Introduction To Analog and Digital Design World Mr.S.Dinesh,AP/EEE
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to3.40 p.m	Session 3	Voltage source, Current source, Amplifiers Dr.M.Iyappan,AP/ECE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Logic Gates, Flip flops and Counters. Mr.S.Dinesh,AP/EEE

Day 2 **22.07.2022**	9.30 a.m – 11.10 a.m	Session 1	Power Supply Design-Primary Supplies-Secondary Supplies-Switching supplies Dr.M.Iyappan,AP/ECE
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Static supplies (without Feedback) Dynamic supplies (with Feedback) Linear supplies Mr.S.Dinesh,AP/EEE
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to3.40 p.m	Session 3	Current controlled supplies-Voltage controlled supplies Dr.M.Iyappan,AP/ECE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Over voltage protection-Under voltage protection Mr.S.Dinesh,AP/EEE
Day 3 **23.07.2022**	9.30 a.m to 11.10 a.m	Session 1	Different types of IC packages, Identification of Controller Dr.M.Iyappan,AP/ECE
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	Debugger circuit-Push pull design of port pins Mr.S.Dinesh,AP/EEE
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to3.40 p.m	Session 3	Memory Technologies (RAM, ROM, EPROM, EEPROM, FLASH Dr.M.Iyappan,AP/ECE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	Interfacing I/O Interface Technologies Mr.S.Dinesh,AP/EEE

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Day 4 **25.07.2022**	9.30 a.m – 11.10 a.m	Session 1	Micro Controller Interfacings Dr.M.Iyappan,AP/ECE
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	LEDs, Switches-Interfacing- Mr.S.Dinesh,AP/EEE
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to3.40 p.m	Session 3	Relay-Interfacing Dr.M.Iyappan,AP/ECE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	DC Motor–Interfacing Mr.S.Dinesh,AP/EEE
Day 5 **26.07.2022**	9.30 a.m – 11.10 a.m	Session 1	Stepper Motor Interfacing Dr.M.Iyappan,AP/ECE
	11.10 a.m to 11.30 a.m	*Tea Break*	
	11.30 a.m to 1.10 p.m	Session 2	ADC, DAC, Temperature Sensor, LCD, Touch Screen, Seven segment display Mr.S.Dinesh,AP/EEE
	1.10 p.m to 2.00 p.m	*Lunch Break*	
	2.00 p.m to3.40 p.m	Session 3	Load calculations-Power requirement calculation methods Dr.M.Iyappan,AP/ECE
	3.40 p.m to 3.50 p.m	*Tea Break*	
	3.50 p.m to 4.30 p.m	Session 4	PCB mechanical fixing-PCB dimension-PCB external interface connectors Mr.S.Dinesh,AP/EEE
	4.30 p.m to 5.00 p.m		Valedictory Function

PROGRAM COORDINATOR
[S. SATHYAMOORTHI]
AP/EEE

HOD/EEE
[DR. P KANNAN]

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ADD ON COURSE ON EMBEDDED HARDWARE DESIGN DEVELOPMENT
STUDENT'S ATTENDANCE

S.No.	Reg.No.	Name of the student	21.07.22		22.07.22		23.07.22		25.07.22		26.07.22	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1.	920819105001	Ahamed Afzar A	/	/	/	/	/	/	/	/	/	/
2.	920819105002	Aravindkumar K	/	/	/	/	/	/	/	/	/	/
3.	920819105003	Guru Prasath A	/	/	/	/	/	/	/	/	/	/
4.	920819105004	Karthi Keyan R	/	/	/	/	/	/	/	/	/	/
5.	920819105005	Kasthuri M	/	/	/	/	/	/	/	/	/	/
6.	920819105006	Lakshmi Priya A	/	/	/	/	/	/	/	/	/	/
7.	920819105007	Logeshwaran N	/	/	/	/	/	/	/	/	/	/
8.	920819105009	Pitchiyatha D	/	/	/	/	/	/	/	/	/	/
9.	920819105010	Poornakumar V	/	/	/	/	/	/	/	/	/	/
10.	920819105011	Pradapkannan B	/	/	AB	AB	/	/	/	/	/	/
11.	920819105012	Rajamurugan M	/	/	/	/	/	/	/	/	/	/
12.	920819105013	Rajasekar M	/	/	/	/	/	/	/	/	/	/
13.	920819105014	Sujeethran S	/	/	/	/	/	/	AB	AB	/	/
14.	920819105016	Vignesh M	/	/	/	/	/	/	/	/	/	/
15.	920820105001	Baskar A	/	/	/	/	/	/	/	/	/	/
16.	920820105002	Bharathiraja C	/	/	/	/	/	/	/	/	/	/
17.	920820105003	Govinthavasan A	/	/	/	/	/	/	/	/	/	/
18.	920820105004	Harish G	/	/	/	/	/	/	/	/	/	/
19.	920820105005	Ishas Ahamed A	/	/	/	/	/	/	/	/	/	/
20.	920820105007	Jeyaram M	/	/	/	/	/	/	/	/	/	/
21.	920820105008	Justin Thiraviyam A	/	/	/	/	/	/	/	/	/	/
22.	920820105009	Kabil Sharma M	/	/	/	/	/	/	/	/	/	/
23.	920820105010	Logesh Kumar M	/	/	/	/	/	/	/	/	/	/
24.	920820105011	Mahendra S	/	/	/	/	/	/	/	/	/	/
25.	920820105012	Mohammed Ashik S	/	/	/	/	/	/	/	/	/	/
26.	920820105013	Ramar V	/	/	/	/	/	/	/	/	/	/
27.	920820105014	Saravanakumar S	/	/	/	/	/	/	/	/	/	/
28.	920820105015	Saravana Muthu K	/	/	/	/	/	/	/	/	/	/
29.	920820105016	Sarwesh R	/	/	/	/	/	/	/	/	/	/
30.	920820105017	Tharun N	/	/	/	/	/	/	/	/	/	/
31.	920820105018	Thavamani A	/	/	/	/	/	/	/	/	/	/
32.	920820105019	Venkatesh V	/	/	/	/	/	/	/	/	/	/
33.	920820105301	Arunkumar S	/	/	/	/	/	/	AB	AB	/	/
34.	920820105302	Bharatha Raja S	/	/	/	/	/	/	/	/	/	/
35.	920820105303	Brintha R	/	/	/	/	/	/	/	/	/	/
36.	920820105304	Ganesh S	/	/	/	/	/	/	/	/	/	/

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S.No.	Reg.No.	Name of the student	21.07.22		22.07.22		23.07.22		25.07.22		26.07.22	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
37.	920820105305	Geethanjali Devi S	/	/	/	/	/	/	/	/	/	/
38.	920820105306	Hareesh K.S	/	/	/	/	/	/	/	/	AB	AB
39.	920820105307	Kalai Selvi S	/	/	/	/	/	/	/	/	/	/
40.	920820105308	Krishna Pandiyan S	/	/	/	/	/	/	/	/	/	/
41.	920820105309	Lakshmanan T	/	/	/	/	/	/	/	/	/	/
42.	920820105310	Loganathan M	/	/	/	/	/	/	/	/	/	/
43.	920820105311	Mohammed Harish H	/	/	/	/	/	/	/	/	/	/
44.	920820105312	Monika K	/	/	/	/	/	/	/	/	/	/
45.	920820105313	Poovarasan R	/	/	/	/	AB	AB	/	/	/	/
46.	920820105314	Praveen Kumar R	/	/	/	/	/	/	/	/	/	/
47.	920820105315	Reegan S	/	/	/	/	/	/	/	/	/	/
48.	920820105316	Sanron Mathi S	/	/	/	/	/	/	/	/	/	/
49.	920820105317	Shylesh Kumar V	/	/	/	/	/	/	/	/	/	/
50.	920820105318	Siva S	/	/	/	/	/	/	/	/	/	/
PRESENT			50	50	49	49	49	49	48	48	49	49
ABSENT			-NIL-	-NIL-	01	01	01	01	02	02	01	01
TOTAL			50	50	50	50	50	50	50	50	50	50
PROGRAM COORDINATOR												

PROGRAM COORDINATOR
[S. SATHIYAMOORTHY]
AP/EEE

HOD/EEE
[Dr. P. KANNAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADD ON COURSE ON EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

QUIZ QUESTION PAPER WITH ANSWER KEY

1) What is the sampling rate of an analog real time oscilloscope (MSO)?

A) 2 Gs/s
B) 20 Gs/s
C) 40 Gs/s
D) 100 Gs/s

2) Which op-amp device serves to be an ideal application for differential as well as instrumentation amplifier?

A) µA748
B) LM318
C) AD OP-27
D) None of the above

3) Which consequence/s of transmission lines arise/s are responsible for generating the signal integrity problems associated with the high speed designs?

A) Overshoot
B) Undershoot
C) Ring back
D) All of the above

4) Which instrument is used in Wein bridge oscillator for fault finding purpose?

A) Analog oscillascope
B) Logic analyzer
C) MSO
D) DSO

5) Which terminology enables the user to develop certain novel features and modify the designs as per the requirement level?

A) Simulation
B) Prototype
C) Product
D) Quality

6) Which type/s of Gaussian parameter distribution represents statistically reduced nominal parameters by the mechanism of multiplication of distribution?

A) Relative variation
B) Absolute variation
C) Bimodel
D) All of the above

7) Which among the following elements of EMC model contribute/s in generating the interference in signal integrity?

A) Energy source
B) Receptor
C) Coupling path between source and receptor
D) All of the above

8) Which among the following oscilloscopes exhibits a serial processing architecture?

A) DPO
B) DSO
C) MSO
D) All of the above

9) Which factor/s affect/s the signal integrity of an instrument?

A) Bends
B) Crosstalk
C) Stub length
D) All of the above

10) In µA748 op-amp, the use of 3 pF compensation capacitor also increases the slew rate by the factor of _____.

A) 10
B) 15
C) 20
D) 30

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ANSWERS:

1) A

2) C

3) D

4) A

5) B

6) C

7) D

8) B

9) D

10) A

PROGRAM COORDINATOR
[S. SATHYAMOORTHI]
AP/EEE

HOD/EEE
[Dr. P. KANIRAJAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADD ON COURSE ON EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

STUDENT'S FEEDBACK FORM

Name of the Student : M. Kasthuri	Year / Semester: III / 06

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices		✓			
3	Examples Provided during this Course	✓				
4	Course Delivered by Resource Person	✓				
5	Time Management			✓		
6	Overall rating of this Course	✓				

PROGRAM COORDINATOR
[S. SATHYAMOORTHI]
AP/EEE

HOD/EEE
[Dr. P. KANIRAJAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADD ON COURSE ON EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

STUDENT'S FEEDBACK FORM

Name of the Student : T. Lakshmanan	Year / Semester: II / 04

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content		✓			
2	Way of Exposed New Knowledge and Practices	✓				
3	Examples Provided during this Course		✓			
4	Course Delivered by Resource Person	✓				
5	Time Management		✓			
6	Overall rating of this Course	✓				

PROGRAM COORDINATOR
[S. SATHYAMOORTHI]
AP/EEE

HOD/EEE
[Dr. P. KANI RAJAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

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STUDENT'S FEEDBACK FORM

Name of the Student : V. Ramcu	Year / Semester: II / 04

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	✓				
2	Way of Exposed New Knowledge and Practices	✓				
3	Examples Provided during this Course		✓			
4	Course Delivered by Resource Person			✓		
5	Time Management		✓			
6	Overall rating of this Course	✓				

PROGRAM COORDINATOR
[S. SATHYAMOORTHI]
AP/EEE

HOD/EEE
[Dr. P. KANIRAJAN]

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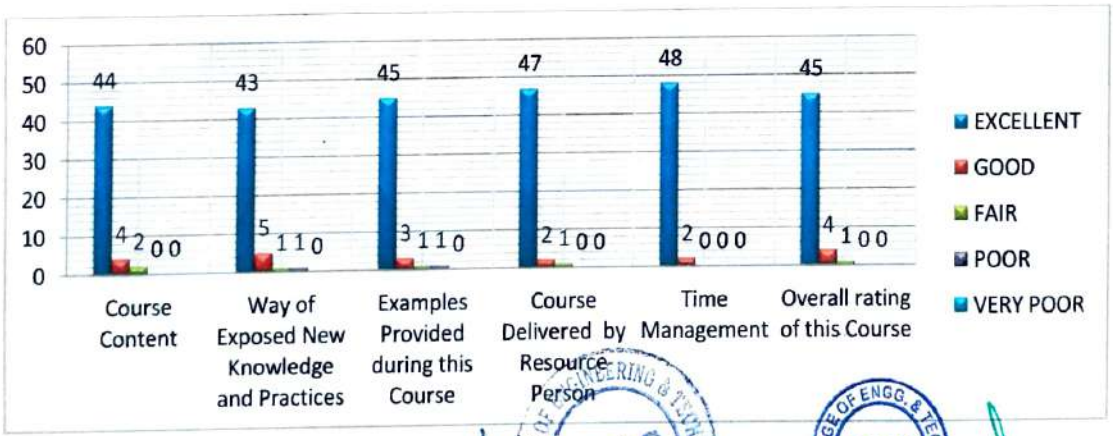
ADD ON COURSE ON EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

STUDENT'S FEED BACK ANALYSIS REPORT

TOTAL STRENGTH: 50

S.No.	CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Course Content	44	04	02	00	00
2	Way of Exposed New Knowledge and Practices	43	05	01	01	00
3	Examples Provided during this Course	45	03	01	01	00
4	Course Delivered by Resource Person	47	02	01	00	00
5	Time Management	48	02	00	00	00
6	Overall rating of this Course	45	04	01	00	00
7	Average	45.33	3.33	1.0	0.33	00

Number of students successfully completed the course: 50



PROGRAM COORDINATOR
[S. SATHYA MOORTHY]
AP/EEE

HOD/EEE
[Dr. P. KANNAN]

IQAC
Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

PRINCIPAL
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADD ON COURSE ON EMBDDED BASED HARDWARE DESIGN DEVELOPMENT

SUMMARY REPORT

The Department of Electrical and Electronics Engineering Organized an Add on Course on **"EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT"** from 21-07-2022 to 26-07-2022 (5 days) at PSS Lab. During the inauguration function on 21st July, 2022 third year student Mr.N.Logeshwaran,delivered the welcome address.

Dr.J.Sundararajan, Principal of our college inaugurated the function and delivered the inaugural address. Our faculty members Dr.M.Iyappan,AP/ECE and Mr.S.Dinesh,AP/EEE participated with us and shared their knowledge with our students. This five days course gave a good overview on **Embedded Based Hardware Design Development** and provided lots of information regarding the topic. In addition to this, also they gave hands on training for Electrical Design the information on Design for various types of **Electrical and Electronics Systems**.

They shared their knowledge of Design of Hard ware in Electrical and Electronics system which enables the students to have skills to resolve complex real problems in Electric systems. Our students learnt various existing and emerging **embedded technologies** of **Electrical Design.** 50 students participated and completed it successfully and were awarded with certificates, after answering the quiz.

On 26/07/2022 during the valedictory function the second year student Mr.S.Reegan delivered the vote of thanks.

PROGRAM COORDINATOR
[S.SATHYAMOORTHY]
AP/EEE

HOD/EEE
[Dr.P.ILANILAVAN]

IQAC

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

NPR College of Engineering & Technology
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADD ON COURSE ON EMBEDDED BASED HARDWARE DESIGN DEVELOPMENT

COURSE MATERIAL /MANUAL

1.https://onlinecourses.nptel.ac.in/noc20_cs14/preview

2.https://www.keentechnologies.com/course/hardware-design-development-online-training-hyderabad-india-uk-usa/

3.https://itcources.com/hardware-design-development-training/

4. http://www.emtech.in/courses/electronics-hardware-design-2/

5.https://www.cetpainfotech.com/technology/hardware-in-electronics

PROGRAM COORDINATOR
[S. SATHYAMOORTHI]
AP/EEE

HOD/EEE
[Dr. P. KANNAGAN]

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF COMPLETION

This is to certify that

Mr. A. THAVAMANI, III YEAR EEE

has successfully completed an Add on Course on
'Embedded Based Hardware Design Development'
from 21/07/2022 to 26/07/2022.

HOD/EEE
DR.P.KANIRAJAN

PRINCIPAL
DR.J.SUNDARARAJAN

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
Principal
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF COMPLETION

This is to certify that

Mr. M. RAJASEKAR, III YEAR EEE

has successfully completed an Add on Course on
'Embedded Based Hardware Design Development'
from 21/07/2022 to 26/07/2022.

HOD/EEE
DR.P.KANIRAJAN

PRINCIPAL
DR.J.SUNDARARAJAN

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE OF COMPLETION

This is to certify that

Mr. M. VIGNESH, III YEAR EEE

has successfully completed an Add on Course on
'Embedded Based Hardware Design Development'
from 21/07/2022 to 26/07/2022.

HOD/EEE
DR.P.KANIRAJAN

PRINCIPAL
DR.J.SUNDARARAJAN

Dr. J.SUNDARARAJAN,
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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO – DESK FUSION 360

INDEX

COURSE NAME: **21MECC01- 3D MODEL CREATION WITH AUTO-DESK FUSION 360**

ACADEMIC YEAR: 2021-2022 SEMESTER: ODD DURATION: **30 HOURS**

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PROGRAM COORDINATOR
[H MATHAN RAJ]

HoD-MECH

IQAC
Coordinator - IQAC
NPR College of Engineering & Technology
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PRINCIPAL
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From:

M.Mathan raj,
Assistant Professor,
Department of Mechanical Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Request for permission to conduct Certificate course for II & III year Mechanical Engineering students – reg

We have planned to conduct Certificate Course on **"3D MODEL CREATION WITH AUTO –DESK FUSION 360"** to our students from 27.08.2021 to 21.09.2021 (20 Days) at 4.30 p.m. to 6.00 p.m. in our college premises. We have proposed **Mr. M.Muthuraj, CEO & Founder, Profenna Technologies, Madurai.** as the resource person for this certificate course . Kindly permit us to conduct the same.

Thanking you.

Yours faithfully,
[M.MATHAN RAJ]

Place: Natham

Date: 03.08.2021

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO-DESK FUSION 360

RESOURCE PERSON'S PROFILE

Name : Mr. M.Muthuraj

Designation : CEO & Founder

Company Name : Profenna Technologies, Madurai

About Resource Person : Mr. M.Muthuraj is currently working as CEO & Founder with Profenna Technologies, Madurai. He has completed his BE (Mech) in IRTT, Erode and also completed ME(Thermal) in GCT, Coimbatore. He is an well experienced person in the field of design and analysis software.. He had more than 20 branches in all over Tamil Nadu.

PROGRAM COORDINATOR
[M.MATHAN RAJ]

HoD-MECH

PRINCIPAL
Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul.

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NPRCET/OFF/MECH/VAC/2021-2022 DATE: 18.08.2021

CIRCULAR

This is to inform that Department of Mechanical Engineering has planned to conduct a Certificate Course on **"3D MODEL CREATION WITH AUTO-DESK FUSION 360"** for the students during this period from 27.08.2021 to 21.09.2021 (20 Days). Interested students can enroll their name to the program coordinators on or before 25.08.2021. The details of the training program are given below.

COURSE NAME	:	**3D MODEL CREATION WITH AUTO-DESK FUSION 360**
RESOURCE PERSON	:	Mr. M.Muthuraj, CEO & Founder, Profenna Technologies, Madurai.
VENUE	:	NPRCET CAD Laboratory
DATE & DURATION	:	27.08.2021 to 21.09.2021 & 30 Hours
PROGRAM COORDINATOR	:	Mr.M.Mathan raj, AP/Mech, NPRCET.

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. All the HoDs
2. All the Class Rooms
3. Notice Board
4. File
5. Program Coordinator
6. IQAC

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

"CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO - DESK FUSION 360"

On 27th August, 2021

Venue: NPRCET Rear Block AC Seminar hall at 11.00 AM.

Chief Guest

Mr. M.Muthuraj,

CEO & Founder,

Profenna Technologies, Madurai

Dr.J.SUNDARARAJAN,

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Mechanical Engineering,

NPR College of Engineering & Technology,

NPR Nagar, Natham.

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AGENDA

Inauguration on 27.08.2021 FN

- **Prayer Song** : Tamilthai vazhthu
- **Welcome Address** : **Ms.K. Shobana**
  III- Year Mechanical
- **Felicitation Address** : **Dr. J. Sundararajan**
  Principal
- **Honoring the Chief Guest** : **Mr. V.Ruban**
  II- Year Mechanical
- **Chief Guest Introduction** : **Mr. M. Mathan raj**
  Assistant Professor
  Mechanical Engineering
- **Chief Guest Address** : **Mr.M.Muthuraj**
  CEO & FOUNDER
  Profenna Technologies

Valedictory on 21.09.2021

- **Vote of Thanks** : **Ms. G.Mahalakshimi**
  III-Year Mechanical
- **National Anthem**

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO-DESK FUSION 360

COURSE CONTENT

Week 1 - Chapter 1:

- Introduction of Autodesk fusion360 fundamentals,getting started the fusion 360 interface design navigation and display.
- Creating the first feature with quick shapes design units and origin quick shape creation.
- Creating sketched shape geometry, introduction to the sketching work flow sketch entities

Week 2 - Chapter 2:

- Additional sketching tools additional entity types editing tools additional dimension tools moving and copying rectangular sketch patterns circular sketch patterns
- Sketched secondary features sketched secondary features using existing geometry
- Pick and place features fillets chamfers holes editing pick and place features.

Week 3 - Chapter 3:

- Construction features construction planes construction axes construction points,equations parameters.
- Additional features and operations draft shell rib split face scale thread press pull.
- Design and display manipulation reordering features inserting features suppressing features.

Week 4 - Chapter 4:

- Single path sweeps , loft features, feature duplication tools mirroring geometry patterning features.
- Distributed design assembly design methods distributed design joint origins assigning joints.
- Component design tools rigid groups interference detection miscellaneous joint tools.

Week 5 -Chapter 5:

- Editing sculpted geometry introduction to the sculpt environment surface quick shapes creating sketched t-spline surfaces creating faces & filling holes .
- Editing from geometry deleting entities working with edges working with faces working with points controlling symmetry thickening geometry.
- Drawing basics creating a new drawing additional drawing views exploded views manipulating drawing.

Criteria to get Certificate:

- Students must have 75% attendance.
- Student should secure 50% marks in the Exam.

