

3.2.2 - Number of workshops/seminars conducted on

Research Methodology, Intellectual Property Rights (IPR)

and entrepreneurship during the year 2022-23

Sl. No.	Department	No. of events conducted	Page No.
1	Civil Engineering	13	02
2	Computer Science & Engineering	18	139
3	Electronics & Communication Engineering	08	201
4	Electrical & Electronics Engineering	11	250
5	Mechanical Engineering	21	306
6	Science & Humanities	04	385
7	Research & Development Section	05	415
8	Institution's Innovation Cell	12	455
9	IEEE	44	490
10	Entrepreneurship Development Cell	04	522
Total n	umber of events conducted	140)

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3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

S.No	Date	Details	Beneficiaries	Page No
1.	20.07.2022	Refresher Course on "Quantity Surveying"	21	02
2.	29.07.2022	Bridge Course on "Structural Design and Drawing"	21	16
3.	30.07.2022	Refresher Course on Units & Measurements	20	29
4.	01.08.2022	Certificate course on "Sketchup"	21	48
5.	04.08.2022	Bridge Couse on "Engineering Mechanics"	23	62
6.	11.08.2022	Bridge Couse on "Strength of Materials"	23	73
7.	01.08.2022	Certificate course on "Autocad" –III yr	20	84
8.	04.08.2022	Refresher Course on Basics in Surveying	23	99
9.	04.08.2022	Certificate Course on "AutoCADD" –II yr	23	114
10.	22.09.2022	Internal staff seminar on LIBS and PXRF validation for the removal of Pb by bio-CaCo3 nano particles from contaminated water.	08	122
11.	22.09.2022	Technical symposium CIVISTA-2022	54	127
12.	17.10.2022	Engineers Day Events 2022	54	134
13.	17.02.2023	Workshop on "Smart city- construction Perspective"	54	136



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2022-23 (ODD)

Date: 20.07.2022

CIRCULAR

This is to inform, that our department is going to conduct a **REFRESHER COURSE on QUANTITY SURVEYING** on this academic year 2022-2023, Final year students are requested to enroll their name to Ms.S.GAYATHRI AP/CIVIL on or before **30.07.2022**.

S. efal f: 20/7/22 Coordinator (Ms.S.GAYATHRI AP/CIVIL)

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Ban 2010712022 RC HOD/CIVIL (DR.R.SARAVANAN)

KCE/ DEPT. OF CIVIL ENGG



DEPARTMENT OF CIVIL ENGINEERING

REFRESHER COURSE

SUBJECT: QUANTITY SURVEYING

YEAR/SEMESTER: IV/VII

ACADEMIC YEAR: 2022-2023(ODD SEM)

Wit ist

PREPARED BY Ms.S.GAYATHRI, AP/ CIVIL

KCE/CIVIL/RFC/IVYR/QS

12/316 12/13

QUANTITY SURVEYING

QUANTITY ESTIMATION UNIT - I

Philosophy – Purpose – Methods of estimation – Types of estimates – Approximate estimates – Detailed estimate - Estimation of quantities for buildings. 6

UNIT II **RATE ANALYSIS AND COSTING**

Standard Data - Observed Data - Schedule of rates - Market rates - Standard Data for Man Hours and Machineries for common civil works - Rate Analysis for all Building works, canals, and Roads- Cost Estimates.

SPECIFICATIONS, REPORTS AND TENDERS UNIT III

Specifications - Detailed and general specifications - Constructions - Types of specifications -Principles for report preparation - report on estimate of residential building -Roads - TTT Act 2000 - Tender notices.

UNIT IV CONTRACTS

Contract - Types of contracts - Contract conditions - Contract for labour, material, design, construction - Drafting of contract documents based on IBRD / MORTH Standard bidding documents.