Prepared by: Mr.M.Mathan raj, AP/MECH,

PROGRAM COORDINATOR	HoD-MECH	IQAC	PRINCIPAL
[M.MATHAN RAJ]		Coordinator - IQAC NPR College of Engineering & Technology Natham, Dindigul (Dt)-624 401.	Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D Principal N.P.R. College of Engineering & Technology Natham, Dindigul (Dt) - 624 401

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO-DESK FUSION 360

REGISTERED STUDENTS' NAME LIST

S/N	REGISTER NUMBER	NAME OF THE STUDENT	YEAR OF STUDY
1.	920820114001	M.Abishek Kumar	II-MECH
2.	920820114002	B.Ajaykumar	II-MECH
3.	920820114003	K.E.Arunkumar	II-MECH
4.	920820114004	S.Mohanraj	II-MECH
5.	920820114005	B.Raguram	II-MECH
6.	920820114006	V.Ruban	II-MECH
7.	920820114007	S.Sabarinathan	II-MECH
8.	920820114008	N.Sivabalan	II-MECH
9.	920820114009	P.Sivakumar	II-MECH
10.	920820114010	V.Thangavimal	II-MECH
11.	920820114011	N.Venkadesan	II-MECH
12.	920819114001	A.Abilash	III-MECH
13.	920819114003	V.Anbarasan	III-MECH
14.	920819114004	S.Aswinbalaji	III-MECH
15.	920819114005	P.Ayyam Perumal	III-MECH
16.	920819114006	S.Balakumaresan	III-MECH
17.	920819114008	B.Dineshpandi	III-MECH
18.	920819114010	M.Gowthaman	III-MECH
19.	920819114012	T.Iman Mohammed	III-MECH
20.	920819114013	G.Maha Lakshmi	III-MECH
21.	920819114014	N.Manikandan	III-MECH
22.	920819114015	R.Manikandan	III-MECH
23.	920819114016	G.Meenakshi Sundaram	III-MECH
24.	920819114018	A.Mohamed Siddiq	III-MECH
25.	920819114019	P.Mohana Ragul	III-MECH
26.	920819114020	N.Mugeshwaran	III-MECH
27.	920819114021	P.Muthusamy	III-MECH
28.	920819114022	S.Nagaraj	III-MECH
29.	920819114023	K.Naveenraj	III-MECH
30.	920819114024	M.Nitheswar	III-MECH
31.	920819114025	Payavulla Sai Prasad	III-MECH
32.	920819114026	B.Raghulpandian	III-MECH
33.	920819114027	M.Rakesh	III-MECH
34.	920819114028	S.Rakesh	III-MECH
35.	920819114029	B.Ramakrishnan	III-MECH
36.	920819114030	M.Ramanan	III-MECH
37.	920819114031	A.Ramkumar	III-MECH
38.	920819114032	P.Ruban	III-MECH

39.	920819114033	S.Sangaran	III-MECH
40.	920819114034	G.Sankar	III-MECH
41.	920819114035	M.Saravanakumar	III-MECH
42.	920819114036	S.Shaarif Ahamed	III-MECH
43.	920819114037	K.Shobana	III-MECH
44.	920819114038	S.Siva Kumar	III-MECH
45.	920819114039	M.Velpackiyaraj	III-MECH

PROGRAM COORDINATOR
[M MATHAN RAJ]

HoD-MECH

PRINCIPAL
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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE 3D MODEL CREATION WITH AUTO-DESK FUSION 360

COURSE SCHEDULE

Venue: CAD Laboratory **Date: 23.08.2021**

External Resource Person:

Mr. M.Muthuraj,
CEO & Founder,
Profenna Technologies,
Madurai.

Internal Resource Person:

1) Mr.M.Mathan raj,
AP/MECH

S/N	Date	Syllabus	Resource Person	Hours
1.	27.08.2021	Introduction to auto - desk fusion 360 fusion 360 fundamentals getting started the fusion 360 interface design.	Mr. M.Muthuraj, CEO & Founder	1.5
2.	28.08.2021	Creating the first feature with quick shapes design units and origin quick shape creation.	Mr.M.Mathan raj, AP/MECH	1.5
3.	31.08.2021	Creating sketched geometry introduction to the sketching workflow sketch entities dimensioning sketch constraints extruding a sketch revolving a sketch.	Mr.M.Mathan raj, AP/MECH	1.5
4.	01.09.2021	Additional sketching tools additional entity types editing tools additional dimension tools moving and copying rectangular sketch patterns circular sketch patterns.	Mr.M.Mathan raj, AP/MECH	1.5
5.	02.09.2021	Sketched secondary features using existing geometery.	Mr. M.Muthuraj, CEO & Founder	1.5
6.	03.09.2021	Pick and place features fillets chamfers holes editing pick and place features	Mr. M.Muthuraj, CEO & Founder	1.5

7.	04.09.2021	Construction features construction planes construction axes construction points	Mr.M.Mathan raj, AP/MECH	1.5
8.	06.09.2021	Equations parameters additional features and operations draft shell rib split face scale thread press pull.	Mr.M.Mathanraj, AP/MECH	1.5
9.	07.09.2021	Design and display manipulation reordering features inserting features suppressing features measure and section analysis direct modelling.	Mr. M.Muthuraj, CEO & Founder	1.5
10.	08.09.2021	Single path sweeps, : loft features.	Mr. M.Muthuraj, CEO & Founder	1.5
11.	09.09.2021	Feature duplication tools mirroring geometry patterning features.	Mr.M.Mathan raj, AP/MECH	1.5
12.	11.09.2021	Distributed design assembly design methods distributed design joint origins assigning joints.	Mr.M.Mathan raj, AP/MECH	1.5
13.	13.09.2021	Component design tools rigid groups interference detection miscellaneous joint tools	Mr. M.Muthuraj, CEO & Founder	1.5
14.	14.09.2021	Multi-body design multi-body design tools components as-built joints.	Mr.M.Mathan raj, AP/MECH	1.5
15.	15.09.2021	Editing sculpted geometry introduction to the sculpt environment surface quick shapes creating sketched t-spline surfaces creating faces & filling holes.	Mr. M.Muthuraj, CEO & Founder	1.5
16.	16.09.2021	Editing from geometry deleting entities working with edges working with faces.	Mr. M.Muthuraj, CEO & Founder	1.5
17.	17.09.2021	Working with points controlling symmetry thickening geometry.	Mr.M.Mathan raj, AP/MECH	1.5
18.	18.09.2021	Creating a new drawing additional drawing views exploded views manipulating drawings.	Mr. M.Muthuraj, CEO & Founder	1.5

19.	20.09.2021	Dimensions other annotations parts list and balloons annotation and dimension settings , drawing output.	Mr.M.Mathan raj, AP/MECH	1.5
20.	21.09.2021	Static analysis using the simulation environment introduction to the simulation environment setting up a structural static analysis setting up the mesh solving a design study visualizing the results.	Mr. M.Muthuraj, CEO & Founder	1.5

PROGRAM COORDINATOR

[M.MATHAN RAJ]

HoD- MECH

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Coordinator - IQAC
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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO-DESK FUSION 360

STUDENTS ATTENDANCE LIST

S/N	Register Number	Name of the Student	27/06	28/06	29/06	01/07	02/07	03/07	04/07	05/07	08/07	09/07	10/07	11/07	12/07	13/07	15/07	16/07	17/07	18/07	19/07	20/07
1.	920820114001	M.Abishek Kumar	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/
2.	920820114002	B.Ajaykumar	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/
3.	920820114003	K.E.Arunkumar	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4.	920820114004	S.Mohanraj	/	/	/	/	/	a	/	/	/	/	/	a	/	/	/	a	/	/	/	/
5.	920820114005	B.Raguram	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	a	/	/	/	/
6.	920820114006	V.Ruban	a	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	a	/
7.	920820114007	S.Sabarinathan	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/
8.	920820114008	N.Sivabalan	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	a
9.	920820114009	P.Sivakumar	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10.	920820114010	V.Thangavimal	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/
11.	920820114011	N.Venkadesan	/	/	a	/	/	/	/	/	/	a	/	/	/	a	/	/	/	/	/	/
12.	920819114001	A.Abilash	/	/	/	/	/	/	/	/	/	a	/	/	/	/	a	/	/	/	/	/
13.	920819114003	V.Anbarasan	/	/	/	a	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/
14.	920819114004	S.Aswinbalaji	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/
15.	920819114005	P.Ayyam Perumal	/	a	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/
16.	920819114006	S.Balakumaresan	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17.	920819114008	B.Dineshpandi	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	a	/	a	/
18.	920819114010	M.Gowthaman	/	/	/	/	a	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/
19.	920819114012	T.Iman Mohammed	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a
20.	920819114013	G.Maha Lakshmi	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/
21.	920819114014	N.Manikandan	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22.	920819114015	R.Manikandan	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/
23.	920819114016	G.Meenakshi Sundaram	/	/	/	/	/	a	/	/	/	/	/	/	/	/	a	/	a	/	/	/
24.	920819114018	A.Mohamed Siddiq	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
25.	920819114019	P.Mohana Ragul	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	a	/
26.	920819114020	N.Mugeshwaran	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27.	920819114021	P.Muthusamy	/	/	/	a	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/
28.	920819114022	S.Nagaraj	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	a
29.	920819114023	K.Naveenraj	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/
30.	920819114024	M.Nitheswar	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/
31.	920819114025	Payavulla Sai Prasad	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
32.	920819114026	B.Raghulpandian	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33.	920819114027	M.Rakesh	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/
34.	920819114028	S.Rakesh	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
35.	920819114029	B.Ramakrishnan	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/

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36.	920819114030	M.Ramanan	/	/	/	a	/	/	/	/	/	/	/	a	/	/	/	a	/	/	/	/
37.	920819114031	A.Ramkumar	a	/	a	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/
38.	920819114032	P.Ruban	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	a	/	/	
39.	920819114033	S.Sangaran	/	a	/	a	/	a	/	/	/	/	a	/	/	/	/	/	/	/	a	/
40.	920819114034	G.Sankar	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/
41.	920819114035	M.Saravanakumar	a	/	/	/	/	/	/	/	/	/	/	/	a	/	/	a	/	/	/	/
42.	920819114036	S.Shaarif Ahamed	/	/	/	a	/	/	a	/	/	/	/	a	/	/	/	/	/	/	/	/
43.	920819114037	K.Shobana	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	a	/	/	/	/
44.	920819114038	S.Siva Kumar	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
45.	920819114039	M.Velpackiyaraj	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	a	/	/	/	/
		Present	41	43	41	40	44	39	41	43	41	39	40	41	42	44	43	40	37	44	41	42
		Absent	04	02	04	05	01	06	04	02	04	06	05	04	03	01	02	05	08	01	04	03
		Coordinator Signature																				

HoD- MECH

PRINCIPAL

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO-DESK FUSION 360

SAMPLE QUESTION PAPER WITH ANSWER KEY

Q1. How can you edit a feature?

- ☐ Select the feature, press Delete, and then create a new feature.
- ☑ **Right-click the feature and select Edit Feature.**
- ☐ Keep clicking Undo until the feature is gone.
- ☐ Find the feature in the browser, select Remove, and then create a new feature.

Q2. Which tool creates a plane normal to a sketch path or edge?

- ☐ Plane Through Two Edges
- ☑ **Plane Along Path**
- ☐ Plane at Angle
- ☐ Plane Through Three Points

Q3. Which tool measures the precise distance between two points, and creates dimensions that are parallel to the locations of objects?

- ☐ Aligned Dimension
- ☑ **Linear Dimension**
- ☐ Angular Dimension
- ☐ Ordinate Dimension

Q4. In simulation, which constraint prevents movement in a specific direction?

- ☐ frictionless
- ☐ prescribed displacement
- ☐ pin
- ☑ **fixed**



Q5. In the CAM workspace, which strategy removes a part's interior cavity?

- ☐ Slot
- ☑ **2D Pocket**
- ☐ Bore
- ☐ 2D Contour

Q6. What does the Zebra Analysis tool do?

- ☐ It applies a metal render.
- ☐ It fixes bodies.
- ☑ **It checks a body's continuity.**
- ☐ It splits bodies apart.

Q7. Which command creates a plane at the midpoint between two faces or work planes?

- ☑ **Midplane**
- ☐ Plane Tangent to Face at Point
- ☐ Offset Plane
- ☐ Plane at Angle

Q8. Which hole type automatically enters a diameter value based on the type of fastener it will accomodate?

- ☐ Clearance
- ☑ **Simple**
- ☐ Drilled
- ☐ Through

Q9. Which workspace creates components made from thin, premade material formed into specific shapes?

- ☐ Mesh
- ☐ Simulation
- ☐ Animation
- ☑ **Sheet Metal**

Q10. What is required to invite other people into your project folder?

- ☐ a name
- ☑ **an email address**
- ☐ an IP address
- ☐ a phone number

Q11. Which tool connects two joints in a way that the motion of one joint can drive the motion of another joint?

- ☐ Drive Joints
- ☐ As-built Joint
- ☐ Motion Study
- ☑ **Motion Link**

Q12. Which joint type allows components to translate along two axes and rotate around a single axis?

- ☐ slider
- ☐ revolute
- ☑ **planar**
- ☐ pin-slot

Q13. Which view shows a drawing part at an enlarged scale?

- ☑ **detail view**
- ☐ section view
- ☐ base view
- ☐ projected view

Q14. Which file type is not a drawing output?

- ☐ DWG file
- ☑ **CSV file**
- ☐ STEP file
- ☐ PDF file

Q15. What command do you use to understand the relationship between multiple joints?

- ☐ Lock
- ☑ **Animate Joint**
- ☐ Animate Model
- ☐ Motion Link

NATHAM

PROGRAM COORDINATOR
[M MATHAN RAJ]

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO-DESK FUSION 360

STUDENT'S FEEDBACK FORM

Name of the Student : M. SARAVANA KUMAR	**Year / Semester:** III / 05
Name of the Program: 21MECC01 – 3D model creation with Autodesk Fusion 360	

CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
COURSE CONTENT	✓				
TECHNICAL SKILL	✓				
INTERACTION	✓				
PRACTICAL SESSION	✓				
COMMUNICATION	✓				

Any Other Comments / Suggestions: —

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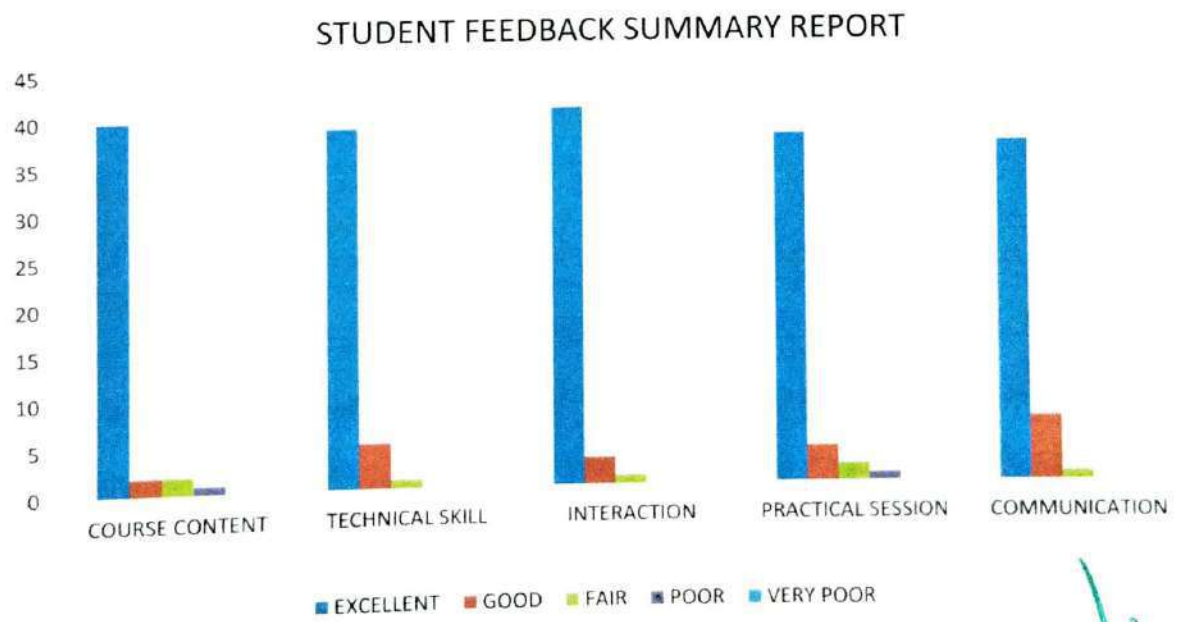
DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO-DESK FUSION 360

STUDENTS' FEEDBACK SUMMARY REPORT

REGISTERED STUDENTS:45 **DATE:21.09.2021**

CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
COURSE CONTENT	40	2	2	1	-
TECHNICAL SKILL	39	5	1	-	-
INTERACTION	41	3	1	-	-
PRACTICAL SESSION	38	4	2	1	-
COMMUNICATION	37	7	1	-	-
AVERAGE	**39**	**4.2**	**1.4**	**0.4**	**0**



PROGRAM COORDINATOR
[M MATHAN RAJ]

HoD-MECH

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Coordinator - IQAC
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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON 3D MODEL CREATION WITH AUTO-DESK FUSION 360

SUMMARY REPORT

The Department of Mechanical Engineering organized a Certificate Course on **"3D Model Creation with Auto-Desk Fusion 360"** from 27.08.2021 to 21.09.2021 (20 days) at CAD Laboratory. During the inauguration function on 27.08.2021 Ms. K.Shobana, III- Year Mechanical Engineering delivered the welcome address.

Dr.J.Sundararajan, Principal of our college inaugurated the program and delivered the inaugural address. Resources person Mr. M.Muthuraj, CEO & Founder, Profenna Technologies, Madurai . shared his technical experience with our students. This twenty days course gave overview about 3D Model Creation with Auto-desk Fusion 360.

He also shared the knowledge of the fundamentals and concepts in 3D Model Creation with Auto-desk Fusion 360 . So that students enable to have skills that would help them to resolve complex real world problems in design field.The students learnt various existing and emerging technologies of 3D Model Creation with Auto –desk Fusion 360.

The students learnt various existing and available sources to gain knowledge. 45 Students attended from II & III year Mechanical Engineering classes. During the valedictory function Students those who participated and successfully completed the Sample giving program were awarded with certificates.

Ms.G.Mahalakshimi of III- Year Mechanical Engineering delivered the vote of thanks.During the valedictory function on 21.09.2021.

PROGRAM COORDINATOR [M NATHAN RAJ]

HoD-MECH

Coordinator - IQAC
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IQAC

PRINCIPAL

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON MODEL CREATION WITH AUTO-DESK FUSION 360

COURSE MATERIAL/MANUAL

Material Link:

Chapter 1: https://www.youtube.com/watch?v=cKYtjVAg8R4

Chapter 2: http:nptel.ac.in/courses/125106001

Chapter 3: https://www.youtube.com/watch?v=FP2USTR09GY

Chapter 4: http:nptel.ac.in/courses/125106001

Chapter 5: https://www.youtube.com/watch?v=FP2USTR09GY

PROGRAM COORDINATOR
[M MATHAN RAJ]

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NATHAM

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE OF COMPLETION

This is to certify that

S. Rakesh, Third Year Mechanical Engineering

has successfully completed the certificate course on

'3D MODEL CREATION WITH AUTO-DESK FUSION 360'

From 27/08/2021 to 21/09/2021.

HOD/MECH
DR.S.PAULSINGARAYAR

PRINCIPAL
DR.J.SUNDARARAJAN
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0

INDEX

COURSE NAME: **21MECC02- SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0**

ACADEMIC YEAR: 2021-2022 SEMESTER: ODD DURATION: **30 HOURS**

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PROGRAM COORDINATOR
G. SUNDARARAJAN

HoD-MECH

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From:

G.Sundararajan,
Assistant Professor,
Department of Mechanical Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Request for permission to conduct Certificate Course for Final year Mechanical Engineering students – reg

We have planned to conduct Certificate Course on **"SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0"** to our students from 27.08.2021 to 21.09.2021 (20 days) at 4.30 p.m. to 6.00 p.m. in our college premises. We have proposed **Mr. A.Vijayapandi, Service Manager, Nagendran Automobiles, Kochadai road, Madurai-10** as the resource person for this Certificate Course . Kindly permit us to conduct the same.

Thanking you.

Yours faithfully,

G. Sundar

(G. SUNDARRAJAN)

Place: Natham

Date: 03.08.2021

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0

RESOURCE PERSON'S PROFILE

Name : Mr. A.Vijayapandi

Designation : Service manager

Company Name : Nagendran Automobiles, Kochadai road, Madurai-10

About Resource Person : Mr. A.Vijayapandi is currently working as Service manager with Nagendran Automobiles, Kochadai road, Madurai-10. He has completed his DME (Mech) in Tamilnadu Polytechnic College, Madurai. He is an experienced technical person with a demonstrated history of working in the Automobile industry.

PROGRAM COORDINATOR
G. SUNDARARAJAN

HoD-MECH

PRINCIPAL
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Principal
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NPRCET/OFF/MECH/VAC/2021-2022

DATE: 18.08.2021

CIRCULAR

This is to inform that Department of Mechanical Engineering has planned to conduct a Certificate Course on **"SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0"** for the students during this period from 27.08.2021 to 21.09.2021 (20 days). Interested students can enroll their name to the program coordinators on or before 25.08.2021. The details of the training program are given below.

COURSE NAME	:	**SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0**
RESOURCE PERSON	:	Mr. A.Vijayapandi, Service manager, Nagendran Automobiles, Kochadai road, Madurai-10.
VENUE	:	Thermal Engineering Laboratory
DATE & DURATION	:	27.08.2021 to 21.09.2021 & 30 Hours
PROGRAM COORDINATOR	:	Mr.G.Sundararajan, AP/MECH, NPRCET.

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E.,M.Tech.,Ph.D.,
Principal
NPR College of Engineering & Technology
Natham-624 401.

Copy to:

1. All the HoDs
2. All the Class Rooms
3. Notice Board
4. File
5. Program Coordinator
6. IQAC

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

"CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0"

On 27th August, 2021

Venue: NPRCET AC Seminar hall at 9.30 AM

Chief Guest

Mr. A.Vijayapandi,

Service Manager,

Nagendran Automobiles, Kochadai road, Madurai-10

Dr J.SUNDARARAJAN,

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Mechanical Engineering,

NPR College of Engineering & Technology,

NPR Nagar, Natham.

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AGENDA

Inauguration on 27.08.2021 FN

- **Prayer Song** : Tamilthai vazhthu
- **Welcome Address** : **Mr.J. Harish**
  IV- Year Mechanical
- **Felicitation Address** : **Dr. J. Sundararajan**
  Principal
- **Honoring the Chief Guest** : **Mr. M.Aswin**
  IV- Year Mechanical
- **Chief Guest Introduction** : **Mr. G. Sundararajan**
  Assistant Professor
  Mechanical Engineering
- **Chief Guest Address** : **Mr.A.Vijaypandi**
  Service Manager
  Nagendran Automobiles

Valedictory on 21.09.2021

- **Vote of Thanks** : **Mr. M.Gowtham kumar**
  IV-Year Mechanical
- **National Anthem**

NPR College of Engineering & Technology
NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
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Phone No: 04544- 246 500, 246501, 246502
Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org

DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0

COURSE CONTENT

Week 1 - Chapter 1:

- Introduction to engine, description of internal & external combustion engines
- Principle & working of 2&4-stroke diesel engine (compression ignition engine (C.I), principle of spark ignition engine(SI), differentiate between 2-stroke and 4 stroke, C.I engine and S.I engine.
- Direct injection and indirect injection, technical terms used in engine, engine specification.

Week 2 - Chapter 2:

- Basic engine components -engine cams & description & functions of pistons, piston rings.
- Common troubles and remedies of piston. Description and function of crank shaft, engine bearings.

Week 3 - Chapter 3:

- Valves & valve trains function of engine valves, different types, materials, type of valve.
- Description of camshafts & drives, importance of cam lobes, timing belts & chains.
- Trouble shooting procedure for excessive smoke, overheating, knocking or abnormal noise.

Week 4 - Chapter 4:

- Intake & exhaust systems - carbureted systems, principle of carburetor, type of carburetor
- Working of constant velocity type carburetor, carburetor operation-carburetion, carburetor.
- Diesel fuel injection system, tanks & lines, air cleaners, intake manifolds.

Week 5 -Chapter 5:

- Braking systems - braking fundamentals, principles of braking, description, construction and operation of drum & disc brakes, advantage over drum brake.
- Description and working principle of master cylinder, hydraulic pressure & force, brake fade.

Week 6 -Chapter 6:

- Clutches & transmission, clutch principles, wet & dry clutches single-plate clutches, multi-plate clutches, operating mechanisms, automatic clutch.
- Gearbox layout & operation gearbox layouts, description of gear shift mechanism, gear ratio gear operation, gear drive position - neutral, 1st to 5th position.

Criteria to get Certificate:

- Students must have 75% attendance.
- Student should secure 50% marks in the Exam.

Prepared by: Mr.G.Sundararajan, AP/MECH,

PROGRAM COORDINATOR

G. SUNDARARAJAN

HoD-MECH

IQAC

Coordinator: IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

PRINCIPAL

Dr. J.SUNDARARAJAN
B.E., M.Tech., Ph.D
Principal
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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0

REGISTERED STUDENTS' NAME LIST

S/N	REGISTER NUMBER	NAME OF THE STUDENT	YEAR OF STUDY
1.	920818114001	V.Abinash	IV-MECH
2.	920818114002	M.Alagarsamy	IV-MECH
3.	920818114003	M.Aswin	IV-MECH
4.	920818114004	G.Aswin Naganath	IV-MECH
5.	920818114005	M.S.Balamurugan	IV-MECH
6.	920818114006	C.Bhuvaneswaran	IV-MECH
7.	920818114007	S.Dinesh Kumar	IV-MECH
8.	920818114008	J.Harish	IV-MECH
9.	920818114010	M.Jothivel	IV-MECH
10.	920818114011	V.Manivannan	IV-MECH
11.	920818114012	R.Manoj Kumar	IV-MECH
12.	920818114014	R.Naveen Prakash	IV-MECH
13.	920818114016	P.Periyandi	IV-MECH
14.	920818114018	K.Prathiban	IV-MECH
15.	920818114020	S.Praveen Raj	IV-MECH
16.	920818114022	T.Sabari Nathan	IV-MECH
17.	920818114023	R.Sangunathan	IV-MECH
18.	920818114025	J.Sebastin Jeral	IV-MECH
19.	920818114026	A.Sriram	IV-MECH
20.	920818114027	S.Sriram	IV-MECH
21.	920818114028	A.Srivel	IV-MECH
22.	920818114029	M.Suriyaviswa	IV-MECH
23.	920818114030	D.Surya	IV-MECH
24.	920818114032	M.Syed Akmal	IV-MECH
25.	920818114033	P.Velmurugan	IV-MECH
26.	920818114034	A.Vinith Kumar	IV-MECH
27.	920818114035	P.Visakan	IV-MECH
28.	920818114036	G.Vishva	IV-MECH
29.	920818114301	B.Athithyan	IV-MECH
30.	920818114302	S.Jeevakalidas	IV-MECH
31.	920818114303	K.Manikandan	IV-MECH
32.	920818114501	G.Rithish Kumar	IV-MECH
33.	920818114701	M.Gowtham Kumar	IV-MECH
34.	920818114502	M.Santhosh Kumar	IV-MECH
35.	920818114503	R.Thilipan	IV-MECH

PROGRAM COORDINATOR

G. SUNDARARAJAN

HoD-MECH

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0

COURSE SCHEDULE

Venue: Thermal Engineering Laboratory **Date: 23.08.2021**

External Resource Person:

Mr. A.Vijayapandi,
Service manager,
Nagendran Automobiles, Kochadai road,
Madurai-10.

Internal Resource Person:

1) Mr.G.Sundararajan, AP/Mech, NPRCET.

S/N	Date	Syllabus	Resource Person	Hours
1.	27.08.2021	Introduction to Engine, Description of internal & external combustion engines, Classification of IC engines.	Mr. A.Vijayapandi, Service manager	1.5
2.	28.08.2021	Principle & working of 2&4-stroke diesel engine (Compression ignition Engine (C.I), Principle of Spark Ignition Engine(SI), differentiate between 2-stroke and 4 stroke, C.I engine and S.I Engine	Mr.G.Sundararajan, AP/MECH	1.5
3.	31.08.2021	Direct injection and Indirect injection, Technical terms used in engine, Engine specification	Mr.G.Sundararajan, AP/MECH	1.5
4.	01.09.2021	Basic engine components - Engine cams & Description & functions of pistons, piston rings	Mr.G.Sundararajan, AP/MECH	1.5
5.	02.09.2021	Common troubles and remedies of piston. Description and function of Crank shaft, Engine	Mr. A.Vijayapandi, Service manager	1.5
6.	03.09.2021	Function of Engine Valves, different types, materials, Type of valve operating mechanism, Importance of Valve seats, Valve-timing setting.	Mr. A.Vijayapandi, Service manager	1.5

7	04.09.2021	Description of Camshafts & drives, importance of Cam lobes Timing belts & chains.	Mr.G.Sundararajan, AP/MECH	1.5
8	06.09.2021	Trouble shooting procedure for Excessive smoke, overheating knocking or abnormal noise	Mr.G.Sundararajan, AP/MECH	1.5
9	07.09.2021	Intake & exhaust systems Carbureted systems, Principle of Carburetor, type of carburettor	Mr. A.Vijayapandi, Service manager	1.5
10	08.09.2021	Working of constant velocity type carburetor, Carburetor operation-Carburetion, Carburetor systems, Metering jets, Accelerating Carburetor barrels , Carburetor	Mr. A.Vijayapandi, Service manager	1.5
11	09.09.2021	Diesel fuel Injection system Tanks & lines, air cleaners Intake manifolds.	Mr.G.Sundararajan, AP/MECH	1.5
12	11.09.2021	Braking Systems - Braking fundamentals, Principles of braking, description construction and operation of Drum & disc brakes, advantage over drum brake	Mr.G.Sundararajan, AP/MECH	1.5
13	13.09.2021	Clutch principles, Wet & dry clutches Single-plate clutches,Multi-plate clutches.	Mr. A.Vijayapandi, Service manager	1.5
14	14.09.2021	Operating mechanisms, Description of cam chain mechanism. Automatic clutch	Mr.G.Sundararajan, AP/MECH	1.5
15	15.09.2021	Gearbox layout & operation Gearbox layouts, description of gear shift mechanism, gear ratio	Mr. A.Vijayapandi, Service manager	1.5
16	16.09.2021	Trouble shooting procedure for Clutch slip when accelerating, clutch will not disengage, motor cycle creeps with clutch disengaged.	Mr. A.Vijayapandi, Service manager	1.5
17	17.09.2021	Misfirin,Study about LPG / CNG powered engines used in Two Wheelers. Safety while handling gas units	Mr.G.Sundararajan, AP/MECH	1.5

18.	18.09.2021	Emission Control-Sources of emission, Combustion, Hydrocarbons, Hydrocarbons in exhaust gas.	Mr. A.Vijayapandi, Service manager	1.5
19.	20.09.2021	Suspension Systems- Principles of suspension, Suspension force. Description, location suspension-description, construction and working principle of telescopic front suspension, suspension oil.	Mr.G.Sundararajan, AP/MECH	1.5
20.	21.09.2021	Shock absorber types-Hydraulic shock absorbers, Gas-pressurized shock absorbers, Load-adjustable shock absorbers, Automatic load-adjustable shock absorbers	Mr. A.Vijayapandi, Service manager	1.5

PROGRAM COORDINATOR

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0

STUDENTS' ATTENDANCE LIST

S/N	Register Number	Name of the Student	21/08	24/08	28/08	4/09	28/09	2/09	4/09	9/09	11/09	25/09	5/09	8/09	9/09	14/09	5/09	16/09	17/09	18/09	23/09	21/09
1.	920818114001	V.Abinash	/	/	/	/	a	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/
2.	920818114002	M.Alagarsamy	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/
3.	920818114003	M.Aswin	a	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/
4.	920818114004	G.Aswin Naganath	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/
5.	920818114005	M.S.Balamurugan	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/
6.	920818114006	C.Bhuvaneswaran	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	a	/	/
7.	920818114007	S.Dinesh Kumar	/	a	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/
8.	920818114008	J.Harish	/	/	/	/	/	/	/	/	/	/	/	/	a	/	a	/	/	/	/	/
9.	920818114010	M.Jothivel	/	/	a	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	a
10.	920818114011	V.Manivannan	/	/	/	/	/	/	a	/	/	/	/	/	/	a	/	/	/	a	/	
11.	920818114012	R.Manoj Kumar	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	
12.	920818114014	R.Naveen Prakash	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	a	/	/	
13.	920818114016	P.Periyandi	/	/	/	/	/	/	/	a	/	/	/	a	/	/	/	/	/	/	/	
14.	920818114018	K.Prathiban	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
15.	920818114020	S.Praveen Raj	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a
16.	920818114022	T.Sabari Nathan	/	/	/	/	/	/	/	a	/	/	/	/	/	a	/	/	/	a	/	
17.	920818114023	R.Sangunathan	/	/	/	/	/	/	a	/	/	a	/	/	/	/	/	/	/	/	/	
18.	920818114025	J.Sebastin Jeral	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
19.	920818114026	A.Sriram	/	/	/	/	/	/	/	/	/	a	/	/	/	/	a	/	/	/	/	
20.	920818114027	S.Sriram	/	/	/	/	/	a	/	/	/	/	/	/	/	a	/	/	/	/	/	
21.	920818114028	A.Srivel	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	
22.	920818114029	M.Suriyaviswa	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	
23.	920818114030	D.Surya	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
24.	920818114032	M.Syed Akmal	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	
25.	920818114033	P.Velmurugan	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
26.	920818114034	A.Vinith Kumar	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	

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27.	920818114035	P.Visakan	a	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28.	920818114036	G.Vishva	/	/	/	a	/	/	/	/	/	a	/	/	a	/	/	/	/	/	/
29.	920818114301	B.Athithyan	/	/	/	/	a	/	/	/	a	/	/	/	/	/	/	/	/	a	/
30.	920818114302	S.Jeevakalidas	/	/	/	/	/	/	/	a	/	a	/	/	/	a	/	/	/	/	/
31.	920818114303	K.Manikandan	/	/	/	a	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/
32.	920818114501	G.Rithish Kumar	/	/	a	/	/	/	/	/	/	a	/	a	/	/	/	a	/	a	/	/
33.	920818114701	M.Gowtham Kumar	a	/	/	/	/	a	/	/	/	/	/	a	/	/	/	/	/	/	/	/
34.	920818114502	M.Santhosh Kumar	/	/	/	/	/	/	/	/	a	/	a	/	/	a	a	/	/	/	a	a
35.	920818114503	R.Thilipan	/	/	/	a	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/
		Present	32	34	33	31	30	32	34	31	30	28	30	32	31	33	31	32	34	33	31	33
		Absent	03	01	02	04	05	03	01	04	05	07	05	03	04	03	04	03	01	03	04	02
		Coordinator Signature																				

HoD- MECH

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal

DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0

SAMPLE QUESTION PAPER WITH ANSWER KEY

1. Which role do internet technologies and the "IoT" play in the context of industry 4.0?
a) They form the base to connect everyday items.
b) They form the base for an environmental friendly production.
c) They form among others the base for corporate communication.
Answer: **They form the base to connect everyday items.**

2. When Industry 4.0 starts?
a) 2007
b) 2010
c) 2013
d) 2016
Answer: **2013**

3. In which year was the term Industry 4.0 first introduced?
a) 2009
b) 2010
c) 2011
d) 2012
Answer: **2011**

4. When did the 3rd industrial revolution prompted?
a) 1950s
b) 1960s
c) 1970s
d) None of the above
Answer: **1960s**

5. In which year did Prime minister Narendra Modi launch Make in India to promote India's manufacturing industry?
a) 2013
b) 2014
c) 2015
d) 2016
Answer: **2014**

6. Which country government introduced the Industry 4.0 concept?
a) United States of America
b) France
c) Germany
d) Great Bretain
Answer: **Germany**

7. Mechanization is _____
a) when a human operates a machine
b) using machines to do work instead of humans
c) installing machines into the human body
d) advancing machine technology
Answer: **using Machines to do work instead of humans**
8. Who invented the Assembly line?
a) Andrew Carnegie
b) Cornelius Vanderbilt
c) John D. Rockefeller
d) Henry Ford
Answer: **Henry Ford**

9. This company was the first to utilize a robotics system in its production line
a) Ford Motor Co
b) Volkswagen
c) General Motors
d) Toyota
Answer: **General Motors**

10. The First Industrial Revolution was brought in by what technology?
a) Steam Power
b) Electricity and Mass Production
c) Computers and Semiconductors
d) Agrarian Riots and Starvation
Answer: **Steam Power**

11. In the Digital Age (3rd Industrial Revolution) what two major inventions changed production and paved the way to Automation
a) Model Control Systems
b) Switches and Relays
c) Programmable Logic Controllers (PLC) and Robots
d) Process Automation
Answer: **Programmable Logic Controllers (PLC) and Robots**

12. The Internet of Things (IoT), access to real-time data, and the introduction of cyber-physical systems mark the big changes for this era
a) 3rd Industrial Revolution
b) Industry 4.0
c) Manufacturing Age
d) Industrial Revolution
Answer: **Industry 4.0**

13. Which one of the industrial revolutions used electric energy to create mass production for the first time?
a) 1st Industrial Revolution
b) 2nd Industrial Revolution
c) 3rd Industrial Revolution
d) 4th Industrial Revolution
Answer: **2nd Industrial Revolution**

14. How did the economy change during the Industrial Revolution?
a) Native Americans became farmers instead of hunters.
b) Plantations changed to sharecropping because of the 13th amendment.
c) More people stopped farming (agriculture) and worked in factories (manufacturing).
d) People stopped working in factories and became farmers.
Answer: **More people stopped farming (agriculture) and worked in factories (manufacturing).**

15. What is the full form of IoT?
a) Internet of Things
b) Idea of Things
c) Integration of Things
d) Institute of Things
Answer: **Internet of Things**

PROGRAM COORDINATOR

G. SUNDARARAJAN

HoD-MECH

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STUDENT'S FEEDBACK FORM

Name of the Student : M. Ashwin	**Year / Semester:** IV - Mech / 07
Name of the Program: Sustainable manufacturing in Industry 4.0 - 21MECC02	

CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
COURSE CONTENT	✓				
TECHNICAL SKILL	✓				
INTERACTION	✓				
PRACTICAL SESSION	✓				
COMMUNICATION	✓				

Any Other Comments / Suggestions:

① Learnt about Sustainable manufacturing techniques

PROGRAM COORDINATOR
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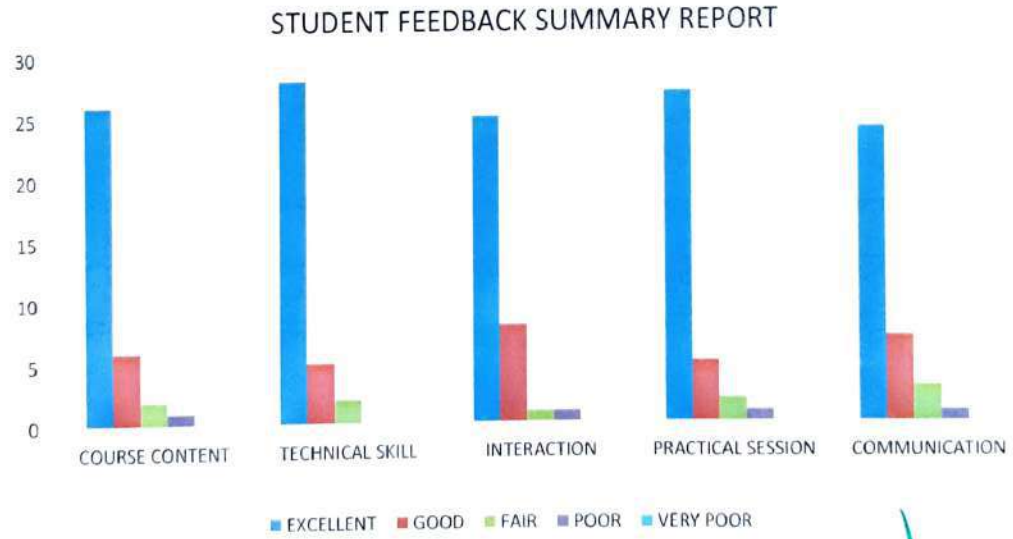
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STUDENTS' FEEDBACK SUMMARY REPORT

REGISTERED STUDENTS: 35 **DATE:21.09.2021**

CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
COURSE CONTENT	26	6	2	1	0
TECHNICAL SKILL	28	5	2	0	0
INTERACTION	25	8	1	1	0
PRACTICAL SESSION	27	5	2	1	0
COMMUNICATION	24	7	3	1	0
AVERAGE	**26**	**6.2**	**2**	**0.8**	**0**



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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0

SUMMARY REPORT

The Department of Mechanical Engineering organized a Certificate Course **"Sustainable Manufacturing in Industry 4.0"** from 27.08.2021 to 21.09.2021 (20days) at Thermal Engineering Laboratory. Mr. J.Harish, IV-Year Mech delivered the welcome address, during the inauguration session on 27.08.2021.

Dr.J.Sundararajan, Principal of our college inaugurated the program and delivered the inaugural address. Resource person Mr. A.Vijayapandi, Service manager, Nagendran Automobiles, Kochadai road, Madurai-10. Shared his technical experience with our students. This twenty days course gave over view about Sustainable Manufacturing in Industry 4.0.

He also shared the knowledge of the fundamentals and concepts in Sustainable Manufacturing in Industry 4.0. So that students enable to have skills that would help them to resolve complex real world problems in automobile field. The students learnt various existing and emerging technologies of Sustainable Manufacturing in industry 4.0.

The students learnt various existing and available sources to gain knowledge. 35 Students attended from IV year Mechanical Engineering . Students those who participated and successfully completed the giving program were awarded with certificates.

Mr.M.Gowtham kumar , IV-Year Mech delivered the vote of thanks, during the valedictory function on 21.09.2021.

PROGRAM COORDINATOR	HoD-MECH	IQAC	PRINCIPAL
G. SUNDARARAJAN		Coordinator - IQAC, NPR College of Engineering & Technology, Natham, Dindigul (Dt)-624 401	Dr. J.SUNDARARAJAN, M.E., M.Tech., Ph.D., Principal, N.P.R. College of Engineering & Technology, Natham, Dindigul (Dt)

DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE COURSE ON SUSTAINABLE MANUFACTURING IN INDUSTRY 4.0

COURSE MATERIAL/MANUAL

Material Link:

Chapter 1: https://www.youtube.com/watch?v=cKYtjVAg8R4

Chapter 2: http:nptel.ac.in/courses/125106001

Chapter 3: https://www.youtube.com/watch?v=FP2USTR09GY

Chapter 4: http:nptel.ac.in/courses/125106001

Chapter 5: http:nptel.ac.in/courses/125106001

Chapter 6: https://www.youtube.com/watch?v=FP2USTR09GY

Further Study:

1.Browne, M.W and Cudeek, R. (1993). 'Alternative ways of assessing model fit, In Bollen K.A. and Long

J.S (ed), Testing Structural Equation Models, Sage, Newbury Park, C.A.

2. Carmines, E.C. and Mclver, J.P. (1981). 'Analyzing models with unobserved variable', In Bohrnstedt

G,W. and Borgatta, E.F (ed). Social Measurement: Sage, Beverly Hills.

3. Haavelmo, T. (1943) "The statistical implications of a system of simultaneous equations, " Econometrica 11:1–2. Reprinted in D.F. Hendry and M.S. Morgan (Eds.), The Foundations of Econometric Analysis, Cambridge University Press, 477—490, 1995.

4. Kurtz David, L., and Boone, E. Louis ., Marketing [The Dryden Press, a divn. Of Holt Rinehart and

Wintson,USa,1981] P 135.

5. MCCarthy Jerome,E., and Brogowicz A.Andrew., Essentials of Marketing [Richard A Irwin Inc.,

Homewood, Illinois, USA,1982} P 12 and 85.

PROGRAM COORDINATOR

G. SUNDARARAJAN

HoD-MECH

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE OF COMPLETION

This is to certify that

G.VISHVA, IV YEAR MECHANICAL ENGINEERING

has successfully completed the certificate course on

'SUSTAINABLE MANUFACTURIN IN INDUSTRY 4.O'

From 27/08/2021 to 21/09/2021.

HOD/MECH
DR.S.PAULSINGARAYAR

PRINCIPAL
DR.J.SUNDARARAJAN
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal

NPR College of Engineering & Technology

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

INDEX

COURSE NAME: **21MEAO03- JOINING OF TUBES SOLID STATE WELDING**

ACADEMIC YEAR: 2021-2022 DURATION: **30 HOURS**

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PROGRAM COORDINATOR

B. Gopi

HoD-MECH

IQAC

NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

PRINCIPAL

Dr. J.SUNDARARAJAN
B.E., M.Tech., Ph.D.,
Principal
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Natham, Dindigul (Dt) - 624 401.

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Website : www.nprcolleges.org, www.nprcet.org, Email:nprcetprincipal@nprcolleges.org

From:

B.Gopi,
Assistant Professor,
Department of Mechanical Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Request for permission to conduct Add on course for II & III Mechanical Engineering Students - reg.

We have planned to conduct Add on Course on **'JOINING OF TUBES SOLID STATE WELDING'** to our students from 30.04.2022 to 30.06.2022 (20 days) at 4.30 p.m. to 6.00 p.m. in our college premises. We have proposed **Mr.P. Chellapandi, Production Manager, SKY Welding Technologies, Dindigul** as the resource person for this Add on Course. Kindly permit us to conduct the same.

Thanking you.

Place: Natham

Date: 07.03.2022

Yours faithfully,

B. Gopi

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

RESOURCE PERSON PROFILE

Name	:	Mr.P. Chellapandi
Designation	:	Production Manager,
Company Name	:	SKY Welding Technologies, Dindigul.
About Resource Person	:	Mr. Chellapandi is currently working as Production Manager with SKY Welding Technoligies, Dindigul. He has completed his B.E (Mech) in Sri Krishna College of Engineering & Technology, Coimbatore. He is experienced technical person with a demonstrated history of working in the Production industry.

B.G

PROGRAM COORDINATOR

B. Gopi

HoD-MECH

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
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COLLEGE OF ENGG. & TECHNOLOGY NATHAM NPRCET

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NPRCET/OFF/MECH/VAC/2021-2022 DATE: 11.03.2022

CIRCULAR

This is to inform that Department of Mechanical Engineering has planned to conduct a Add on Course on **'JOINING OF TUBES SOLID STATE WELDING'** for the students during this period from 30.04.2022 to 30.06.2022 (20 days). Interested students can enroll their name to the program coordinators on or before 21.04.2022.

The details of the training program are given below.

COURSE NAME	:	**JOINING OF TUBES SOLID STATE WELDING**
RESOURCE PERSON	:	Mr.P. Chellapandi, Production Manager, SKY Welding Tecnologies, Dindigul.
VENUE	:	Manufacturing Technology Lab
DATE & DURATION	:	30.04.22 to 30.06.22 & 30 Hours
PROGRAM COORDINATOR	:	Mr.B.Gopi, AP/Mech, NPRCET.

PRINCIPAL

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

Copy to:

1. All the HoDs
2. All the Class Rooms
3. Notice Board
4. File
5. Program Coordinator
6. IQAC

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

"ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING"

On 22th April, 2022

Venue: NPRCET AC Seminar hall at 9.30 A.M.

Chief Guest

Mr.P. Chellapandi,

Production Manager,

SKY Welding Technologies, Dindigul.

Dr.J.Sundararajan

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Mechanical Engineering,

NPR College of Engineering & Technology,

NPR Nagar, Natham.