VALUATION UNIT V

Valuations- Capitalized value - Depreciation - Escalation - Valuation of land - Buildings -Calculation of Standard rent – Mortgage – Lease

4

TOTAL: 30 PERIODS

7

S. 401 f. 218/22 STAFF INGHARGE Ms.S.GAYATHRI

08/08/2022 HOD/CIVIL **Dr.R.SARAVANAN**

KCE/CIVIL/RFC/IVYR/QS

KCE/ DEPT. OF CIVIL ENGG





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DEPARTMENT OF CIVIL ENGINEERING

Sub. Name: Quantity surveying Staff Name: Ms.S.Gayathri

Branch/Year/Sem: B.E CIVIL/IV/VII Batch: 2019-2023 Academic Year: 2022-2023(ODD)

Topic No	Topic	Teaching Methodology	No. of Hours Required	Cumulative No. of periods
UNIT I	QUANTITY ESTIMATE			(04)
1.	Philosophy – Purpose – Methods of estimation	BB/PPT	1.4	1
2.	Types of estimates	BB/PPT	1	2
3.	Approximate estimates – Detailed estimate	BB/PPT	1. 1. 1. A.J.	3
4.	Estimation of quantities for buildings.	BB/PPT	1 - 1 - 1	4
LEARN At the e	ING OUTCOME and of unit, students should be able to Understand the concept of Estimate. Estimate the residential building.			
UNIT II	RATE ANALYSIS AND COSTING	이 제품 바람이 있어?		(06)
5.	Standard Data – Observed Data – Schedule of rates – Market rates	BB/PPT	2	6
6.	Standard Data for Man Hours and Machineries for common civil works	BB/PPT	2	8
7.	Rate Analysis for all Building works, canals, and Roads- Cost Estimates.	BB/PPT	2	10
LEARN At the e • l • H • H	ING OUTCOME nd of unit, students should be able to Jnderstand about the data collection. Know about schedule of rates. Analysis about rate analysis			
UNIT II	I SPECIFICATIONS, REPORTS AND TENDERS			(07)
8.	Specifications – Detailed and general specifications	BB/PPT	1.4	11
9.	Constructions- Types of specifications	BB/PPT	2	13
10.	Principles for report preparation	BB/PPT	() 2 1	a <u>1</u> 5
11.	Report on estimate of residential building	BB/PPT	1	16
		DD /DDT	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	THE WAY DO THE

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LEARNING OUTCOME

At the end of unit, students should be able to

- Outline the concept report preparation.
- Understand about specification.

a an airtigean				(07)
UNIT	V CONTRACTS	VIDEO	1	18
13.	Contract	VIDEO	1	19
14.	Types of contracts	VIDEO	Contracting of the	1940-12 DA
15.	conditions – Contract for labor, material, design, construction	BB/PPT	2	21
16.	Drafting of contract documents based on IBRD / MORTH Standard bidding documents.	ВВ/РРТ	3	24

LEARNING OUTCOME

At the end of unit, students should be able to

- Outline about contract system.
- Know the types of contract system.

UNIT V	VALUATION		Al and a second	(06)
17	Valuations- Capitalized value	VIDEO	1	25
17.	Depreciation - Escalation	BB/PPT	WA 1	26
10.	Valuation of land	BB/PPT	1	27
20	Buildings - Calculation of Standard rent	VIDEO	1	28
20.	Mortgage - Lesse	VIDEO	2.0	30
21.	Mortgage – Lease		1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	

LEARNING OUTCOME

At the end of unit, students should be able to

- Outline the concepts of valuation.
- Know the methods of valuation.
- Understand the terminology in valuation.
- Prepare the value of buildings and other structures.

COURSE OUTCOME

At the end of syllabus, students will be able to

- Estimate the quantities for buildings,
- Rate Analysis for all Building works, canals, and Roads and Cost Estimate.
- Understand types of specifications, principles for report preparation, tender notices types.
- Gain knowledge on types of contracts.
- Evaluate valuation for building and land.