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AGENDA

Inauguration on 22.04.2022 FN

- **Prayer Song** : Tamilthai vazhthu
- **Welcome Address** : **Mr.V. Ruban**
  II- Year Mechanical
- **Felicitation Address** : **Dr. J. Sundararajan**
  Principal
- **Honoring the Chief Guest** : **Mr. A.Abu Ali**
  II- Year Mechanical
- **Chief Guest Introduction** : **Mr. B. Gopi**
  Assistant Professor
  Mechanical Engineering
- **Chief Guest Address** : **Mr.P.Chellapandi**
  Production Manager
  SKY Welding Technologies,
  Dindigul.

Valedictory on 30.06.2022

- **Vote of Thanks** : **Ms. G.Mahalakshimi**
  III-Year Mechanical
- **National Anthem**

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

COURSE CONTENT

Week 1 - Chapter 1:

- Fundamental principles – Air Acetylene welding, Oxyacetylene welding, Carbon arc welding, Shielded metal arc welding, Submerged arc welding.
- TIG & MIG welding, Plasma arc welding and Electro slag welding processes.

Week 2 - Chapter 2:

- Spot welding, Seam welding, Projection welding, Resistance Butt welding, Flash Butt welding.
- Percussion welding and High frequency resistance welding processes.

Week 3 - Chapter 3:

- Cold welding, Diffusion bonding, Explosive welding, Ultrasonic welding, Friction welding, Forge welding.
- Roll welding and Hot pressure welding processes - advantages, limitations and applications.

Week 4 - Chapter 4:

- Thermite welding
- Atomic hydrogen welding
- Electron beam welding
- Laser Beam welding
- Friction stir welding
- Under Water welding

Week 5 -Chapter 5:

- Various weld joint designs
- Welding defects
- Causes and Remedies
- Weld ability of Aluminum, Copper and Stainless steels.
- Destructive and Non-destructive testing of weldments.

Criteria to get Certificate:

- Students must have 75% attendance.
- Student should secure 50% marks in the Exam.

Prepared By: Mr.B.Gopi, AP/MECH

COLLEGE OF ENGG. & TECHNOLOGY * NPR * NATHAM

PROGRAM COORDINATOR

B.Gopi

HoD-MECH

Coordinator - IQAC
NPR College of Engineering & Technology
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IQAC

PRINCIPAL

Dr. J.SUNDARARAJAN. B.E., M.Tech., Ph.D.
Principal
N.P.R. College of Engineering & Tech...
Natham, Dindigul (Dt)...

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

REGISTERED STUDENTS NAME LIST

S/N	REGISTER NUMBER	NAME OF THE STUDENT	YEAR OF STUDY
1.	920820114001	M.Abishek Kumar	II-MECH
2.	920820114002	B.Ajaykumar	II-MECH
3.	920820114003	K.E. Arunkumar	II-MECH
4.	920820114004	S. Mohanraj	II-MECH
5.	920820114005	B. Raguram	II-MECH
6.	920820114006	V. Ruban	II-MECH
7.	920820114007	S. Sabarinathan	II-MECH
8.	920820114008	N. Sivabalan	II-MECH
9.	920820114009	P. Sivakumar	II-MECH
10.	920820114010	V. Thangavimal	II-MECH
11.	920820114011	N. Venkadesan	II-MECH
12.	920820114301	A. Abu Ali	II-MECH
13.	920820114302	R. Arun Kumar	II-MECH
14.	920820114303	L. Asfar Sharuk Hussain	II-MECH
15.	920820114304	N. Askar Ali	II-MECH
16.	920820114305	V. Babu Shankar	II-MECH
17.	920820114306	T. Dhakshinamoorthi	II-MECH
18.	920820114307	A. Elancheran	II-MECH
19.	920820114308	T. Gopinath	II-MECH
20.	920820114309	J. Kabilan	II-MECH
21.	920820114310	V. Kamaleswaran	II-MECH
22.	920820114311	S. Karthick	II-MECH
23.	920820114312	S. Karthick Raj	II-MECH
24.	920820114313	M. Lalith Kumar	II-MECH
25.	920820114314	J. Mahadu	II-MECH
26.	920820114315	H. Mohamed Harish	II-MECH
27.	920820114316	K. Mohamed Rahuman	II-MECH
28.	920820114317	A. Mohammedajmalkhan	II-MECH
29.	920820114318	S. Mohammed Alijinnah	II-MECH
30.	920820114319	J. Mohmmed Irfaan	II-MECH
31.	920820114320	M. Nithesh	II-MECH
32.	920820114321	G. Prakash Kumar	II-MECH
33.	920820114322	R. Ragul	II-MECH
34.	920820114323	R. Rajmohan	II-MECH

NATHAM

35.	920820114324	R. Raj Venkatesh	II-MECH
36.	920820114325	K. Sanjay Kumar	II-MECH
37.	920819114001	A. Abilash	III-MECH
38.	920819114003	V. Anbarasan	III-MECH
39.	920819114004	S. Aswinbalaji	III-MECH
40.	920819114005	P. Ayyam Perumal	III-MECH
41.	920819114006	S. Balakumaresan	III-MECH
42.	920819114008	B. Dineshpandi	III-MECH
43.	920819114010	M. Gowthaman	III-MECH
44.	920819114012	T. Iman Mohammed	III-MECH
45.	920819114013	G. Maha Lakshmi	III-MECH
46.	920819114014	N. Manikandan	III-MECH
47.	920819114015	R. Manikandan	III-MECH
48.	920819114016	G.Meenakshi Sundaram	III-MECH
49.	920819114018	A. Mohamed Siddiq	III-MECH
50.	920819114019	P. Mohana Ragul	III-MECH
51.	920819114020	N. Mugeshwaran	III-MECH
52.	920819114021	P. Muthusamy	III-MECH
53.	920819114022	S. Nagaraj	III-MECH
54.	920819114023	K. Naveenraj	III-MECH
55.	920819114024	M. Nitheswar	III-MECH
56.	920819114025	Payavulla Sai Prasad	III-MECH
57.	920819114026	B. Raghulpandian	III-MECH
58.	920819114027	M. Rakesh	III-MECH
59.	920819114028	S. Rakesh	III-MECH
60.	920819114029	B. Ramakrishnan	III-MECH

PROGRAM COORDINATOR

B-Gopi

HoD-MECH

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

COURSE SCHEDULE

Venue: Manufacturing Laboratory

Date: 22.04.2022

External Resource Person:

Mr. Chellapandi,
Production Manager
SKY Welding Tecnologies,
Dindigul.

Internal Resource Persons:

Mr.B.Gopi,
AP/Mech,
NPRCET.

S/N	Date	Syllabus	Resource Person	Hours
1.	30.04.2022	Fundamental principles – Air Acetylene welding	Mr.P. Chellapandi, Production Manager	1.5
2.	02.05.2022	Oxyacetylene welding, Carbon arc welding, Shielded metal arc welding	Mr.B.Gopi, AP/MECH	1.5
3.	12.05.2022	Submerged arc welding, TIG & MIG welding, Plasma arc welding and Electro slag	Mr.B.Gopi, AP/MECH	1.5
4.	14.05.2022	Spot welding, Seam welding, Projection welding	Mr.B.Gopi, AP/MECH	1.5
5.	24.05.2022	Resistance Butt welding, Flash Butt welding	Mr.P. Chellapandi, Production Manager	1.5
6.	26.05.2022	Percussion welding and High frequency resistance welding processes	Mr.B.Gopi, AP/MECH	1.5
7.	27.05.2022	Cold welding, Diffusion bonding	Mr.P. Chellapandi, Production Manager	1.5
8.	14.06.2022	Explosive welding	Mr.B.Gopi, AP/MECH	1.5
9.	15.06.2022	Ultrasonic welding	Mr.P. Chellapandi, Production Manager	1.5
10.	16.06.2022	Friction welding, Forge welding	Mr.P.Chellapandi, Production Manager	1.5
11.	17.06.2022	Roll welding and Hot pressure welding processes	Mr.B.Gopi, AP/MECH	1.5

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12.	20.06.2022	Thermite welding	Mr.P. Chellapandi, Production Manager	1.5
13.	21.06.2022	Atomic hydrogen welding,	Mr.B.Gopi, AP/MECH	1.5
14.	23.06.2022	Electron beam welding, Laser Beam welding	Mr.P. Chellapandi, Production Manager	1.5
15.	24.06.2022	Friction stir welding, Under Water welding	Mr.B.Gopi, AP/MECH	1.5
16.	25.06.2022	Welding automation in aerospace	Mr.P. Chellapandi, Production Manager	1.5
17.	27.06.2022	Nuclear and surface transport vehicles.	Mr.P. Chellapandi, Production Manager	1.5
18.	28.06.2022	Various weld joint designs – Welding defects – causes and remedies	Mr.B.Gopi, AP/MECH	1.5
19.	29.06.2022	Weld ability of Aluminium, Copper, and Stainless steels	Mr.B.Gopi, AP/MECH	1.5
20.	30.06.2022	Destructive and Non-destructive testing of weldments	Mr.P. Chellapandi, Production Manager	1.5
Total Hours				30

PROGRAM COORDINATOR

B Gopi

HoD-MECH

IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
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PRINCIPAL

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

STUDENTS' ATTENDANCE LIST

S/N	Register Number	Name of the Student	30/04	01/05	02/05	19/05	24/05	25/05	26/05	04/06	15/06	16/06	17/06	20/06	21/06	23/06	24/06	25/06	27/06	28/06	01/07	05/07
1.	920820114001	M.Abishek Kumar	/	/	/	/	a	/	/	/	/	a	/	/	/	/	/	a	/	/	/	/
2.	920820114002	B.Ajaykumar	/	/	/	/	/	a	/	/	a	/	/	/	a	/	/	/	a	/	/	/
3.	920820114003	K.E. Arunkumar	/	/	a	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/
4.	920820114004	S. Mohanraj	a	/	/	a	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/
5.	920820114005	B. Raguram	/	a	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	a	/
6.	920820114006	V. Ruban	/	/	/	/	/	/	/	a	/	/	/	/	/	a	/	/	/	/	/	/
7.	920820114007	S. Sabarinathan	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/
8.	920820114008	N. Sivabalan	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/
9.	920820114009	P. Sivakumar	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/
10.	920820114010	V. Thangavimal	a	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/
11.	920820114011	N. Venkadesan	/	/	a	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	a	a
12.	920820114301	A. Abu Ali	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/
13.	920820114302	R. Arun Kumar	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/
14.	920820114303	L. Asfar Sharuk Hussain	/	/	/	/	/	/	/	a	/	/	/	/	/	/	a	/	/	/	/	/
15.	920820114304	N. Askar Ali	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/
16.	920820114305	V. Babu Shankar	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17.	920820114306	T. Dhakshinamoorthi	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/
18.	920820114307	A. Elancheran	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19.	920820114308	T. Gopinath	/	/	/	/	a	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/
20.	920820114309	J. Kabilan	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21.	920820114310	V. Kamaleswaran	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	a	/	/	/	/
22.	920820114311	S. Karthick	/	/	/	/	/	a	/	/	/	/	/	/	a	/	/	/	/	/	/	/
23.	920820114312	S. Karthick Raj	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
24.	920820114313	M.Lalith Kumar	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/
25.	920820114314	J. Mahadu	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
26.	920820114315	H. Mohamed Harish	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/
27.	920820114316	K. Mohamed Rahuman	/	/	/	/	a	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/
28.	920820114317	A. Mohammedajmalkhan	/	a	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29.	920820114318	S. Mohammed Alijinnah	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30.	920820114319	J. Mohmmed Irfaan	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/

| | | |

DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

SAMPLE QUESTION PAPER WITH ANSWERS KEY

Q1. Forge welding is best suited for.....

A. Stainless Steel
B. High carbon steel
C. Cast iron
D. **Wrought iron**

Q2.In arc welding, temperature of the following order may be granted.....

A.1000Oc
B. 1500Oc
C. **5500Oc**
D. 8000Oc

Q3. Which of the following is strongest for brazing joints.....

A.Butt
B.Scarf (inclined)
C.Lap
D.All are equally strong

Q4. Equipment is used for arc welding a material by carbon electrode.....

A.C. welding set
B. Rectifier
C.Motor generator.
D.**D.C. welding set with straight polarity**

Q5.In reverse polarity welding.....

A.Electrode holder is connected to the negative and work to positive
B.**Electrode holder is connected to the positive and work to negative**
C.Work is positive and holder is earthed
D. Holder is positive and work is earthed

Q6.In MIG welding, the metal is transferred in the form of.....

A. **A fine spray of metal**
B.Molten drops
C.Weld pool
D.Molecules

Q7.Distortion in welding occures due to.....

A. Use of excessive current
B.**Improper clamping methods**
C. Use of wrong electrodes
D.Oxidation of weld pool



Q8. In inter gas arc welding following is used for welding alluminium.....

A.No-combustible electrode in combination with helium and D.C. current
B.**Combustible electrodes and argon in combination with A.C. current**
C. Straight polarity D.C. current
D. Carbon dioxide, because of its excellent penetration and high speed

Q9.In inter gas arc welding following is used for welding magnesium.....

A.**No-combustible electrode in combination with helium and D.C. current**
B.Combustible electrodes and argon in combination with A.C. current
C. Straight polarity D.C. current
D.Carbon dioxide, because of its excellent penetration and high speed

Q10. Carbon arc welding is.....

A.A process which uses a mixture of iron oxide and granular aluminium
B.Accomplished by maintaining a hot molten metal pool between plates
C. Used to weld carbon rods
D. **None of the above**

Q11. Thermit welding.....

A.**A process which uses a mixture of iron oxide and granular Aluminium**
B.Accomplished by maintaining a hot molten metal pool between plates
C.A process in which arc is maintained under blanket of flux
D. In no welding process

Q12.The most commonly used flame in gas welding is.....

A. **Neutral**
B.Oxidising
C.Carburising
D. All of the above

Q13.Arc-welding uses following electric supply .....

A. A.C.
B. D.C.
C.**Both AC and DC**
D.Spiral waveform

Q14. The electroslag welding is.....

A. A process which uses a mixture of iron oxide and granular aluminium
B.**Accomplished by maintaining a hot molten metal pool between plates**
C.A process in which arc is maintained under a blanket of flux
D. There is nothing called electro slag

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Q15.Submerged arc welding is.....

A. A process which uses a mixture of iron oxide and granular aluminium
B.Accomplished by maintaining a hot molten metal pool between plates
C. **A process in which arc is maintained under a blanket of flux**
D.All of the above

B.S-17

PROGRAM COORDINATOR

B.Gopi

HoD-MECH

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

STUDENT'S FEEDBACK FORM

Name of the Student : B.AJAY KUMAR	**Year / Semester:** II / EVEN
Name of the Program: 21MEA003 – Joining of tubes Solid State Welding	

CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
COURSE CONTENT	✓				
TECHNICAL SKILL	✓				
INTERACTION		✓			
PRACTICAL SESSION	✓				
COMMUNICATION	✓				

Any Other Comments / Suggestions:

The program was very useful.

PROGRAM COORDINATOR

B. Gopi

HoD-MECH

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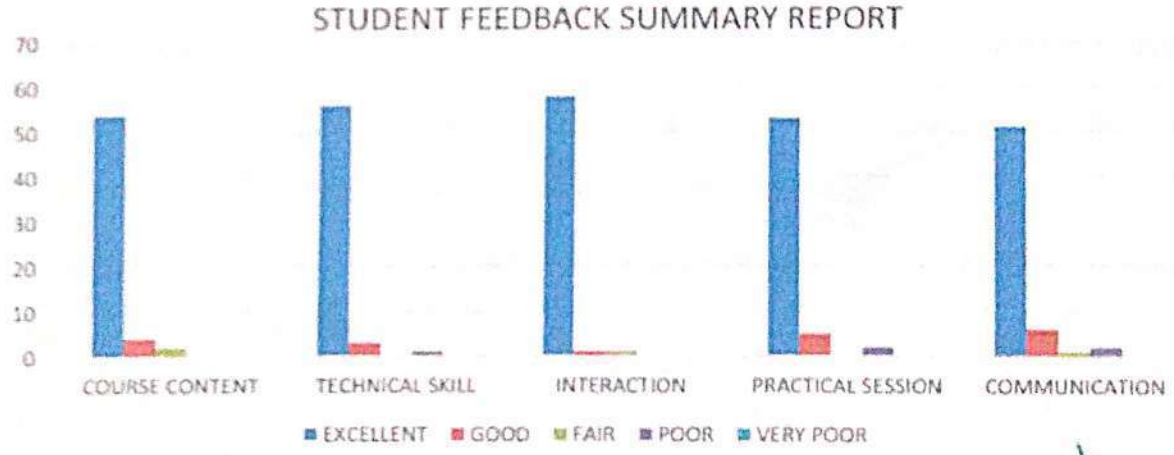
DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

STUDENTS' FEEDBACK SUMMARY REPORT

REGISTERED STUDENT'S: 60 **DATE: 30.06.2022**

CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
COURSE CONTENT	54	4	2	0	0
TECHNICAL SKILL	56	3	0	1	0
INTERACTION	58	1	1	0	0
PRACTICAL SESSION	53	5	0	2	0
COMMUNICATION	51	6	1	2	0
AVERAGE	54.4	3.8	0.8	1	0



PROGRAM COORDINATOR

HoD-MECH

IQAC

PRINCIPAL

Coordinator - IQAC
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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

SUMMARY REPORT

The Department of Mechanical Engineering organized a Add On Course on **'Joining of Tubes Solid State Welding'** from 30.04.2022 to 30.06.2022 (20 days) at Manufacturing Lab. During the inauguration function on 22.04.2022. Mr. V.Ruban, II Year Mechanical Engineering delivered the welcome address.

Dr. J.Sundararajan, Principal of our college inaugurated the program delivered and inaugural address. Resources person Mr. Chellapandi, Production Manager, SKY Welding Technologies, Dindigul. shared his knowledge with our students. This twenty days course gave overview about Joining of tubes solid state welding.

He also shared his technical experience of the fundamentals and principles in Joining of Tubes Solid State Welding. So that students enable to have skills that would help them to resolve complex real world problems in industrial field. The students learnt various existing and emerging technologies of Industrial Welding Systems.

The students learnt various existing and available sources to gain knowledge. 60 Students attended from II & III year Mechanical Engineering. Students those who participated and successfully completed the giving program were awarded with certificates.

G.Maha lakshimi of III Year Mechanical Engineering delivered the vote of thanks. During. the valedictory function on 30.06.2022 .

PROGRAM COORDINATOR

HoD-MECH

IQAC
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PRINCIPAL
Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.
Principal
N.P.R. College of Engineering & Tech.
Natham, Dindigul (Dt)

DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON JOINING OF TUBES SOLID STATE WELDING

COURSE MATERIAL/MANUAL

Material Link:

Chapter1:https://www.hydraulicspneumatics.com/technologies/21884114/pneumatic-and-hydraulic-systems

Chapter2:https://www.hydraulicspneumatics.com/technologies/article/21884206/air-and-hydraulic-pumps

Chapter3:https://www.hydraulicspneumatics.com/technologies//21884209/directional-control-valves

Chapter 4: https://www.hydraulicspneumatics.com/technologies/2181234 relief-and-unloading-pressure

Chapter 5: https://www.hydraulicspneumatics.com/technologies/21884582/ relief-and-unloading-pressure

Chapter 6:https://www.hydraulicspneumatics.com/technologies//21884592/directional-control-valves

Further Study:

[1] M. Taghizadeh, et al.,"Modeling and identification of a solenoid valve for PWM control applications,". C. R. Mecanique, pp. 131-140, April 2009.

[2]E.E. Topc,et al.,"Development of electro-pneumatic fast switching valve and investigation of its characteristics," Mechatronics, pp. 365-378, January 2006.

[3]M. Taghizadeh, et al.,"Improving dynamic performances of PWM-driven servo-pneumatic systems via a novel pneumatic circuit,". ISA Transactions, pp. 512-518, May2009.

[4]J. 'Swider, et al., "Programmable controller designed for electro-pneumatic systems,". Journal of Materials Processing Technology, pp. 1459–14652005.

[5]P. Beater, "Pneumatic Drives: System Design, Modelling and Control," Springer, pp. 25-36.

[6]A. Messina, et al. "Experimenting and modelling the dynamics of pneumatic actuators controlled by the pulse width modulation (PWM) technique". Mechatronics, January, pp. 859–8812005.

B.G. -17

PROGRAM COORDINATOR

B. Gopi

HoD-MECH

PRINCIPAL

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D., Principal, N.P.R. College of Engineering & Technology, Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE OF PARTICIPATION

This is to certify that

K.SANJAY KUMAR, II MECHANICAL ENGINEERING

For Successful completion of Add-on Course on

"JOINING OF TUBES SOLID STATE WELDING"

From 30.04.2022 to 30.06.2022.

HOD/MECH

DR.S.PAULSINGARAYAR

PRINCIPAL

DR.J.SUNDARARAJAN

Dr. J.SUNDARARAJAN,
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Principal
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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

INDEX

COURSE NAME: **21MEAO04- ADDITIVE MANUFACTURING**

ACADEMIC YEAR: 2021-2022 SEMESTER: EVEN DURATION: **30 HOURS**

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PROGRAM COORDINATOR

T. Bala Subramani

HoD-MECH

IQAC

Coordinator - IQAC
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PRINCIPAL

Dr. J. SUNDARARAJAN
B.E., M.Tech., Ph.D
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From:

The Head of the Department,
Mechanical Engineering,
NPR College of Engineering & Technology,
Natham.

To

The Principal,
NPR College of Engineering & Technology,
Natham.

Respected Sir,

Sub: Request for permission to conduct Add on course for Mechanical final year students – Regarding

We have planned to conduct Add on course program on **"ADDITIVE MANUFACTURING"** to our students from 11.03.2022 to 20.06.2022 (20 days) at 4.30 p.m. to 6.00 p.m. in our college premises. We have proposed **Mr. J.Sivakumar, HR, Meccanotecnica India Pvt Ltd** as the resource person for this Add on course. Kindly permit us to conduct the same.

Thanking you.

Place: Natham

Date : 15.02.2022

Yours faithfully,

[T. Bala Subramani]

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

RESOURCE PERSON'S PROFILE

Name	:	Mr.J.Sivakumar,
Designation	:	HR
Company Name	:	Meccanotecnica India Pvt Ltd, Nilakottai,
About Resource Person	:	Mr. J.Sivakumar is currently working as HR with Meccanotecnica India Pvt Ltd, Nilakottai. He has completed his B.E (Mech) in Coimbatore Institute of Technology, Coimbatore and MBA in Madurai Kamaraj University, Madurai. He is experienced technical and Administrative person with a demonstrated history of working in the Production industry.

PROGRAM COORDINATOR

T. Bala Subramani

HoD/MECH

PRINCIPAL

Dr. J.SUNDARARAJAN, B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt.), T.N.

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NPRCET/OFF/MECH/VAC/2021-2022

DATE: 04.02.2022

CIRCULAR

This is to inform that Department of Mechanical Engineering the planned to conduct a Add on Course on **"ADDITIVE MANUFACTURING"** for the students during this period from 11.03.2022 to 20.06.2022 (20 Days).Interested students can enroll their name to the program coordinators on or before 07.03.2022.

The details of the training program are given below.

COURSE NAME	:	**ADDITIVE MANUFACTURING**
RESOURCE PERSON	:	Mr.J.Sivakumar, HR, Meccanotecnica India Pvt Ltd, Nilakottai.
VENUE	:	RBSH-001 Seminar Hall
DATE & DURATION	:	11.03.2022 to 20.06.2022 & 30 Hours
PROGRAM COORDINATOR	:	Mr.T.Balasubramani, AP/Mech, NPRCET.

PRINCIPAL

Dr. J.SUNDARAVADIVEL, B.E.,M.Tech.,Ph.D.,
Principal
N.P.R.College of Engineering & Technology
Natham, Dindigul (Dt) 624 401.

Copy to:

1. All the HoDs
2. All the Class Rooms
3. Notice Board
4. File
5. Program Coordinator
6. IQAC

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

"ADD ON COURSE ON ADDITIVE MANUFACTURING "

On 08th March, 2022

Venue:NPRCET AC Seminar hall at 9.30 A.M.

Chief Guest

Mr.J.Sivakumar,HR,

Meccanotecnica India Pvt Ltd, Nilakottai,

Dr.J.SUNDARARAJAN

Principal,

NPR College of Engineering & Technology

Felicitates the function

Organized by

Department of Mechanical Engineering,

NPR College of Engineering & Technology,

NPR Nagar, Natham.

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AGENDA

Inauguration on 08.03.2022 FN

- **Prayer Song** : Tamilthai vazhthu
- **Welcome Address** : **Ms.K. Shobana**
  III- Year Mechanical
- **Felicitation Address** : **Dr. J. Sundararajan**
  Principal
- **Honoring the Chief Guest** : **Mr. P.Ruban**
  III- Year Mechanical
- **Chief Guest Introduction** : **Mr. T. Balasubramani**
  Assistant Professor
  Mechanical Engineering
- **Chief Guest Address** : **Mr.J.Sivakumar**
  HR
  Meccanotecnica India Pvt Ltd
  Nilakottai

Valedictory on 20.06.2022

- **Vote of Thanks** : **Mr. M.Syed Akmal**
  IV-Year Mechanical
- **National Anthem**

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

COURSE CONTENT

Week 1 - Chapter 1:

- Introduction to lean and nine waste in lean
- Evolution of lean
- Global study: lean thinking
- Value flow and muda, muri and mura
- Meeting the stake holders requirement

Week 2 - Chapter 2:

- Various tool of LM
- Fundamental blocks of lean.
- 5s – seiri, seiton, seiso, seiketsu and shitsuke
- Need for TPM, pillars of TPM.
- Implementation of TPM, overall equipment effectiveness and its computation.

Week 3 - Chapter 3:

- Lean systems in manufacturing and services industries.
- Work flow, small lot sizes.
- TBL activity – automat and ford debacle.
- Pull method, kanban.

Week 4 - Chapter 4:

- Resource and project selection.
- Selecting projects, process mapping.
- Current and future value stream mapping, project suitable for lean initiatives.

Week 5 -Chapter 5:

- Standardized work, continuous improvement.
- Lean projects: training, selecting the members.
- Preparing project plan, implementation, review.
- Productivity improvement: process, machinery operator and equipment

Criteria to get Certificate:

- Students must have 75% attendance.
- Student should secure 50% marks in the Exam.

Prepared by: Mr.T.Balasubramani, AP/MECH,

PROGRAM COORDINATOR	HoD-MECH	IQAC	PRINCIPAL
T. Balasubramani		Coordinator - IQAC NPR College of Engineering & Technology Natham, Dindigul (Dt)-624 401	Dr. J.SUNDARARAJAN B.E., M.Tech., Ph.D. Principal N.P.R. College of Engineering & Technology Natham, Dindigul (Dt)-624 401

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

REGISTERED STUDENTS NAME LIST

S/N	REGISTER NUMBER	NAME OF THE STUDENT	YEAR OF STUDY
1.	920819114031	A. Ramkumar	III-MECH
2.	920819114032	P. Ruban	III-MECH
3.	920819114033	S. Sangaran	III-MECH
4.	920819114034	G. Sankar	III-MECH
5.	920819114035	M. Saravanakumar	III-MECH
6.	920819114036	S. Shaarif Ahamed	III-MECH
7.	920819114037	K. Shobana	III-MECH
8.	920819114038	S. Siva Kumar	III-MECH
9.	920819114039	M.Velpackiyaraj	III-MECH
10.	920819114301	N Veeramanikandan	III-MECH
11.	920818114001	V. Abinash	IV-MECH
12.	920818114002	M. Alagarsamy	IV-MECH
13.	920818114003	M. Aswin	IV-MECH
14.	920818114004	G. Aswin Naganath	IV-MECH
15.	920818114005	M.S. Balamurugan	IV-MECH
16.	920818114006	C. Bhuvaneswaran	IV-MECH
17.	920818114007	S. Dinesh Kumar	IV-MECH
18.	920818114008	J. Harish	IV-MECH
19.	920818114010	M. Jothivel	IV-MECH
20.	920818114011	V. Manivannan	IV-MECH
21.	920818114012	R. Manoj Kumar	IV-MECH
22.	920818114014	R. Naveen Prakash	IV-MECH
23.	920818114016	P. Periyandi	IV-MECH
24.	920818114018	K. Prathiban	IV-MECH
25.	920818114020	S. Praveen Raj	IV-MECH
26.	920818114022	T. Sabari Nathan	IV-MECH
27.	920818114023	R. Sangunathan	IV-MECH
28.	920818114025	J. Sebastin Jerald	IV-MECH
29.	920818114026	A. Sriram	IV-MECH
30.	920818114027	S. Sriram	IV-MECH
31.	920818114028	A. Srivel	IV-MECH
32.	920818114029	M. Suriyaviswa	IV-MECH

33.	920818114030	D. Surya	IV-MECH
34.	920818114032	M. Syed Akmal	IV-MECH
35.	920818114033	P. Velmurugan	IV-MECH
36.	920818114034	A. Vinith Kumar	IV-MECH
37.	920818114035	P. Visakan	IV-MECH
38.	920818114036	G. Vishva	IV-MECH
39.	920818114301	B. Athithyan	IV-MECH
40.	920818114302	S. Jeevakalidas	IV-MECH
41.	920818114303	K. Manikandan	IV-MECH
42.	920818114501	G. Rithish Kumar	IV-MECH
43.	920818114701	M. Gowtham Kumar	IV-MECH
44.	920818114502	M.Santhosh Kumar	IV-MECH
45.	920818114503	R. Thilipan	IV-MECH

PROGRAM COORDINATOR

T. Bala Subramani

HoD- MECH

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

COURSE SCHEDULE

Venue: RBSH-001 **Date: 07.03.2022**

External Resource Person:

Mr.J.Sivakumar,
Meccanotecnica India Pvt Ltd,
Nilakottai.

Internal Resource Persons:

Mr.T.Balasubramani,
AP/Mech, NPRCET.

S/N	Date	Syllabus	Resource Person	Hours
1.	11.03.2022	Introduction to lean and nine waste in Lean	Mr.J.Sivakumar, HR	1.5
2.	12.03.2022	Evolution Of Lean	Mr.T.Balasubramani, AP/MECH	1.5
3.	17.03.2022	Global study: lean thinking	Mr.T.Balasubramani, AP/MECH	1.5
4.	18.03.2022	Value flow and muda, muri and mura	Mr.T.Balasubramani, AP/MECH	1.5
5.	28.03.2022	Meeting the stake holders requirement	Mr.J.Sivakumar, HR	1.5
6.	29.03.2022	Elements of LM	Mr.J.Sivakumar, HR	1.5
7.	30.03.2022	Various tool of LM	Mr.T.Balasubramani, AP/MECH	1.5
8.	09.04.2022	Fundamental blocks of lean	Mr.J.Sivakumar, HR	1.5
9.	21.04.2022	5s - Seiri Seiton Seiso Seiketsu And Shitsuke	Mr.T.Balasubramani, AP/MECH	1.5
10.	22.04.2022	Need for TPM, pillars of TPM	Mr.J.Sivakumar, HR	1.5
11.	02.05.2022	Implementation of TPM overall equipment effectiveness and its computation.	Mr.J.Sivakumar, HR	1.5
12.	12.05.2022	Lean systems in manufacturing and services industries.	Mr.J.Sivakumar, HR	1.5

13.	14.05.2022	Work flow, small lot sizes	Mr.T.Balasubramani, AP/MECH	1.5
14.	24.05.2022	Tbl activity – automek and ford debacle	Mr.T.Balasubramani, AP/MECH	1.5
15.	26.05.2022	Pull method, kanban,	Mr.J.Sivakumar, HR	1.5
16.	27.05.2022	A3 problem solving, just in time	Mr.J.Sivakumar, HR	1.5
17.	14.06.2022	Resource and project selection preparing project plan, implementation, review.	Mr.J.Sivakumar, HR	1.5
18.	15.06.2022	Selecting projects, process mapping.	Mr.T.Balasubramani, AP/MECH	1.5
19.	16.06.2022	Current and future value stream mapping project suitable for lean initiatives lean projects: training, selecting the members.	Mr.J.Sivakumar, HR	1.5
20.	20.06.2022	Standardized work, continuous improvement. Productivity improvement: process, machinery operator and equipment	Mr.J.Sivakumar, HR	1.5
Total Hours				**30**

PROGRAM COORDINATOR

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Coordinator - IQAC
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PRINCIPAL

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Principal
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Natham, Dindigul Dt., Tamil Nadu.

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

STUDENTS' ATTENDANCE LIST

S/N	Register Number	Name of the Student	11/03	12/03	17/03	19/03	26/03	27/03	30/03	2/04	9/04	23/04	24/04	30/04	1/05	8/05	14/05	15/05	21/05	22/05	28/05	29/05	30/05
1.	920819114031	A. Ramkumar	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/
2.	920819114032	P. Ruban	/	/	a	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	a	/
3.	920819114033	S. Sangaran	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4.	920819114034	G. Sankar	a	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	a	/	/	/	/
5.	920819114035	M. Saravanakumar	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a
6.	920819114036	S. Shaarif Ahamed	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7.	920819114037	K. Shobana	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/
8.	920819114038	S. Siva Kumar	a	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/
9.	920819114039	M.Velpackiyaraj	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/
10.	920819114301	N Veeramanikandan	/	/	/	a	/	a	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/
11.	920818114001	V. Abinash	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a
12.	920818114002	M. Alagarsamy	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/
13.	920818114003	M. Aswin	/	/	/	/	a	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/
14.	920818114004	G. Aswin Naganath	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	a	/	/	/
15.	920818114005	M.S. Balamurugan	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/
16.	920818114006	C. Bhuvaneswaran	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17.	920818114007	S. Dinesh Kumar	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/
18.	920818114008	J. Harish	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/
19.	920818114010	M. Jothivel	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20.	920818114011	V. Manivannan	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/
21.	920818114012	R. Manoj Kumar	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22.	920818114014	R. Naveen Prakash	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23.	920818114016	P. Periyandi	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	a
24.	920818114018	K. Prathiban	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
25.	920818114020	S. Praveen Raj	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/
26.	920818114022	T. Sabari Nathan	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27.	920818114023	R. Sangunathan	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28.	920818114025	J. Sebastin Jerald	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29.	920818114026	A. Sriram	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/	/
30.	920818114027	S. Sriram	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

31.	920818114028	A. Srivel	/	/	/	/	/	a	/	/	/	/	/	/	/	/	a	/	/	/	/	/			
32.	920818114029	M. Suriyaviswa	/	/	a	/	/	/	/	/	/	a	/	/	/	/	/	/	a	/	/				
33.	920818114030	D. Surya	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/				
34.	920818114032	M. Syed Akmal	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	a	/			
35.	920818114033	P. Velmurugan	/	/	/	/	/	a	/	/	/	/	/	/	a	/	a	/	/	/	/				
36.	920818114034	A. Vinith Kumar	/	/	/	a	/	/	/	/	/	a	/	a	/	/	/	/	/	/	a				
37.	920818114035	P. Visakan	a	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	a	/	/				
38.	920818114036	G. Vishva	/	/	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/				
39.	920818114301	B. Athithyan	/	/	/	/	a	/	/	/	/	/	/	/	/	a	/	/	/	a	/				
40.	920818114302	S. Jeevakalidas	/	a	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/				
41.	920818114303	K. Manikandan	/	/	/	a	/	a	a	/	/	/	/	/	/	/	/	/	/	/	/				
42.	920818114501	G. Rithish Kumar	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/				
43.	920818114701	M. Gowtham Kumar	/	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/				
44.	920818114502	M.Santhosh Kumar	/	/	/	/	/	/	a	/	/	/	/	/	/	/	/	/	/	/	/				
45.	920818114503	R. Thilipan	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	a	/	/				
		Present	40	42	42	38	41	40	42	37	40	43	42	44	45	43	41	43	44	40	42	41			
		Absent	05	03	03	07	04	05	03	08	05	02	03	01	0	02	04	02	01	05	03	04			
		Coordinator Signature																							

HoD/ MECH

PRINCIPAL

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Natham, Dindigul (Dt.), Tamil Nadu.

NPR COLLEGE OF ENGINEERING & TECHNOLOGY * NATHAM

DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

SAMPLE QUESTION PAPER WITH ANSWERS

1. Which one is NOT related to rapid prototyping definition?

A. Layer by layer
B. Physical model
C. From 3D CAD data
D. Production line

Answer» **D. Production line**

2. Which one of the processes is NOT using a laser?

A. FDM
B. SLA
C. SLS
D. LOM

Answer» **A. FDM**

3. Which of the following is the process in the RP cycle?

A. Post-processing
B. Transfer to machine
C. Pre-processing
D. All of the above

Answer» **D. All of the above**

4. Which of the following is one of the design process steps?

A. Build
B. Concept
C. Pre-processing
D. Transfer to machine

Answer» **B. Concept**

5. What is the format for the prototyping machine file?

A. .prt
B. .slt
C. .stl
D. .iges

Answer» **C. .stl**

6. Which CAD software cannot be used to create data for the prototyping machine?

A. CREO
B. CATIA
C. NX Unigraphics
D. Adobe Illustrator

Answer» **D. Adobe Illustr**

7. Which one of the process is subtractive prototyping?

A. 5 axis CNC Milling
B. Fused Deposition Modeling
C. Multi-Jet Modeling
D. Stereolithography Apparatus

Answer» **A. 5 axis CNC Milling**

8. From the following, in which process, the input material is in solid form?

A. SLA
B. SLS
C. FDM
D. MJM

Answer» **C. FDM**

9. Which of the process, the input material is in liquid form?

A. LOM
B. SLS
C. FDM
D. MJM

Answer» **D. MJM**

10. Which of the process, the input material is in powder form?

A. LOM
B. SLS
C. FDM
D. MJM

Answer» **B. SLS**

11. Which material is NOT available for LOM process?

A. Paper
B. Plastic
C. Metal
D. Glass

Answer» **D. Glass**

12. Which of the following is the process of the pre-processing stage?

A. Remove support
B. Checking 3D CAD data
C. De-powdering loose material
D. Dip in a binder to strengthen the part

Answer» **B. Checking 3D CAD data**

13. A computer model of a part design on a CAD system is called which of the following?

A. Computer Prototype
B. Geometric Prototype
C. Solid Prototype
D. Virtual Prototype

Answer» **D. Virtual Prototype**

14. Which of the following RP technologies uses powders as the starting material?

A. Droplet Deposition Manufacturing
B. Fused-Deposition Modeling
C. Selective Laser Sintering
D. Stereolithography

Answer» **C. Selective Laser Sintering**

15. Which of the following are problems with the current rapid prototyping and additive manufacturing technologies?

A. Limited material variety
B. Inability to convert a solid part into layers
C. Poor machinability of the starting material
D. The inability of the designer to design the part

Answer» **A. Limited material variety**

PROGRAM COORDINATOR

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DEPARTMENT OF MECHANICAL AND ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

STUDENT'S FEEDBACK FORM

Name of the Student : A.RamKumar	**Year / Semester:** IV / 08
Name of the Program: 21MEA004 – ADDITIVE MANUFACTURING	

CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
COURSE CONTENT	✓				
TECHNICAL SKILL	✓				
INTERACTION	✓				
PRACTICAL SESSION	✓				
COMMUNICATION	✓				

Any Other Comments / Suggestions:

– Learnt about AM Techniques

PROGRAM COORDINATOR
T Bala Subramani

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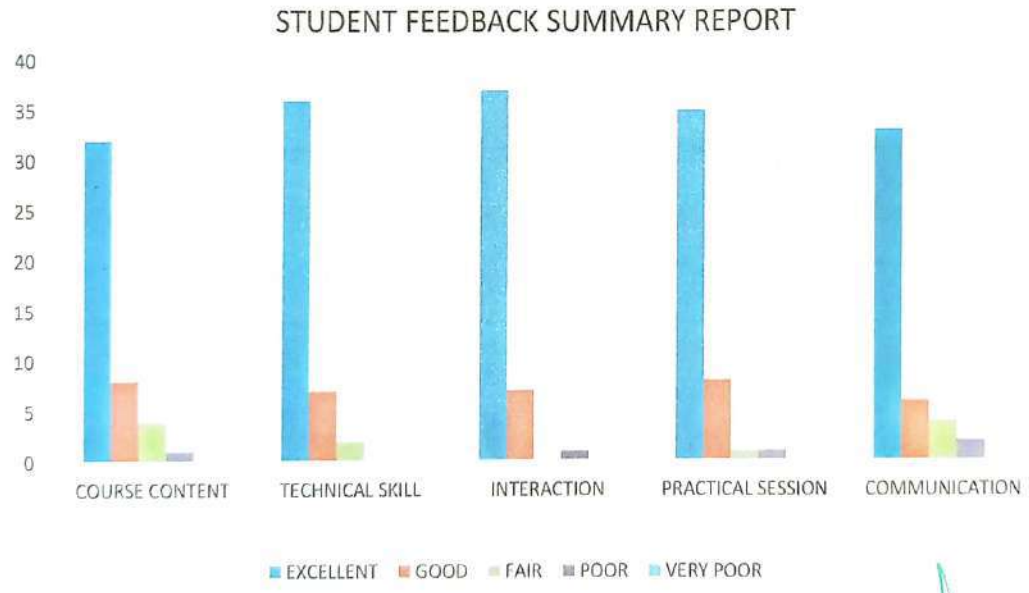
DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

STUDENTS' FEEDBACK SUMMARY REPORT

REGISTERED STUDENTS: 45 **DATE: 20.06.2022**

CONTENT	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
COURSE CONTENT	32	8	4	1	0
TECHNICAL SKILL	36	7	2	0	0
INTERACTION	37	7	0	1	0
PRACTICAL SESSION	35	8	1	1	0
COMMUNICATION	33	6	4	2	0
AVERAGE	**34.6**	**7.2**	**2.2**	**1**	**0**



PROGRAM COORDINATOR
T. Bala Subramani

HoD-MECH

Coordinator IQAC

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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

SUMMARY REPORT

The Department of Mechanical Engineering organized a Add On Course on '**Additive Manufacturing** ' from 11.03.2022 to 20.06.2022 (20 days) in RBSH 001-Seminar Hall. During the inauguration function on 08.03.2022 Ms. K.Shobana, III –Year Mechanical engineering delivered the welcome address.

Dr. J.Sundararajan, Principal of our college inaugurated the program and delivered the inaugural address. Resources person Mr.J.Sivakumar, HR, Meccanotecnica India Pvt Ltd, Nilakottai,Dindigul, shared his technical experience with our students. This thirty days course gave overview about Additive Manufacturing . He also shared his knowledge of the fundamentals and principles in Additive Manufacturing System. So that students enable to have skills that would will help them to resolve complex real world problems in industrial field.The students learnt various existing and emerging technologies of Additive Manufacturing .

The students learnt various existing and available sources to gain knowledge. 45 Students attended from IV year Mechanical Engineering . Students those who participated and successfully completed the giving program were awarded with certificates.

M.Syed Akmal of IV- Year Mechanical Engineering delivered vote of thanks. During the valedictory function on 20.06.2022.

PROGRAM COORDINATOR
T. Bala Subramani

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Co-ordinator - IQAC
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IQAC

PRINCIPAL
Dr.

DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE ON ADDITIVE MANUFACTURING

COURSE MATERIAL/MANUAL

Material Link:

Chapter 1: https://nptel.ac.in/courses/110/107/110107130/

Chapter 2: https://nptel.ac.in/courses/112/104/112104188/

Chapter 3: https://www.youtube.com/watch?v=-2Cd38P6YO0

Chapter 4: https://www.leanproduction.com/tools/oee-pack/top-25-lean-tools.pdf

Chapter 5: https://www.youtube.com/watch?v=-2Cd38P6YO0

Further Study:

[1] Poksinska, B. (2010). The current state of Lean implementation in health care: literature review. Quality Management in Healthcare, 19(4), 319-329.

[2] Mazzocato, P., Savage, C., Brommels, M., Aronsson, H., & Thor, J. (2010). Lean thinking in healthcare: a realist review of the literature. BMJ Quality & Safety, 19(5), 376-382

. [3] Tjahjono, B., Ball, P., Vitanov, V. I., Scorzafave, C., Nogueira, J., Calleja, J., ... & Srivastava, S. (2010). Six Sigma: a literature review. International Journal of Lean Six Sigma, 1(3), 216-233.

[4] Singh, B., Garg, S. K., & Sharma, S. K. (2011). Value stream mapping: literature review and implications for Indian industry. The International Journal of Advanced Manufacturing Technology, 53(5-8), 799-809.

[5] Stone, K. B. (2012). Four decades of lean: a systematic literature review. International Journal of Lean Six Sigma, 3(2), 112-132.

[6] Zhang, Q., Irfan, M., Khattak, M. A. O., Zhu, X., & Hassan, M. (2012). Lean Six Sigma: a literature review. Interdisciplinary Journal of Contemporary research in business, 3(10), 599-605.

PROGRAM COORDINATOR
T Balasubramani

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DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE OF PARTICIPATION

This is to certify that

G. Sankar, Third Year Mechanical Engineering

For Successful completion of Add-On Course on

"ADDITIVE MANUFACTURING"

From 11/03/2022 to 20/06/2022.

HOD/MECH
DR.S.PAULSINGARAYAR

PRINCIPAL
DR.J.SUNDARARAJAN
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
Natham, Dindigul (Dt) - 624 401.

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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRCUIT TELEVISION

INDEX

COURSE CODE & NAME: **21SHAO01 - CLOSED CIRCUIT TELEVISION (CCTV)**

ACADEMIC YEAR: **2021-2022** SEMESTER: **ODD** DURATION: **35 HOURS**

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PROGRAMME CO-ORDINATOR Mr. H. Bhoomeswaran, AP/PHY

HoD/S&H Dr. T. Priya

IQAC CO-ORDINATOR Mr. K. Aruna Senthil Kumar

PRINCIPAL Dr. J. Sundararajan

Coordinator - IQAC
N.P.R College of Engineering & Technology
Natham Dindigul (Dt)-624 401

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

From

Dr. T. priya,
Head of the Department
Department of Science & Humanities
NPR College of Engineering & Technology
Natham.

To

The principal,
NPR College of Engineering & Technology
Natham.

Respected Sir,

Sub: Request for permission to conduct Add on Course for I year Students - Regarding

We have planned to conduct Add on course "CLOSED CIRCUIT TELEVISION (CCTV)" to our students on the following days 5/2/22, 12/2/22, 26/2/22, 5/3/22 & 12/3/22 (5 days) in our college campus. We have proposed Mr. M. Karuppayanny, Supporting Engineer & Mr. V. Rajkumar, Supporting Engineer as resource persons for this Add on course. Kindly permit us to conduct the same.

Thank you,

Yours faithfully

T.P.