S. eforf fiz 18 122 Prepared by Ms.S.GAYATHRI

HOD/CIVIL

KCE/CIVIL/RFC/IVYR/QS

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DEPARTMENT OF CIVIL ENGINEERING SPECIAL TIME TABLE (1.0.2022 - 6.0.2022,0DD SEM) D.E - CIVIL (Regulation 2017) - With Effect from 1.8.2022

lear: IV		Seme	ster: VII			Class	Room : 233	- na - X	465 1	N. Page	Block: I
Session	1	8 2	10.45	3	4	12.30	5	6	02.40	17	8
Day	09.15am 10.00am	10.00am	11.00 am/	11.00am 11.45am	11.45am	01.10 pm	01.10pm	01.55pm	02.50 pm	02.50pm 	03.35pm 04.20pm
MON	Orien	tation		C	c		COMM	LSKILL	1.1	B	C
TUE	R	FC	100	C	c	×	COMM	LSKILL		B	c
WED	RI	FC DE	AK	C	c	BREA	СОММ	SKILL	AK	B	с
THU	T&P(SS)	T&P(A)	BRE	c	c E	E	СОММ	SKILL	BRE	1) 1) 1)	c
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SAT	RI	°C		il all c	c 🥠		СОММ	SKILL		B	c

SUB CODE	NAME OF THE SUBJECT	CREDITS	NAME OF THE STAFF	DEPT	PERIODS/WEEK
4	VALU	JE ADDITION	INTIATIVES (VAI)	1.0000000000000000000000000000000000000	
Orientation	Orientation Program		Mr.K.Arun	CIVIL	Z
COMMISKILL	Communication Skill	다 집 나라는	Mr.D.Dinesh	ENGLISH	.12
BC	Bridge Course		Mr.R.Ramchandar	CIVIL	12
RFC	Refresher Course		Ms.S.Gayathri	CIVIL	08
T&P (A)	Training & Placement - Aptitude		Ms.P.Suganya	T&P	1
T&P(SS)	Training & Placement - Softskill		Dr.K.Sudhakar	T&P	1,000
CC	Certification Course - Sketchup		Mr.R.Chandrasekar	CIVIL	12
CLASS CO-O	RDINATOR	NAME OF	THE REPRESENTATIVES	100 - 2000 I I	ROLLNO

Mr.K.Arun	in B.Agalya M.Jayase		elan		01 08
	VALUE ADDITI	ON INTIATI	VES (VAI) - REGULAR HOL	JRS	
LIB/NET	Library / Internet	VAI	Mr.K.Arun	CIVIL	1

LIB/NET	Library / Internet	VAI	Mr.K.Arun	CIVIL	enda da la contra da
NPTEL	NPTEL Swayam Courses	VAI	Mr.K.Arun	CIVIL	
RC	Refresher Course	VAI	Ms.S.Gayathri	CIVIL	
T&P (A)	Training & Placement - Aptitude	VAI	Ms.P.Suganya	T&P	185 -
T&P(SS)	Training & Placement - Softskill	VAL	Dr.K.Sudhakar	T&P	1
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DEPT.

Batch:2019 - 2023

2092 1100

J.M 307 PRINCIPAL

Strength:20

11/24/2022



Advantages of the Tender process

- Most effective method of locking competitive rates.
- New technologies and options are received through open tender process.



o The term tender

formally means an invitation to

trade under the terms of offer.

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o A contract is

the term used

when 2 parties

have reached

agreement.

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ump Sum Contract	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
o Also named "Fixed Fee Cont	ract".
• With this kind of contract the contractor agrees to do- th specified project for a fixed	engineer and/or e described and price.
o Often used in engineering co	ontracts.
Suitable if the scope and sch project are appropriately de consulting engineer to estim	nedule of the efined – to allow the ate project costs.