NPR College of Engineering & Technology

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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRUIT TELEVISION (CCTV)

RESOURCE PERSONS PROFILE

Name	:	**Mr.M. Karuppasamy**
Designation	:	**Supporting Engineer**
Company Name	:	**MINITZ DATA Services,** 1st Floor, No:5, Baskar Complex, Besant Road, Chokkikulam, Madurai-625 002
About Resource Person	:	**Supporting Engineer** from April 2018 to till date, Supervisor, CCTV Technician, Operator, CCTV Application Developer and Product designer
Name	:	**Mr. V. Rajkumar**
Designation	:	**Supporting Engineer**
Company Name	:	**MINITZ DATA Services,** 1st Floor, No:5, Baskar Complex, Besant Road, Chokkikulam, Madurai-625 002
About Resource Person	:	**Supporting Engineer** from April 2018 to till date, Supervisor,CCTV Technician, Operator,CCTVApplication Developer and Product designer

PROGRAMME CO-ORDINATOR

Mr. H. Bhoomeswaran, AP/PHY

HoD/S&H

Dr. T. Priya

PRINCIPAL

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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRUIT TELEVISION (CCTV)

CIRCULAR

NPRCET/OFF/S&H/VAC/2021-2022 **DATE: 03.01.2022**

This is to inform that Department of Science & Humanities has planned to conduct a Value Added course on **"CLOSED CIRUIT TELEVISION (CCTV)"** for First year students in our college campus during this ODD semester 2021-2022. Interested students can enrol their name on or before 31.1.2022 The details of the training program are given below:

COURSE NAME	:	**CLOSED CIRUIT TELEVISION (CCTV)**
RESOURCE PERSONS	:	**Mr.M.Karuppasamy & Mr.V.Rajkumar**
VENUE	:	**NPRCET Rear Block Seminar Hall (Second Floor)**
DATE & DURATION	:	**05.02.2022, 12.02.2022, 26.02.2022, 05.03.2022, 12.03.2022 9.30 am to 4.00 pm**
PROGRAMME COORDINATOR	:	**Mr. H. Bhoomeswaran, AP/PHY NPRCET**

PRINCIPAL
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.

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1. IQAC
2. All the HODs
3. All the Class Rooms
4. Notice Board
5. File

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The Management, Principal, Staff and Students

Cordially invite you for the inauguration of

"Add on Course on CLOSED CIRUIT TELEVISION (CCTV)"

On 5th Febrauary, 2022

Venue: NPRCET Rear Block Seminar Hall (Second Floor) at 9.30 a.m.

Chief Guest

Mr. M. Karuppasamy

MINITZ DATA Services, Madurai

&

Mr. V. Rajkumar

MINITZ DATA Services, Madurai

Felicitation Address

Dr. J. Sundararajan

Principal,

NPR College of Engineering & Technology

Organized By

Department of Science & Humanities,

NPR College of Engineering & Technology,

NPR Nagar, Natham.

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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRUIT TELEVISION (CCTV)

COURSE CONTENT

DAY 1-CHAPTER 1- INTRODUCTION

- CCTV system design
- Components of CCTV systems
- Defining system requirements
- CCTV system design considerations
- Types of CCTV camera and their functionality

DAY 2-CHAPTER 2-COMPONENTS OF CCTV SYSTEMS

- Cameras- Lenses
- Housing and Mounts
- RJ45, BNC Connector Crimping
- Camera Mounting assembly
- Power supply unit connection
- Lens Adjustment
- Video Monitors

DAY 3-CHAPTER 3-CAMERA CONFIGURATION

- Configuration Procedure
- Create User Access
- Assign IP address
- Video Compression
- Frame rate, Band width, PTZ preset
- Set time and Date, Time Zone
- Set Recording Mode, Set OSD Name

DAY 4-CHAPTER 4-VIDEO RECORDING CONFIGURATION

- Recording and retrieving process of footage
- Function of various blocks of DVR
- Create User Name and Password
- Assign Recording type
- Create backup
- Video Playback

DAY 5-CHAPTER 5- EMERGING TECHNOLOGY

- Digital Technologies –
- Improvements to Existing Technology –
- Major IT Trends

CRITERIA TO GET CERTIFICATE:

- Students should register their names for this course
- Students must have **80%** attendance.
- Student should secure **75%** marks in the Exam.

Prepared By : Mr. H. Bhoomeswaran, AP/PHY

Approved by

HoD/S&H

Dr. T. Priya

IQAC CO-ORDINATOR

Mr. K. Aruna Senthil Kumar

Coordinator - IQAC
...lege of Engineering & Technology
...nam, Dindigul (Dt)-624 401

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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRUIT TELEVISION (CCTV)

REGISTERED STUDENTS NAME LIST

S.No.	REGISTER NUMBER	STUDENT NAME	YEAR
1	920821103002	BHARATH KUMAR S	I - CIVIL
2	920821103003	DINAKARAN K	I - CIVIL
3	920821103004	ELAMBARUTHI B	I - CIVIL
4	920821103005	KIRTHIK ANANTH M	I - CIVIL
5	920821103008	PRAVEEN C	I - CIVIL
6	920821103009	RAGHUL S P	I - CIVIL
7	920821103010	RITIKA S A	I - CIVIL
8	920821103011	SANJAY YUKENDRA M	I - CIVIL
9	920821103012	SUBANU M	I - CIVIL
10	920821103013	SYEDALI FATHIMA K	I - CIVIL
11	920821103014	VEERAMARI S	I - CIVIL
12	920821104003	ANBARASAN P	I - CSE
13	920821104004	ANBARASU S	I - CSE
14	920821104006	APSARA JASMINE S	I - CSE
15	920821104007	ARASUTHANGAPANDI M	I - CSE
16	920821104008	ARUSHA BANU A	I - CSE
17	920821104009	BABY SHALINI C	I - CSE
18	920821104011	BHARATHI J	I - CSE
19	920821104012	BHUVANESHWARAN S	I - CSE
20	920821104013	DEVADHARSHINI R S	I - CSE
21	920821104014	DHANUSH M	I - CSE
22	920821104015	DHARANI T	I - CSE
23	920821104017	DHARSHINI M	I - CSE
24	920821104018	DURGA GHANA DEVI S	I - CSE
25	920821104019	FAHMITHA SIRIN N	I - CSE
26	920821104026	JOTHIPRAKASH M	I - CSE
27	920821104027	KARTHIKEYAN K	I - CSE
28	920821104028	KARTHIKEYAN M	I - CSE
29	920821104029	KEERTHI HARAN R	I - CSE
30	920821104030	MADHESH G	I - CSE
31	920821104031	MADHUMITHA J	I - CSE
32	920821104033	NATCHATHIRA M	I - CSE
33	920821104034	NAVEEN S	I - CSE
34	920821104035	PAVITHRA J	I - CSE
35	920821104040	ROOBALA V	I - CSE
36	920821104041	SHAUL HAMEED U	I - CSE
37	920821104042	SANKARADINESH A	I - CSE
38	920821104043	SHANMUGAPRIYA V	I - CSE
39	920821104044	SHEEBA S	I - CSE
40	920821104047	SHRIHARINI V	I - CSE
41	920821104048	SIBIDHARANI K	I - CSE
42	920821104049	SIVAKUMAR R	I - CSE
43	920821104050	SIVASUBRAMANIAN N	I - CSE
44	920821104052	SRI SUDHARSANA LAKSHMI D	I - CSE
45	920821104053	SUMITHA V	I - CSE
46	920821104054	SURESH KANNAN.M	I - CSE

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47	920821104055	SURYAPRAKASH S	I - CSE
48	920821104056	SUSMITHA N	I - CSE
49	920821104057	THESHAN BANU S	I - CSE
50	920821104059	YUVASHRI A	I - CSE
51	920821105003	JEEVADHARANI P	I - EEE
52	920821105005	JEYAVARTHINI T	I - EEE
53	920821105006	KEERTHIKA P	I - EEE
54	920821105007	LAARA DOLLY S	I - EEE
55	920821105012	MURALITHARAN A	I - EEE
56	920821105014	NARESH KARTHIK M S	I - EEE
57	920821105015	PRAVEENKUMAR U	I - EEE
58	920821105016	RAMYA M	I - EEE
59	920821105019	SIVANESAN D	I - EEE
60	920821105020	SRISAISAKTHI R	I - EEE
61	920821105021	SUDHARSAN M	I - EEE
62	920821105022	SUJINDRAN S	I - EEE
63	920821105024	VIKRAM J	I - EEE
64	920821105025	VINOTH K	I - EEE
65	920821105026	VISHAL GANESH J	I - EEE
66	920821106001	AAKASH R	I - ECE A
67	920821106002	AASHIGA BEGAM N	I - ECE A
68	920821106003	ABDUL RAHMAN A	I - ECE A
69	920821106004	ABIRAMI.S	I - ECE A
70	920821106005	ABHISHEK S	I - ECE A
71	920821106006	ALAGU PANDI P	I - ECE A
72	920821106007	AMRUTHA SHOPIGA C	I - ECE A
73	920821106008	ASHOK KUMAR S	I - ECE A
74	920821106013	BHUVANESWARI P	I - ECE A
75	920821106014	CHINRAMAN V	I - ECE A
76	920821106015	DHANANJEYAN M	I - ECE A
77	920821106016	DHARANI R	I - ECE A
78	920821106017	DHARSHINI B	I - ECE A
79	920821106018	DIVYADHARSHINI G	I - ECE A
80	920821106019	DURGA S	I - ECE A
81	920821106024	HARISH BALAJI E	I - ECE A
82	920821106025	HARSHINIPRIYA R	I - ECE A
83	920821106026	HEMANTH BALA M	I - ECE A
84	920821106027	IMRANA Y	I - ECE A
85	920821106028	JANANI M	I - ECE A
86	920821106029	JAYASURYA S	I - ECE A
87	920821106030	JEEVA BHARATHI M	I - ECE A
88	920821106031	JEYA SURYA S	I - ECE A
89	920821106036	LAKSHMANADHASAN S	I - ECE A
90	920821106037	LAKSHMANAN K	I - ECE A
91	920821106038	MANIKANDAN G	I - ECE A
92	920821106039	MANIKANDAN N	I - ECE A
93	920821106040	MANOJ KUMAR S	I - ECE A
94	920821106046	MUKESH VARMA M	I - ECE A
95	920821106047	NACHAMMAI C	I - ECE A
96	920821106048	NADHIRA BANU N	I - ECE A
97	920821106049	NADHIYA M	I - ECE B
98	920821106050	NEHA A	I - ECE B
99	920821106051	NITHISHKUMAR K	I - ECE B

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100	920821106052	NITHYASRI R	I - ECE B
101	920821106060	PREMKUMAR G	I - ECE B
102	920821106061	PRIYA DHARSHINI S	I - ECE B
103	920821106062	PUGALENTHI K	I - ECE B
104	920821106063	RAGUL M	I - ECE B
105	920821106064	RAMAPRABAKARAN R	I - ECE B
106	920821106066	RAVIKUMAR S	I - ECE B
107	920821106067	SABARI PRASATH P	I - ECE B
108	920821106070	SARANYA K	I - ECE B
109	920821106071	SARATHI R	I - ECE B
110	920821106072	SATHASIVAM M	I - ECE B
111	920821106074	SHANOFAR BEGUM S	I - ECE B
112	920821106075	SIVA BALAJI M	I - ECE B
113	920821106076	SIVABALAN S	I - ECE B
114	920821106077	SOUNDHARYA R	I - ECE B
115	920821106079	SUBAMOZHI P	I - ECE B
116	920821106080	SUBASH CHANDRA BOSE S	I - ECE B
117	920821106081	SUDHISHREE J J	I - ECE B
118	920821106082	SUSHMITHA N P	I - ECE B
119	920821106083	SWATHI P	I - ECE B
120	920821106086	THIRUMALAIKARTHICK N	I - ECE B
121	920821106087	THOWFIK RAJA S	I - ECE B
122	920821106088	VARSHA V S	I - ECE B
123	920821106089	VEERALAKSHMI M	I - ECE B
124	920821106094	VIJAYA SHREE R	I - ECE B
125	920821114001	AATHIRAJA D	I - MECH
126	920821114003	ARAVINTH B	I - MECH
127	920821114005	BALAJI K	I - MECH
128	920821114008	DEEPAK R	I - MECH
129	920821114009	DEEPAK KUMAR S	I - MECH
130	920821114010	DHAMOTHARAN V	I - MECH
131	920821114011	DHAYAL PRIYADHARSHAN	I - MECH
132	920821114012	GOKUL M	I - MECH
133	920821114015	HARIHARAN D	I - MECH
134	920821114016	JEEVAKUMAR S	I - MECH
135	920821114017	JEEVANANTHAM B	I - MECH
136	920821114018	KANNAN S	I - MECH
137	920821114021	MANOHARAN K	I - MECH
138	920821114026	SANTHOSH KUMAR K	I - MECH
139	920821114027	SANTHOSHKUMAR P	I - MECH
140	920821114028	SIVAPRAKASH P	I - MECH
141	920821114029	VENKAT ARJUN A	I - MECH
142	920821114031	YOGARAJA S	I - MECH

PROGRAMME CO-ORDINATOR

Mr. H. Bhoomeswaran, AP/PHY

HoD/S&H

Dr. T. Priya

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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRUIT TELEVISION (CCTV)

COURSE SCHEDULE

Venue: NPRCET Rear Block Seminar Hall (Second Floor) **Date: 3.02.2022**

EXTERNAL RESOURCE PERSONS:
1.Mr. M. Karuppasamy
2.Mr.V. Raj Kumar

INTERNAL RESOURCE PERSONS:
1.Mr. H. Bhoomeswaran
2.Mr. M. Thangam

Day 1 05.02.2022	9.00 A.M	**Registration**	
	9.30 A.M – 10.00 A.M	**Inauguration**	
	10. 00 A.M - 11.10 A.M	Session 1	CCTV Introduction **Mr.M. Karuppasamy**
	11.10 A.M to 11.30 A.M	*Tea Break*	
	11.30 A.M to 1.10 P.M	Session 2	Types of CCTV camera and their functionality **Mr. V. Rajkumar**
	1.10 P.M to 2.00 P.M	*Lunch Break*	
	2.00 P.M to 3.40 P.M	Session 3	Components of CCTV Systems **Mr. H. Bhoomeswaran**
	3.40 P.M to 3.50 P.M	*Tea Break*	
	3.50 P.M to 4.30 P.M	Session 4	RJ45, BNC Connector Crimping **Mr. M. Thangam**

Day 2 12.02.2022	9.30 A.M – 11.10 A.M	Session 1	Camera Mounting assembly **Mr. V. Rajkumar**
	11.10 A.M to 11.30 A.M	*Tea Break*	
	11.30 A.M to 1.10 P.M	Session 2	Lens Adjustment **Mr.M. Karuppasamy**
	1.10 P.M to 2.00 P.M	*Lunch Break*	
	2.00 P.M to 3.40 P.M	Session 3	Video Monitors **Mr. H. Bhoomeswaran**
	3.40 P.M to 3.50 P.M	*Tea Break*	
	3.50 P.M to 4.30 P.M	Session 4	Video Recorders **Mr. M. Thangam**

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Day 3 **26.02.2022**	9.30 A.M – 11.10 A.M	Session 1	Camera Configuration Procedure **Mr. M. Thangam**
	11.10 A.M to 11.30 A.M	Tea Break	
	11.30 A.M to 1.10 P.M	Session 2	Create User Access – Assign IP address **Mr.M. Karuppasamy**
	1.10 P.M to 2.00 P.M	Lunch Break	
	2.00 P.M to 3.40 P.M	Session 3	Video Compression – Frame rate – Band width – PTZ preset **Mr. H. Bhoomeswaran**
	3.40 P.M to 3.50 P.M	Tea Break	
	3.50 P.M to 4.30 P.M	Session 4	Set Recording Mode- Set OSD Name **Mr. V. Rajkumar**
Day 4 **05.03.2022**	9.30 A.M – 11.10 A.M	Session 1	Video Recording and retrieving process of footage **Mr. H. Bhoomeswaran**
	11.10 A.M to 11.30 A.M	Tea Break	
	11.30 A.M to 1.10 P.M	Session 2	Recording format of DVR – Create User Name and Password **Mr. M. Thangam**
	1.10 P.M to 2.00 P.M	Lunch Break	
	2.00 P.M to 3.40 P.M	Session 3	Initialize Hard Disk – Add Camera **Mr.M. Karuppasamy**
	3.40 P.M to 3.50 P.M	Tea Break	
	3.50 P.M to 4.30 P.M	Session 4	Video Playback **Mr. M. Thangam**
Day 5 **12.03.2022**	9.30 A.M – 11.10 A.M	Session 1	Digital Technologies **Mr. M. Thangam**
	11.10 A.M to 11.30 A.M	Tea Break	
	11.30 A.M to 1.10 P.M	Session 2	Integrating CCTV Components **Mr.M. Karuppasamy**
	1.10 P.M to 2.00 P.M	Lunch Break	
	2.00 P.M to 3.40 P.M	Session 3	Improvements to Existing Technology **Mr. H. Bhoomeswaran**
	3.40 P.M to 3.50 P.M	Tea Break	
	3.50 P.M to 4.30 P.M	Session 4	Major IT Trends **Mr. V. Rajkumar**
	4.30 P.M to 5.00 P.M	**Valedictory**	

PROGRAMME CO-ORDINATOR
Mr. H. Bhoomeswaran, AP/PHY

HoD/S&H
Dr. T. Priya

IQAC CO-ORDINATOR
Mr. K. Aruna Senthil Kumar

Coordinator - IQAC
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PRINCIPAL
Dr. J. Sundararajan

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Principal
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DEPARTMENT OF SCIENCE & HUMANITIES
ADD ON COURSE ON CLOSED CIRUIT TELEVISION(CCTV)

STUDENT ATTENDANCE

SL. No.	Roll.No.	Student Name	Year	05.02.22		12.02.22		26.02.22		05.03.22		12.03.22	
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	920821103002	BHARATH KUMAR S	I - CIVIL	/	/	/	/	/	/	/	/	/	/
2	920821103003	DINAKARAN K	I - CIVIL	/	/	AB	AB	/	/	/	/	/	/
3	920821103004	ELAMBARUTHI B	I - CIVIL	/	/	AB	AB	/	/	/	/	/	/
4	920821103005	KIRTHIK ANANTH M	I - CIVIL	/	/	/	/	/	/	/	/	/	/
5	920821103008	PRAVEEN C	I - CIVIL	/	/	/	/	/	/	/	/	/	/
6	920821103009	RAGHUL S P	I - CIVIL	/	/	/	/	/	/	/	/	/	/
7	920821103010	RITIKA S A	I - CIVIL	/	/	/	/	/	/	/	/	/	/
8	920821103011	SANJAY YUKENDRA M	I - CIVIL	/	/	/	/	/	/	/	/	/	/
9	920821103012	SUBANU M	I - CIVIL	/	/	/	/	/	/	/	/	/	/
10	920821103013	SYEDALI FATHIMA K	I - CIVIL	/	/	/	/	/	/	/	/	/	/
11	920821103014	VEERAMARI S	I - CIVIL	/	/	/	/	/	/	/	/	/	/
12	920821104003	ANBARASAN P	I - CSE	/	/	/	/	/	/	/	/	/	/
13	920821104004	ANBARASU S	I - CSE	/	/	/	/	/	/	/	/	/	/
14	920821104006	APSARA JASMINE S	I - CSE	/	/	/	/	/	/	/	/	/	/
15	920821104007	ARASUTHANGAPANDI M	I - CSE	/	/	/	/	/	/	/	/	/	/
16	920821104008	ARUSHA BANU A	I - CSE	/	/	AB	AB	/	/	/	/	/	/
17	920821104009	BABY SHALINI C	I - CSE	/	/	AB	AB	/	/	/	/	/	/
18	920821104011	BHARATHI J	I - CSE	/	/	/	/	/	/	/	/	/	/
19	920821104012	BHUVANESHWARAN S	I - CSE	/	/	/	/	/	/	/	/	/	/
20	920821104013	DEVADHARSHINI R S	I - CSE	/	/	/	/	/	/	/	/	/	/
21	920821104014	DHANUSH M	I - CSE	/	/	/	/	/	/	/	/	/	/
22	920821104015	DHARANI T	I - CSE	/	/	/	/	/	/	/	/	/	/
23	920821104017	DHARSHINI M	I - CSE	/	/	AB	AB	/	/	/	/	/	/
24	920821104018	DURGA GHANA DEVI S	I - CSE	/	/	/	/	/	/	/	/	/	/
25	920821104019	FAHMITHA SIRIN N	I - CSE	/	/	AB	AB	/	/	/	/	/	/
26	920821104026	JOTHIPRAKASH M	I - CSE	/	/	AB	AB	/	/	/	/	/	/
27	920821104027	KARTHIKEYAN K	I - CSE	/	/	/	/	/	/	/	/	/	/
28	920821104028	KARTHIKEYAN M	I - CSE	/	/	/	/	/	/	/	/	/	/
29	920821104029	KEERTHI HARAN R	I - CSE	/	/	/	/	/	/	/	/	/	/
30	920821104030	MADHESH G	I - CSE	/	/	AB	AB	/	/	/	/	/	/
31	920821104031	MADHUMITHA J	I - CSE	/	/	/	/	/	/	/	/	/	/
32	920821104033	NATCHATHIRA M	I - CSE	/	/	/	/	/	/	/	/	/	/
33	920821104034	NAVEEN S	I - CSE	/	/	/	/	/	/	/	/	/	/
34	920821104035	PAVITHRA J	I - CSE	/	/	/	/	/	/	/	/	/	/
35	920821104040	ROOBALA V	I - CSE	/	/	/	/	/	/	/	/	/	/
36	920821104041	SHAUL HAMEED U	I - CSE	/	/	/	/	/	/	/	/	/	/
37	920821104042	SANKARADINESH A	I - CSE	/	/	/	/	/	/	/	/	/	/
38	920821104043	SHANMUGAPRIYA V	I - CSE	/	/	AB	AB	/	/	/	/	/	/

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39	920821104044	SHEEBA S	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
40	920821104047	SHRIHARINI V	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
41	920821104048	SIBIDHARANI K	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
42	920821104049	SIVAKUMAR R	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
43	920821104050	SIVASUBRAMANIAN N	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
44	920821104052	SRI SUDHARSANA LAKSHMI D	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
45	920821104053	SUMITHA V	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
46	920821104054	SURESH KANNAN.M	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
47	920821104055	SURYAPRAKASH S	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
48	920821104056	SUSMITHA N	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
49	920821104057	THESHAN BANU S	I - CSE	/	/	AB	AB	/	/	/	/	/	/	/	/
50	920821104059	YUVASHRI A	I - CSE	/	/	/	/	/	/	/	/	/	/	/	/
51	920821105003	JEEVADHARANI P	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
52	920821105005	JEYAVARTHINI T	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
53	920821105006	KEERTHIKA P	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
54	920821105007	LAARA DOLLY S	I - EEE	/	/	AB	AB	/	/	/	/	/	/	/	/
55	920821105012	MURALITHARAN A	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
56	920821105014	NARESH KARTHIK M S	I - EEE	/	/	AB	AB	/	/	/	/	/	/	/	/
57	920821105015	PRAVEENKUMAR U	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
58	920821105016	RAMYA M	I - EEE	/	/	AB	AB	/	/	/	/	/	/	/	/
59	920821105019	SIVANESAN D	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
60	920821105020	SRISAISAKTHI R	I - EEE	/	/	/	/	/	/	/	/	AB	AB	/	/
61	920821105021	SUDHARSAN M	I - EEE	/	/	AB	AB	/	/	/	/	/	/	/	/
62	920821105022	SUJINDRAN S	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
63	920821105024	VIKRAM J	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
64	920821105025	VINOTH K	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
65	920821105026	VISHAL GANESH J	I - EEE	/	/	/	/	/	/	/	/	/	/	/	/
66	920821106001	AAKASH R	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
67	920821106002	AASHIGA BEGAM N	I - ECE A	/	/	AB	AB	/	/	/	/	/	/	/	/
68	920821106003	ABDUL RAHMAN A	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
69	920821106004	ABIRAMI.S	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
70	920821106005	ABHISHEK S	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
71	920821106006	ALAGU PANDI P	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
72	920821106007	AMRUTHA SHOPIGA C	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
73	920821106008	ASHOK KUMAR S	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
74	920821106013	BHUVANESWARI P	I - ECE A	AB	AB	/	/	/	/	/	/	/	/	/	/
75	920821106014	CHINRAMAN V	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
76	920821106015	DHANANJEYAN M	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
77	920821106016	DHARANI R	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
78	920821106017	DHARSHINI B	I - ECE A	/	/	/	/	/	/	/	/	AB	AB	/	/
79	920821106018	DIVYADHARSHINI G	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
80	920821106019	DURGA S	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
81	920821106024	HARISH BALAJI E	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/
82	920821106025	HARSHINIPRIYA R	I - ECE A	/	/	/	/	/	/	/	/	/	/	/	/

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83	920821106026	HEMANTH BALA M	I - ECE A	P	P	P	P	P	P	P	P	P	P	
84	920821106027	IMRANA Y	I - ECE A	P	P	P	P	P	P	P	P	P	P	
85	920821106028	JANANI M	I - ECE A	P	P	P	P	P	P	AB	AB	P	P	
86	920821106029	JAYASURYA S	I - ECE A	P	P	P	P	P	P	P	P	P	P	
87	920821106030	JEEVA BHARATHI M	I - ECE A	P	P	P	P	P	P	P	P	P	P	
88	920821106031	JEYA SURYA S	I - ECE A	P	P	AB	AB	P	P	P	P	P	P	
89	920821106036	LAKSHMANADHASAN S	I - ECE A	P	P	AB	AB	P	P	P	P	P	P	
90	920821106037	LAKSHMANAN K	I - ECE A	P	P	P	P	P	P	P	P	P	P	
91	920821106038	MANIKANDAN G	I - ECE A	P	P	P	P	P	P	P	P	P	P	
92	920821106039	MANIKANDAN N	I - ECE A	P	P	AB	AB	P	P	P	P	P	P	
93	920821106040	MANOJ KUMAR S	I - ECE A	P	P	P	P	P	P	P	P	P	P	
94	920821106046	MUKESH VARMA M	I - ECE A	P	P	P	P	P	P	P	P	P	P	
95	920821106047	NACHAMMAI C	I - ECE A	P	P	P	P	P	P	P	P	P	P	
96	920821106048	NADHIRA BANU N	I - ECE A	P	P	P	P	P	P	P	P	P	P	
97	920821106049	NADHIYA M	I - ECE B	P	P	P	P	P	P	P	P	P	P	
98	920821106050	NEHA A	I - ECE B	P	P	P	P	P	P	P	P	P	P	
99	920821106051	NITHISHKUMAR K	I - ECE B	P	P	P	P	P	P	P	P	P	P	
100	920821106052	NITHYASRI R	I - ECE B	P	P	P	P	P	P	P	P	P	P	
101	920821106060	PREMKUMAR G	I - ECE B	AB	AB	P	P	P	P	P	P	P	P	
102	920821106061	PRIYA DHARSHINI S	I - ECE B	P	P	P	P	P	P	P	P	P	P	
103	920821106062	PUGALENTHI K	I - ECE B	P	P	P	P	P	P	P	P	P	P	
104	920821106063	RAGUL M	I - ECE B	P	P	AB	AB	P	P	P	P	P	P	
105	920821106064	RAMAPRABAKARAN R	I - ECE B	P	P	P	P	P	P	P	P	P	P	
106	920821106066	RAVIKUMAR S	I - ECE B	P	P	P	P	P	P	P	P	P	P	
107	920821106067	SABARI PRASATH P	I - ECE B	P	P	P	P	P	P	P	P	P	P	
108	920821106070	SARANYA K	I - ECE B	P	P	P	P	P	P	P	P	P	P	
109	920821106071	SARATHI R	I - ECE B	P	P	AB	AB	P	P	P	P	P	P	
110	920821106072	SATHASIVAM M	I - ECE B	P	P	P	P	P	P	P	P	P	P	
111	920821106074	SHANOFAR BEGUM S	I - ECE B	P	P	P	P	P	P	P	P	P	P	
112	920821106075	SIVA BALAJI M	I - ECE B	P	P	P	P	P	P	P	P	P	P	
113	920821106076	SIVABALAN S	I - ECE B	P	P	AB	AB	P	P	P	P	P	P	
114	920821106077	SOUNDHARYA R	I - ECE B	P	P	P	P	P	P	P	P	P	P	
115	920821106079	SUBAMOZHI P	I - ECE B	P	P	P	P	P	P	P	P	P	P	
116	920821106080	SUBASH CHANDRA BOSE S	I - ECE B	P	P	P	P	P	P	P	P	P	P	
117	920821106081	SUDHISHREE J J	I - ECE B	P	P	P	P	P	P	P	P	P	P	
118	920821106082	SUSHMITHA N P	I - ECE B	P	P	P	P	P	P	P	P	P	P	
119	920821106083	SWATHI P	I - ECE B	P	P	P	P	P	P	P	P	P	P	
120	920821106086	THIRUMALAIKARTHICK N	I - ECE B	P	P	P	P	P	P	P	P	P	P	
121	920821106087	THOWFIK RAJA S	I - ECE B	P	P	P	P	P	P	P	P	P	P	
122	920821106088	VARSHA V S	I - ECE B	P	P	P	P	P	P	P	P	P	P	
123	920821106089	VEERALAKSHMI M	I - ECE B	P	P	AB	AB	P	P	P	P	P	P	
124	920821106094	VIJAYA SHREE R	I - ECE B	P	P	P	P	P	P	P	P	P	P	
125	920821114001	AATHIRAJA D	I - MECH	P	P	AB	AB	P	P	P	P	P	P	

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126	920821114003	ARAVINTH B	I - MECH	/	/	/	/	AB	AB	/	/	/	/
127	920821114005	BALAJI K	I - MECH	/	/	/	/	/	/	/	/	/	/
128	920821114008	DEEPAK R	I - MECH	/	/	/	/	/	/	/	/	/	/
129	920821114009	DEEPAK KUMAR S	I - MECH	/	/	AB	AB	/	/	/	/	/	/
130	920821114010	DHAMOTHARAN V	I - MECH	/	/	/	/	/	/	/	/	/	/
131	920821114011	DHAYAL PRIYADHARSHAN	I - MECH	/	/	/	/	/	/	/	/	/	/
132	920821114012	GOKUL M	I - MECH	/	/	/	/	/	/	/	/	/	/
133	920821114015	HARIHARAN D	I - MECH	/	/	AB	AB	/	/	/	/	/	/
134	920821114016	JEEVAKUMAR S	I - MECH	/	/	/	/	/	/	/	/	/	/
135	920821114017	JEEVANANTHAM B	I - MECH	/	/	/	/	/	/	/	/	/	/
136	920821114018	KANNAN S	I - MECH	/	/	/	/	/	/	/	/	/	/
137	920821114021	MANOHARAN K	I - MECH	/	/	/	/	/	/	/	/	/	/
138	920821114026	SANTHOSH KUMAR K	I - MECH	/	/	/	/	/	/	/	/	/	/
139	920821114027	SANTHOSHKUMAR P	I - MECH	/	/	/	/	/	/	/	/	/	/
140	920821114028	SIVAPRAKASH P	I - MECH	/	/	/	/	/	/	AB	AB	/	/
141	920821114029	VENKAT ARJUN A	I - MECH	/	/	/	/	/	/	/	/	/	/
142	920821114031	YOGARAJA S	I - MECH	/	/	AB	AB	/	/	/	/	/	/
PRESENT				140	140	115	115	141	141	139	139	142	142
ABSENT				2	2	27	27	1	1	3	3	2	2
PROGRAMME COORDINATOR													

HoD/S&H

Dr. T. Priya

PRINCIPAL

Dr. J. Sundararajan

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering &
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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRUIT TELEVISION(CCTV)

SAMPLE QUESTION PAPER WITH ANSWERS

1. What does CCTV Stands for?
A. Computer Circuit TV
B. Computer Closed Television
C. Closed Circuit Television
D. Circuit Closed Television

2. What is CCTV?

A. A private security camera system where the circuits are closed and all of the elements are connected directly.

B. An open broadcast security camera system where the signals are broadcast across airwaves.

C. A satellite camera system.

D. A cable TV system that members of the public can access.

3. CCTV can be used to?

A. Study the stars at night.
B. Remotely monitor the temperature of fridges.
C. Monitor the interior and exterior of a property.
D. Study wildlife at night in the wild.

4. Which of the following scenarios is CCTV best used for?

A. Seeing if it is raining outside.
B. Watching out for wildlife.
C. Spying on friends.
D. Spotting violence in a crowded venue like a football match.

5. A CCTV operator must;

A. Give copies of CCTV film to anyone who asks for it.
B. Monitor only one CCTV camera whilst at work.
C. Not answer the phone when in a Control Room.
D. Ensure the confidentiality of all information gained.

6. A domestic CCTV system needs to;

A. Be operated in a responsible way that respects the privacy of others.
B. Pointed in any direction you want it to be.
C. Have a live feed going at all times.
D. Placed at head height to capture peoples faces.

7. A basic CCTV surveillance system works as follows;

A. It takes pictures and films with a camera, then sends these to their destination and finally manages them when they arrive.
B. It takes pictures and film only but does not send or store them.
C. It is a dummy camera that records nothing.

8. In which country was the first CCTV system introduced?

A. India

B. China

C. Germany

D. USA

9. A CCTV operator should be;

A. Prepared to work 24 hour shifts.
B. Observant and able to concentrate over long periods.
C. Able to work standing up.
D. Attend the scene of any incidents highlighted by a CCTV camera.

10. A CCTV control room must be kept secure because;

A. It complies with the regulations, policies and procedures put in place by regulatory bodies, local authorities and the police.
B. Meets environmental health and safety standards.
C. Helps to keep the electricity bill down.
D. Assists CCTV Operators to remain focused.

PROGRAMME CO-ORDINATOR

Mr. H. Bhoomeswaran, AP/PHY

HoD/S&H

Dr. T. Priya

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AGENDA

Welcome Address : **M. NATCHATHIRA**

I Year Computer Science Engineering

Inaugural Address : **DR. J. SUNDARARAJAN**

Principal

Chief Guest Address : **Mr. M. KARUPPASAMY**

MINITZ DATA Services

CCTV Application Developer and Product Designer

Chokkikulam, Madurai

Guest of Honour : **Mr. V. Rajkumar**

MINITZ DATA Services

CCTV Application Developer and Product Designer

Chokkikulam, Madurai

Vote of Thanks : **Mr.R. RAMAPRABAKARAN**

I year Mechanical Engineering Department

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NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India.
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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRCUIT TELEVISION (CCTV)

STUDENTS' FEEDBACK FORM

Name of the Student: S.Bhuvaneswaran	**Year / Semester:** I- CSE
Name of the Program:	

CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
COURSE CONTENT	✓				
TECHNICAL SKILL		✓			
INTERACTION	✓				
PRACTICAL SESSION		✓			
COMMUNICATION		✓			

Any Other Comments / Suggestions:

Easily understandable and Nice Session

PROGRAMME COORDINATOR

Mr. H. Bhoomeswaran, AP/PHY

HoD/S&H

Dr. T. Priya

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STUDENTS' FEEDBACK FORM

Name of the Student: P. SIVAPRAKASH	**Year / Semester:** I mech / I
Name of the Program: CCTV	

CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
COURSE CONTENT	✓				
TECHNICAL SKILL	✓				
INTERACTION		✓			
PRACTICAL SESSION	✓				
COMMUNICATION		✓			

Any Other Comments / Suggestions:

very useful to me to understand the functional concepts of CCTV.

PROGRAMME COORDINATOR

Mr. H. Bhoomeswaran, AP/PHY

HoD/S&H

Dr. T. Priya

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STUDENTS' FEEDBACK FORM

Name of the Student: S. Abirami	**Year / Semester:** I - ECE - A
Name of the Program: CCTV	

CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
COURSE CONTENT		✓			
TECHNICAL SKILL	✓				
INTERACTION				✓	
PRACTICAL SESSION	✓				
COMMUNICATION			✓		

Any Other Comments / Suggestions:

This session is very useful to me

PROGRAMME COORDINATOR

Mr. H. Bhoomeswaran, AP/PHY

HoD/S&H

Dr. T. Priya

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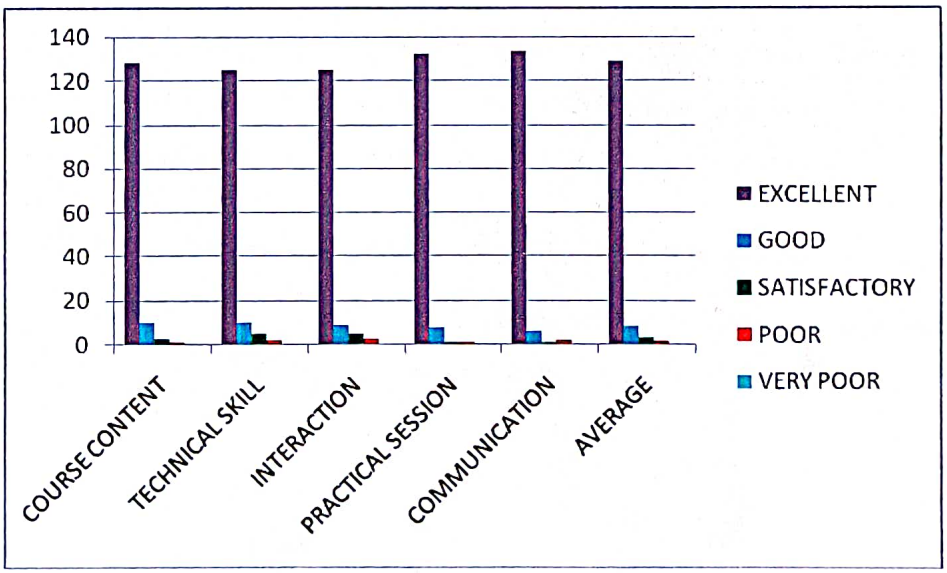
DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRCUIT TELEVISION (CCTV)

STUDENTS' FEEDBACK SUMMARY REPORT

TOTAL STRENGTH: 142 **DATE: 12.03.2022**

CONTENT	EXCELLENT	GOOD	SATISFACTORY	POOR	VERY POOR
COURSE CONTENT	128	10	3	1	0
TECHNICAL SKILL	125	10	5	2	0
INTERACTION	125	9	5	3	0
PRACTICAL SESSION	132	8	1	1	0
COMMUNICATION	133	6	1	2	0
AVERAGE	128.6	8.6	3.2	1.8	0



PROGRAMME CO-ORDINATOR Mr. H. Bhoomeswaran, AP/PHY

HoD/S&H Dr. T. Priya

IQAC CO-ORDINATOR Mr. K. Aruna Senthil Kumar

PRINCIPAL Dr. J. Sundararajan

Coordinator - IQAC
NPR College of Engineering & Technology
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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRCUIT TELEVISION (CCTV)

SUMMARY REPORT

The Department of Science & Humanities organized Add on Course on **"CLOSED CIRCUIT TELEVISION (CCTV)"** on the following dates **5/2/2022, 12/2/2022, 26/2/2022, 5/3/2022 & 12/03/2022 (5 Days)** at NPRCET Rear Block Seminar Hall (Second Floor) **M. NATCHATHIRA, I CSE** has delivered the welcome address.

Dr. J. Sundararajan, Principal of our college inaugurated the program and delivered the inaugural address. Resource Persons **Mr. M. Karuppasamy & Mr. V. Rajkumar** shared their knowledge with our students.

This program taught the purpose of adopting this kind of security system and its installation. It is a rapidly growing field that has significant potential to improve the operation, reliability, serviceability, and utility of many engineering systems. The students learnt video recorders, display units and types of cables for signal transmission before studying how to develop CCTV system plans in Auto CAD. This course covers all the basics and emerging technology.

142 Students ~~were~~ attended from I Year CIVIL, CSE, EEE, ECE and MECH. Students those who have participated and successfully completed the Quiz program were awarded with certificates. **Mr.R. Ramaprabakaran, I ECE** delivered the vote of thanks.

PROGRAMME CO-ORDINATOR	HoD/S&H	IQAC CO-ORDINATOR	PRINCIPAL
Mr. H. Bhoomeswaran, AP/PHY	Dr. T. Priya	Mr. K. Aruna Senthil Kumar	Dr. J. Sundararajan

Coordinator
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DEPARTMENT OF SCIENCE & HUMANITIES

Certificate of Completion

This is Presented to R. KEERTHI HARAN, I CSE for Completing "Closed Circuit Television (CCTV)" Add on Course Completed on 12.03.2022 Organized by Department of Science & Humanities, NPR College of Engineering & Technology.

Programme Co-ordinator **HoD** **Principal**

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DEPARTMENT OF SCIENCE & HUMANITIES

ADD ON COURSE ON CLOSED CIRCUIT TELEVISION (CCTV)

COURSE MATERIAL

MATERIAL LINK:

CHAPTER1-1.https://www.youtube.com/watch?v=e3JZWDyG6Yk
CHAPTER-2:https://www.youtube.com/watch?v=D-52qjKJMqc

CHAPTER-3:https://www.youtube.com/watch?v=D-52qjKJMqc

CHAPTER-4:https://www.youtube.com/watch?v=kr9852Yzoz4

CHAPTER-5:https://www.youtube.com/watch?v=1L80HDdS7Wg

FURTHER STUDY:

1. CCTV Camera Installation Training English Book Paper Pack . Mr. Prabu, Jan 2017 CHIP Systems

2. CCTV Technology Handbook, Homeland Security, July 2013

3. CCTV Camera Equipment Installation, Service and Maintenance, Govt of India, Ministry of skill development and entrepreneurship directorate general of training

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HoD/S&H
Dr. T. Priya

PRINCIPAL
Dr. J. Sundararajan

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

INDEX

COURSE CODE &NAME: **21BAA001 & SAP HR CETIFICATION**

ACADEMIC YEAR: **2021 -2022** SEMESTER: **ODD** DURATION: **30 HOURS**

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PROGRAM COORDINATOR

HoD/MBA

IQAC

Coordinator - IQAC
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PRINCIPAL

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

PERMISSION LETTER

DATE: 01/10/2021

From

The Head of the Department,
Department of Management studies,
NPR College of Engineering and Technology,
Natham.

To

The Principal,
NPR College of Engineering and Technology,
Natham.

Respected Sir,

Sub: Request for permission to conduct Value Added Program for MBA students - Regarding

We have planned to conduct Add-on Course on **"SAP HR CERTIFICATION"** to our MBA students from 06/011/2021, 13/11/2021, 20/11/2021, & 27/11/2021 in our college premises. We proposed **Mr. S. Chandrasekar,** Senior HR Manager, Madura Steel Industries Private Limited, Dindigul as a resource person for this Add-on course program, Kindly permit us to conduct the same.

Thanking you,

Yours faithfully,

HOD - MBA

Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
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DEPARTMENT OF MANAGEMENT STUDIES
ADD ON COURSE - SAP HR CETIFICATION
RESOURCE PERSON PROFILE

Name : **Mr. S. Chandrasekar**

Designation : Senior HR Manager

Company Name : Madura Steel Industries Private Limited, Dindigul

About Resource Person :

Mr.S.Chandrasekar working as a Senior HR Manager in Madura Steel Industries Private Limited, Dindigul has wide and varied experience in Human Resource Department. He has 15 years of experience in private enterprise in the top management in manufacturing as well as information technology fields combined with more 12 years of rich experience in leading end-to-end recruitment Life Cycle, Manpower planning & Talent Acquisition, HR Operations, Policy Formulation, Tally - ERP,SAP, Team Management & Payroll etc. A creative writer and freelance journalist, having published stories and articles on science and environment on web sites. He has scattered some interest in software areas like Software development and other programming languages. He has conducted many management activities and acted as Chief guest and gave Guest lecturer in reputed institutions.

PROGRAM COORDINATOR

HOD/MBA

PRINCIPAL

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

CIRCULAR

Date: 20/10/2021

This is to inform that Department of Management Studies is planned to conduct an Add on Course program on **"SAP HR CETIFICATION"** for the students during 2021-2022.Interested students can enroll their name to the program coordinator on or before 27/10/2021. The details of the training program are given below

COURSE NAME	:	SAP HR CETIFICATION
RESOURCE PERSON	:	Mr. S. Chandrasekar, Senior HR Manager, Madura Steel Industries Private Limited, Dindigul
VENUE	:	MBA Seminar Hall
DATE & DURATION	:	06/11/2021, 13/11/2021, 20/11/2021, & 27/11/2021 & 30Hrs
PROGRAM COORDINATOR	:	Ms.P.Geetha, Assistant Professor Department of Management Studies, NPR College of Engineering & Technology

PRINCIPAL
Dr. J.SUNDARARAJAN,
B.E., M.Tech., Ph.D.,
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt.) - 624 401.