ACADEMIC YEAR 2022-23 (ODD SEM) RFC-QUANTITY SURVEYING STUDENTS ENROLLMENT

IV YEAR CIVIL / VII SEM

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S.No.	Reg. Number	Student Name	Students Signature
1	821119103001	AGALYA B	B. Ngalyon
2	821119103002	ANBUMANI S	8. Antiumant
3	821119103003	ARUNKUMAR M	m Anuskuman
4	821119103004	ARUNPRASAD S	S. Annprosed
5	821119103005	DIVYA S	5. Divya
6	821119103006	JANANI T S	T.S. BH.
7	821119103007	JAYACHANDRAN N	N. John
8	821119103008	JAYASEELAN M	M: Jayola h.
9	821119103010	KURALARASAN R	Phundarres an
10	821119103011	MADHUMITHA R	P. Madlumillan
11	821119103012	MONIKA M	M. Marial
12	821119103013	PREMKUMAR J	J- premburga
13	821119103014	RENGESWARI R	of Lingesweeney_
14	821119103015	RUBIKA M	NdRits 1
15	821119103016	SANTHOSH S	Carling . Some has
16	821119103017	SATHYA P	2. 89 40-
17	821119103018	STALIN P	P. Split
18	821119103019	VIMAL R	A.Vint
19	821119103301	DANIEL NAVIS F	F. Darie Tous
20	821119103501	KARTHIKEYAN R	Pr halltleggen
21	821119103501	ABIRAMI	Stower

S. Joff: 3/8/22 SUBJECT INCHARGE (MS.S.GAYATHRI)

0310812022 HOD/CIVIL (DR.R.SARAVANAN)



ACADEMIC YEAR 2022-23 (ODD SEM) **RFC-QUANTITY SURVEYING Assessment Marks**

IV YEAR CIVIL / VII SEM

S.No.	Reg. Number	Student Name	Total Marks (50)
1	821119103001	AGALYA B	50
2	821119103002	ANBUMANI S	47
3	821119103003	ARUNKUMAR M	45
4	821119103004	ARUNPRASAD S	45
5	821119103005	DIVYA S	49
6	821119103006	JANANI T S	48
7	821119103007	JAYACHANDRAN N	46
8	821119103008	JAYASEELAN M	50
9	821119103010	KURALARASAN R	50
10	821119103011	MADHUMITHA R	50
11	821119103012	MONIKA M	50
12	821119103013	PREMKUMAR J	42
13	821119103014	RENGESWARI R	50
14	821119103015	RUBIKA M	50
15	821119103016	SANTHOSH S	48
16	821119103017	SATHYA P	50
17	821119103018	STALIN P	50
18	821119103019	VIMAL R	43
19	821119103301	DANIEL NAVIS F	44
20	821119103501	KARTHIKEYAN R	44
21	821119103501	ABIRAMI	47

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SUBJECT INCHARGE (MS.S.GAYATHRI)

HOD/CIVIL RSAD

(DR.R.SARAVANAN)





DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE OF APPRECIATION

This is to certify that Mr./Ms. <u>T.S.JANANI</u> of <u>IV YR</u> Civil Engineering has completed <u>REFRESHER COURSE</u> in the topic <u>QUANTITY SURVEYING</u> organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during

AUGUST 2022.

S. Moff.

Ms.S.GAYATHRI COURSE INCHARGE

Dr.R.SARAVANAN HOD/CIVIL

JIN

Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE OF APPRECIATION

This is to certify that Mr./Ms. <u>P.STALIN</u> of <u>IV YR</u> Civil Engineering has completed <u>REFRESHER COURSE</u> in the topic <u>QUANTITY SURVEYING</u> organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during

AUGUST 2022.

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MS.S.GAYATHRI COURSE INCHARGE

6. Jaron

Dr.R.SARAVANAN HOD/CIVIL

t J.M

Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL

KCE/DEPT. OF CIVIL ENGG







DEPARTMENT OF CIVIL ENGINEERING

BRIDGE COURSE

STRUCTURAL DESIGN AND DRAWING

YEAR/SEMESTER: IV/07

ACADEMIC YEAR : 2022-2023 (ODD SEM)

PREPARED BY

Mr.R.RAMCHANDAR, AP/CIVIL

KCE/CIVIL/BC/IV YR/SDD



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2022-23 (ODD)

Date: 22.07.2022

CIRCULAR

This is to inform, that our department is going to conduct a **bridge Course on STRUCTURAL DESIGN AND DRAWING** on this academic year 2022-2023 for final year, 7th semester students. All students are requested to enroll their name to Mr.R.Ramchandar AP/CIVIL on or before **29.07.2022**.