Copy to:

1. All the HoDs
2. All the Class Rooms
3. Notice Board
4. File
5. Program Coordinator

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The Management, Principal, Faculty and Students of Department of Management Studies cordially invite you for

ADD ON COURSE

On

SAP HR CETIFICATION

Date: 6th November 2021 ***Time:*** 10.00 AM

Programme Date: **06.11.2021** to **27.11.2021**

VENUE:

NPR MBA Seminar Hall

Resource Person

Mr. S. Chandrasekar

Senior HR Manager

Madura Steel Industries Private Limited, Dindigul

Dr.J.Sundararajan

Principal

NPR College of Engineering and Technology

Will felicitate the function

Organized by

Department of Management Studies

NPR College of Engineering & Technology

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

COURSE CONTENT

Day 1 - Chapter 1: Introduction to SAP HCM

- ERP and ERP Packages
- SAP and its architecture
- SAP and its modules
- SAP Human Capital Management (HCM) and its areas
- Discussions with Participants

Day 2 - Chapter 2: Overview of HR Module

- Getting Started
- The HR module
- Organizational Information
- Employee Information

Day 3 - Chapter 3: Configuring an Organizational Structure

- Maintain Plan Data
- Add account assignment to the company organizational unit
- Account assignment features
- Structure Maintenance

Day4-Chapter 4: Establishing the Enterprise Structure

- Configuring Personnel Sub-Areas
- Employee Sub-groups
- Grouping for Work Schedules
- Understanding the HCM specific process in HCM implementation

Criteria to get Certificate:

- Average assignment score = 25% of average of best 3 assignments out of the total 4 assignments given in the course.
- Exam score = 75% of the proctored certification exam score out of 100
- Final score = Average assignment score + Exam score

Prepared By: Ms.P.Geetha, AP/MBA

Approved By,

PROGRAM COORDINATOR | HoD/MBA | IQAC | PRINCIPAL

Coordinator - IQAC
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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

REGISTERED STUDENTS NAME LIST

S. No	Register Number	Student Name	Year
1.	920820631001	ABIRAMI S	II YEAR
2.	920820631002	AJITHKUMAR D	II YEAR
3.	920820631003	ASHIK ALI R	II YEAR
4.	920820631004	ASWATHAMA M	II YEAR
5.	920820631005	ATCHAYA P	II YEAR
6.	920820631006	BALAMURUGAN M	II YEAR
7.	920820631007	BAVI SUREKA K	II YEAR
8.	920820631008	BHUVANESHWARI N	II YEAR
9.	920820631009	CHITRA R	II YEAR
10.	920820631010	DESOUZA DASMIN R	II YEAR
11.	920820631011	DHARANI M	II YEAR
12.	920820631012	ELAMEGA E	II YEAR
13.	920820631013	GAYATHRI R	II YEAR
14.	920820631014	GUHAN A C	II YEAR
15.	920820631015	GUNA MARISHWARI K	II YEAR
16.	920820631016	JENITHAKARTHIGA S	II YEAR
17.	920820631017	KANNAN A	II YEAR
18.	920820631018	KAVITHA V	II YEAR
19.	920820631019	LAKSHMI PRIYA J	II YEAR
20.	920820631020	MADHAN K	II YEAR
21.	920820631021	MANIKANDAN J	II YEAR
22.	920820631023	MEENAKSHI T	II YEAR
23.	920820631024	NILAVIYA T	II YEAR
24.	920820631025	NISHA JENIFER A	II YEAR
25.	920820631026	PARTHIBAN A	II YEAR
26.	920820631027	PUNITHA R	II YEAR
27.	920820631028	RAJPRABAKARAN J	II YEAR
28.	920820631029	SARAVANAKUMAR A	II YEAR
29.	920820631030	SATHISH KUMAR K	II YEAR
30.	920820631031	SHIVA PRADHIP R P	II YEAR

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31.	920820631032	SINDHU P	II YEAR
32.	920820631033	SUGANYA S	II YEAR
33.	920820631034	VELLAIYAMMAL C	II YEAR
34.	920820631035	VIJAYA ROHINI B	II YEAR
35.	-	ABINAYA.M	I YEAR
36.	-	ABIRAMI.K	I YEAR
37.	-	AJAYRAM.S	I YEAR
38.	-	AROCKIA SHAJIKA.A	I YEAR
39.	-	AYYANAR .P	I YEAR
40.	-	BHAGAVATHYA.B	I YEAR
41.	-	BHARATHI. K	I YEAR
42.	-	BHAVITHRA.M	I YEAR
43.	-	BHUVANESHWARI.R	I YEAR
44.	-	DHINA THAYALAN H	I YEAR
45.	-	DINESH KUMAR.K	I YEAR
46.	-	DIVYA BHARATHI. B	I YEAR
47.	-	DIVYA BHARATHI.K	I YEAR
48.	-	GOKUL.v	I YEAR
49.	-	GOWRI.P	I YEAR
50.	-	HARI HARA SUDHAN G	I YEAR
51.	-	HEMALATHA S	I YEAR
52.	-	JENNATH BIRTHOSE.A	I YEAR
53.	-	JOE ARUN RAJ S	I YEAR
54.	-	LASHIYA.T.S.	I YEAR
55.	-	MADHANAGOPU. P	I YEAR
56.	-	MAHA ATCHAYA.P	I YEAR
57.	-	MANUSHA B	I YEAR
58.	-	MEENAKUMARI.M	I YEAR
59.	-	MOHAMED AZIM	I YEAR
60.	-	MUTHU KRISHNAN. M	I YEAR
61.	-	NITHYA C	I YEAR
62.	-	PALPANDI K	I YEAR

COLLEGE OF ENGG. & TECHNOLOGY NATHAM

63.	-	PARTHIBAN	I YEAR
64.	-	PAVITHRAN.M	I YEAR
65.	-	PREETHI SOWMIA S	I YEAR
66.	-	PROMOD KUMAR.P	I YEAR
67.	-	RAJ KUMAR. S	I YEAR
68.	-	RAJAPRIYA.D	I YEAR
69.	-	RAJESWARI.G	I YEAR
70.	-	RAJKUMAR.P	I YEAR
71.	-	RAMESH KUMAR.T	I YEAR
72.	-	ROJA.M	I YEAR
73.	-	SAKTHI BALAJI.N	I YEAR
74.	-	SABARI NATHAN R	I YEAR
75.	-	SANGEETHA.M	I YEAR
76.	-	SANTHOSH KUMAR S	I YEAR
77.	-	SARAVANAN.M	I YEAR
78.	-	SELVIN.S	I YEAR
79.	-	SENTHIL KUMAR. P	I YEAR
80.	-	SRI JEYA SUNDARI S	I YEAR
81.	-	SRIMATHI.S	I YEAR
82.	-	SUBBU LAKSHMI M	I YEAR
83.	-	VASHILABANU R	I YEAR
84.	-	VIGNESH S	I YEAR
85.	-	VIKRAM RAJA.M	I YEAR
86.	-	VISHALAKSHI.S	I YEAR
87.	-	VIGNESH S	I YEAR
88.	-	VIKRAM RAJA.M	I YEAR
89.	-	VISHALAKSHI.S	I YEAR
90.	-	VITHYA.S	I YEAR

PROGRAM COORDINATOR

HoD/MBA

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

COURSE SCHEDULE

Venue : MBA Seminar Hall

Internal Resource Persons : Ms.P.Geetha, AP/MBA

Date : 06/11/2021, 13/11/2021, 20/11/2021, & 27/11/2021

Date	9.30 a.m. to 11.10 a.m.	11.10 a.m.to 11.30 a.m.	11.30 a.m.to 1.10 p.m.	1.10 p.m. to 2.00 p.m.	2.00 p.m. to 3.40 p.m.	3.40 p.m. to 3.50 p.m.	3.50 p.m. to 4.30 p.m.
Day 1 06/11/2021	SESSION I Inauguration	Tea Break	SESSION II Mr. S. Chandrasekar ERP and ERP Packages, SAP and its architecture	Lunch	SESSION III Mr. S. Chandrasekar SAP and its modules, SAP Human Capital Management (HCM) and its areas	Tea Break	SESSION IV Ms.P.Geetha Discussions with Participants
Day 2 13/11/2021	SESSION I Mr. S. Chandrasekar Getting Started		SESSION II Mr. S. Chandrasekar The HR module		SESSION III Ms.P.Geetha Organizational Information		SESSION IV Mr. S. Chandrasekar Employee Information
Day 3 20/11/2021	SESSION I Mr. S. Chandrasekar Maintain Plan Data		SESSION II Ms.P.Geetha Add account assignment to the company organizational unit		SESSION III Mr. S. Chandrasekar Account assignment features		SESSION IV Mr. S. Chandrasekar Structure Maintenance
Day 4 27/11/2021	SESSION I Mr. S. Chandrasekar Configuring Personnel Sub-Areas		SESSION II Mr. S. Chandrasekar Employee Sub-groups		SESSION III Ms.P.Geetha Grouping for Work Schedules		SESSION IV Mr. S. Chandrasekar Understanding the HCM specific process in HCM implementation

PROGRAM COORDINATOR

HOD/MBA

IQAC

Coordinator - IQAC
NPR College of Engineering & Technology
Natham, Dindigul (Dt)-624 401

PRINCIPAL
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NPR COLLEGE OF ENGG. & TECHNOLOGY NATHAM

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

STUDENTS ATTENDANCE

Sl. No	Roll Number	STUDENT NAME	YR	06/11/2021		13/11/2021		20/11/2021		27/11/2021	
1.	920820631001	ABIRAMI S	II	/	/	/	/	/	/	/	/
2.	920820631002	AJITHKUMAR D	II	/	/	/	/	/	/	/	/
3.	920820631003	ASHIK ALI R	II	/	/	/	/	/	/	/	/
4.	920820631004	ASWATHAMA M	II	/	/	/	/	/	/	/	/
5.	920820631005	ATCHAYA P	II	/	/	/	/	/	/	a	a
6.	920820631006	BALAMURUGAN M	II	/	/	/	/	/	/	/	/
7.	920820631007	BAVI SUREKA K	II	/	/	/	/	/	/	/	/
8.	920820631008	BHUVANESHWARI N	II	/	/	/	/	/	/	/	/
9.	920820631009	CHITRA R	II	a	a	/	/	a	a	/	/
10.	920820631010	DESOUZA DASMIN R	II	/	/	/	/	/	/	/	/
11.	920820631011	DHARANI M	II	/	/	a	a	/	/	/	/
12.	920820631012	ELAMEGA E	II	/	/	/	/	/	/	/	/
13.	920820631013	GAYATHRI R	II	/	/	/	/	/	/	/	/
14.	920820631014	GUHAN A C	II	/	/	/	/	/	/	a	a
15.	920820631015	GUNA MARISHWARI K	II	/	/	/	/	/	/	/	/
16.	920820631016	JENITHAKARTHIGA S	II	/	/	/	/	/	/	/	/
17.	920820631017	KANNAN A	II	/	/	/	/	/	/	/	/
18.	920820631018	KAVITHA V	II	/	/	/	/	/	/	/	/
19.	920820631019	LAKSHMI PRIYA J	II	a	a	/	/	a	a	/	/
20.	920820631020	MADHAN K	II	/	/	/	/	/	/	/	/
21.	920820631021	MANIKANDAN J	II	/	/	/	/	/	/	/	/
22.	920820631023	MEENAKSHI T	II	/	/	/	/	a	a	/	/
23.	920820631024	NILAVIYA T	II	/	/	/	/	/	/	/	/
24.	920820631025	NISHA JENIFER A	II	/	/	/	/	/	/	/	/
25.	920820631026	PARTHIBAN A	II	/	/	a	a	/	/	/	/
26.	920820631027	PUNITHA R	II	/	/	/	/	a	a	/	/
27.	920820631028	RAJPRABAKARAN J	II	/	/	/	/	/	/	/	/
28.	920820631029	SARAVANAKUMAR A	II	/	/	/	/	/	/	/	/
29.	920820631030	SATHISH KUMAR K	II	/	/	/	/	/	/	/	/

30.	920820631031	SHIVA PRADHIP R P	II	/	/	/	/	/	/	/	/
31.	920820631032	SINDHU P	II	/	/	/	/	/	/	/	/
32.	920820631033	SUGANYA S	II	/	/	/	/	/	/	/	/
33.	920820631034	VELLAIYAMMAL C	II	/	/	/	/	/	/	/	/
34.	920820631035	VIJAYA ROHINI B	II	a	a	/	/	/	/	/	/
35	-	ABINAYA.M	I	/	/	/	/	/	/	/	/
36	-	ABIRAMI.K	I	/	/	/	/	a	a	/	/
37	-	AJAYRAM.S	I	/	/	a	a	/	/	/	/
38	-	AROCKIA SHAJIKA.A	I	/	/	/	/	/	/	/	/
39.	-	AYYANAR .P	I	/	/	/	/	/	/	/	/
40.	-	BHAGAVATHYA.B	I	/	/	/	/	/	/	/	/
41.	-	BHARATHI. K	I	/	/	/	/	/	/	/	/
42.	-	BHAVITHRA.M	I	/	/	/	/	/	/	a	a
43.	-	BHUVANESHWARI.R	I	/	/	/	/	/	/	/	/
44.	-	DHINA THAYALAN H	I	a	a	/	/	/	/	/	/
45.	-	DINESH KUMAR.K	I	/	/	/	/	/	/	/	/
46.	-	DIVYA BHARATHI. B	I	/	/	/	/	/	/	/	/
47.	-	DIVYA BHARATHI.K	I	/	/	/	/	/	/	/	/
48.	-	GOKUL.v	I	/	/	a	a	/	/	/	/
49.	-	GOWRI.P	I	/	/	/	/	/	/	/	/
50.	-	HARI HARA SUDHAN G	I	/	/	/	/	/	/	/	/
51.	-	HEMALATHA S	I	/	/	/	/	a	a	/	/
52.	-	JENNATH BIRTHOSE.A	I	/	/	/	/	/	/	/	/
53.	-	JOE ARUN RAJ S	I	/	/	/	/	/	/	/	/
54.	-	LASHIYA.T.S.	I	a	a	/	/	/	/	/	/
55.	-	MADHANAGOPU. P	I	/	/	/	/	/	/	/	/
56.	-	MAHA ATCHAYA.P	I	/	/	/	/	/	/	/	/
57.	-	MANUSHA B	I	/	/	/	/	/	/	/	/
58.	-	MEENAKUMARI.M	I	/	/	/	/	/	/	/	/
59.	-	MOHAMED AZIM	I	/	/	/	/	/	/	/	/
60.	-	MUTHU KRISHNAN. M	I	/	/	/	/	/	/	/	/
61.	-	NITHYA C	I	/	/	/	/	/	/	/	/
62.	-	PALPANDI K	I	/	/	/	/	/	/	/	/
63.	-	PARTHIBAN	I	/	/	/	/	a	a	/	/

NATHAM

64.	-	PAVITHRAN.M	I	/	/	/	/	/	/	/	/	/
65.	-	PREETHI SOWMIA S	I	a	a	/	/	/	/	/	/	/
66.	-	PROMOD KUMAR.P	I	/	/	/	/	/	/	/	/	/
67.	-	RAJ KUMAR. S	I	/	/	/	/	a	a	/	/	/
68.	-	RAJAPRIYA.D	I	/	/	/	/	/	/	/	/	/
69.	-	RAJESWARI.G	I	/	/	/	/	/	/	/	/	/
70.	-	RAJKUMAR.P	I	/	/	/	/	/	/	/	/	/
71.	-	RAMESH KUMAR.T	I	/	/	/	/	/	/	/	a	a
72.	-	ROJA.M	I	/	/	/	/	/	/	/	/	/
73.	-	SAKTHI BALAJI.N	I	/	/	/	/	/	/	/	/	/
74.	-	SABARI NATHAN R	I	/	/	/	/	/	/	/	/	/
75.	-	SANGEETHA.M	I	/	/	/	/	/	/	/	/	/
76.	-	SANTHOSH KUMAR S	I	/	/	a	a	/	/	/	/	/
77.	-	SARAVANAN.M	I	/	/	/	/	/	/	/	/	/
78.	-	SELVIN.S	I	/	/	/	/	/	/	/	/	/
79.	-	SENTHIL KUMAR. P	I	/	/	/	/	/	/	/	a	a
80.	-	SRI JEYA SUNDARI S	I	/	/	/	/	/	/	/	/	/
81.	-	SRIMATHI.S	I	/	/	/	/	/	/	/	/	/
82.	-	SUBBU LAKSHMI M	I	/	/	/	/	/	/	/	/	/
83.	-	VASHILABANU R	I	a	a	/	/	/	/	/	/	/
84.	-	VIGNESH S	I	/	/	/	/	/	/	/	/	/
85.	-	VIKRAM RAJA.M	I	/	/	/	/	a	a	/	/	/
86.	-	VISHALAKSHI.S	I	/	/	/	/	/	/	/	/	/
87.	-	VIGNESH S	I	/	/	/	/	/	/	/	/	/
88.	-	VIKRAM RAJA.M	I	/	/	/	/	/	/	/	/	/
89.	-	VISHALAKSHI.S	I	/	/	a	a	/	/	/	/	/
90.	-	VITHYA.S	I	a	a	/	/	/	/	/	/	/

PROGRAM COORDINATOR

HoD/MBA

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

SAMPLE QUIZ QUESTION PAPER & ANSWER

1. SAP was founded in which year?
   A)1972
   B)1974
   C)1980
   D)1982

2. What does SAP stand for?
   A)Systems Applications and Products for Data Processing
   B)Systems Applications and Products for Data Warehousing
   C)Systems Applications and Products for Data Maintaining
   D)Systems Applications and Products for Data collecting

3. What is SAP Instance?
   A)Group of Database that make a system run
   B)Group of SAP instances that make a system run
   C)Group of Services that make a system run
   D)Group of O/S level Files that make a system run

4. What is a Valid Configuration for a R3 System?
   A)Many App servers and one database server
   B)No app server and one database server
   C)One app server and many database servers
   D)None of the above

5. What is online redo log ?
   A)Redo logs record all changes made to a database's data files
   B)An Oracle database requires at least two online redo log groups
   C)Each redo log group there is at least one online redo log member
   D)All of the above

6. Select the correct SQL command for generating control file ?
   A)ALTER DATABASE BACKUP CONTROL FILE TO TRACE.
   B)ALTER DATABASE CONTROL FILE TO TRACE
   C)RECOVER DATABASE USING BACKUP CONTROL FILE TO TRACE
   D)RECOVER DATABASE USING BACKUP CONTROL FILE



7. While importing Support Packages you need to do the following. Select the correct statement.

A)Update SPAM/SAINT update with latest version
B)Client 000 is not to be used for importing
C)Import must always be performed during peak operations
D)Aborted packages must be kept untouched

8. When performing stack upgrade you will get the stage SPAD and SPAU adjustments.

A)True
B)False

9. Select the correct statement with respect to SPAU and SPDD.

A)SPDD phase comes before SPAU
B)SPAU phase comes before SPDD
C)Both can be skipped when doing support packages
D)No standered step defined any step can come first

10. Select the correct statement with respect to SPAU and SPDD.

A)SPDD phase comes before SPAU
B)SPAU phase comes before SPDD
C)Both can be skipped when doing support packages
D)No standered step defined any step can come first

Answers

1)A 2)A 3)C 4)A 5)D 6)A 7)A 8)A 9)A 10)A

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

STUDENT FEEDBACK

Name of the Student : Selvin.S	**Year / Semester:** I / I
Name of the Program: SAP HR CETIFICATION	

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1	Course Content	✓			
2	Way of exposed new knowledge and practices		✓		
3	Examples Provided during this course	✓			
4	Course delivered by Resource Person	✓			
5	Time Management	✓			
6	Overall rating of this course	✓			
7	Any Other Comments / Suggestions				

PROGRAM COORDINATOR

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

STUDENT FEEDBACK

Name of the Student : Dhoosani. M	**Year / Semester:** II / III
Name of the Program: SAP HR CETIFICATION	

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1	Course Content	✓			
2	Way of exposed new knowledge and practices	✓			
3	Examples Provided during this course		✓		
4	Course delivered by Resource Person	✓			
5	Time Management	✓			
6	Overall rating of this course		✓		
7	Any Other Comments / Suggestions	–			

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

STUDENT FEEDBACK

Name of the Student : Parthiban A	**Year / Semester:** II / III
Name of the Program: SAP HR CETIFICATION	

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1	Course Content	✓			
2	Way of exposed new knowledge and practices	✓			
3	Examples Provided during this course	✓			
4	Course delivered by Resource Person	✓			
5	Time Management	✓			
6	Overall rating of this course	✓			
7	Any Other Comments / Suggestions	—			

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ISO 9001

DEPARTMENT OF MANAGEMENT STUDIES

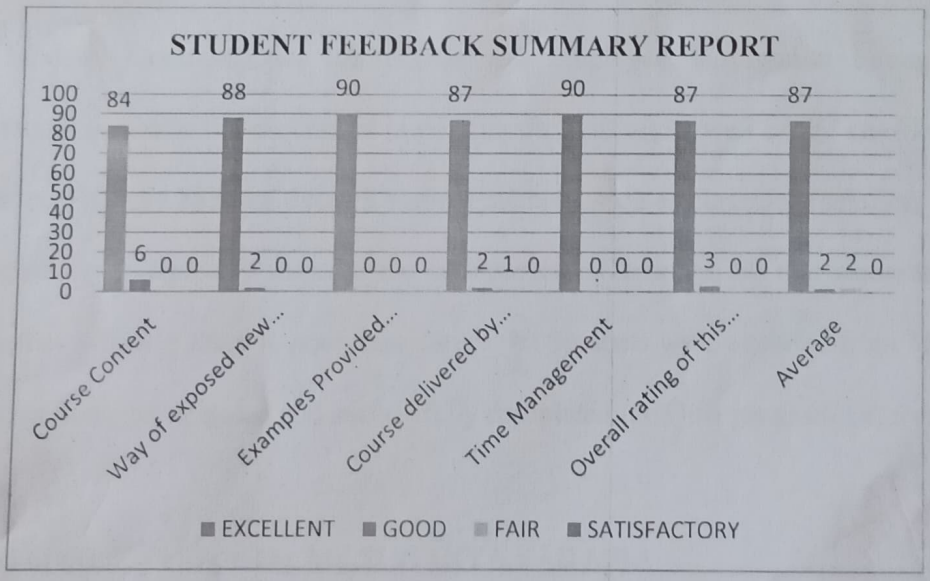
ADD ON COURSE - SAP HR CETIFICATION

STUDENT FEEDBACK SUMMARY REPORT

REGISTERED STUDENTS: 90

DATE: 01/12/2021

S. No	CONTENT	EXCELLENT	GOOD	FAIR	SATISFACTORY
1	Course Content	84	6	0	0
2	Way of exposed new knowledge and practices	88	2	0	0
3	Examples Provided during this course	90	0	0	0
4	Course delivered by Resource Person	87	2	1	0
5	Time Management	90	0	0	0
6	Overall rating of this course	87	3	0	0
Average		87	2	2	0



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ISO 9001

DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

SUMMARY REPORT

Department of Management Studies organized Add on Course on "**SAP HR CETIFICATION**" from 06/11/2021, 13/11/2021, 20/11/2021, & 27/11/2021 at our College Premises. Ms. LAKSHMI PRIYA J, II MBA has delivered welcome address.

Dr.J.Sundararajan, Principal felicitated the course. This four week course gives over view about **SAP HR CETIFICATION**. **Mr. S. Chandrasekar** had shared their knowledge about **SAP HR CETIFICATION**. Basically, in this module the candidate will learn about Enterprise Resource Planning and its Packages, Systems Applications and Product's Architecture and Modules, SAP Human Capital Management. The students will also be guided with Discussions on the topics covered. Students can learn how to get started with SAP, understand the HR Module, Organizational Information and Employee Information Entrepreneurship Development is basically the process of improving the skill set as well as the knowledge of the entrepreneurs. This can be done through various methods such as classroom sessions or training program specially designed to increase the entrepreneurial acumen. So that students enable to have skills that will help them to start their career. 90 Students were attended from MBA I & II year. Students those participated and successfully completed the Quiz program has awarded with certificates.

Vote of thanks delivered by Ms. SUGANYA S - II MBA.

PROGRAM COORDINATOR

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DEPARTMENT OF MANAGEMENT STUDIES

ADD ON COURSE - SAP HR CETIFICATION

COURSE MATERIAL

Material Link:

1. https://open.sap.com/
2. https://groups.google.com/g/mansursk14/c/VIojYMr7E3k
3. https://erproof.com/hr/sap-hr-training/
4. https://www.guru99.com/sap-training-hub.html
5. https://sapbrainsonline.com/

References:

[1] Henry Harvin - SAP Human Resource Management Course

[2] Heike Rawe (2008). SAP for Retail. ISBN 978-1-5922-9213-4

[3] Mahadevan, Neetha; Doerner, Stephan (19 September 2014). "SAP to Acquire Concur Technologies"

[4] Steve (24 January 2018). "SAP acquires recast.AI and invests in France" - Enterprise Times.

[5] Meyer, David (26 October 2017). "SAP Is Being Investigated by the U.S. Over a Major International Kickback Scandal"

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NPR COLLEGE OF ENGINEERING AND TECHNOLOGY

CERTIFICATE PROGRAM

ON

"SAP HR CERTIFICATION"

Certificate of participation

This is to certify that of GAYATHRI R (920820631013)-II-YEAR-MBA has attended the Certificate Program on "**SAP HR CERTIFICATION**" organised by Department Of **Management Studies**, NPR COLLEGE OF ENGINEERING AND TECHNOLOGY on 06.11.2021, 13.11. 2021, 20.11. 2021 & 27.11.2021.

PROGRAM CO-ORDINATOR

HOD

PRINCIPAL