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Coordinator (Mr.R.Ramchandar AP/CIVIL)

20/07/2002 HOD/CIVIL

(DR.R.SARAVANAN)

SYLLABUS

STRUCTURAL DESIGN AND DRAWING

OBJECTIVES:

- The course aims at providing students with a solid background on the principles of structural engineering design.
- Students will be acquire the knowledge of liquid retaining structures, retaining wall and industrial structures.

UNIT -I RETAINING WALLS

Reinforced concrete Cantilever Retaining Walls-Horizontal Backfill with Surcharge-Design of Shear Key-Design and Drawing.

UNIT-II FLAT SLAB AND BRIDGES

Design of Flat Slabs with and without drops by Direct Design Method of IS code- Design and Drawing - IRC Specifications and Loading.

UNIT-III LIQUID STORAGE STRUCTURES

RCC Water Tanks - On ground - Design and Drawing

UNIT-IV INDUSTRIAL STRUCTURES

Structural steel Framing - Steel Roof Trusses

UNIT-V GIRDERS AND CONNECTIONS

Plate Girders - Behaviour of Components

TOTAL: 30 PERIODS

6

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COURSE OUTCOME

At the end of the course, the students will be able to

- Design and draw reinforced concrete Cantilever Retaining Walls
- Design and draw flat slab as per code provisions
- Design and draw reinforced concrete Water tanks
- Gain knowledge on Structural steel Framing
- Gain knowledge on Deign of Plate Girder

STAFF INCHARGE (Mr.R.RAMCHANDAR)

22/07/2020 HOD/CIVIL

(Dr.R.SARAVANAN)

KCE/CIVIL/BC /IV YR/SDD

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DEPARTMENT OF CIVIL ENGINEERING SPECIAL TIME TABLE (1.0.2022 - 6.8.2022, ODD SEM) B.E - CIVIL (Regulation 2017) • With Effect from 1.8.2022

Strength:20

atch:201	9 - 2023	Seme	ster: VII			Class	Room : 233				Block:
Seation		2	10.45	3	4	12.30	5	6	02.40 pm	1 7	8
Day	09.15am	10.00 am	11.00	11.00am	11.45am	01.10 pm	01.10pm 	01.55pm 02.40pm	02.50 pm	02.50pm - 03.35pm	03.35pm 04.20pm
MON	Orier	tation	1M	(CC Providence		COMM_SKILL			BC	
TUE	R	FC			cc	×	СОМ	1.SKILL		E	IC
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THU	T&P(SS)	T&P(A)	BRE		cc 👔	NCH	СОМ	A.SKILL	۲ ۲	i i i i i i i i i i i i i i i i i i i	BC
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SAT	F	FC		ν. Vi	cc		COM	M.SKILL	H-TANK		BC

SUBCODE	NAME OF THE SUBJECT	CREDITS	NAME OF THE STAFF	DEPT	PERIODS/WEEK
300 2002	VALU	EADDITION	INTIATIVES (VAI)		
Orientation	Orientation Program		Mr.K.Arun	CIVIL	2
COMM SKILL	Communication Skill	1) galaxy -	Mr.D.Dinesh	ENGLISH	.12
BC	Bridge Course	1 1 1	Mr.R.Ramchandar	CIVIL	12
PEC	Refresher Course	3 - V	Ms.S.Gayathri	CIVIL	08
TEP (A)	Training & Placement - Aptitude	1.4.	Ms.P.Suganya	T&P	1
TEP(SS)	Training & Placement - Softskill	6.00	Dr.K.Sudhakar	T&P	1
	Certification Course - Sketchup		Mr.R.Chandrasekar	CIVIL	12
CLASS CO-O	RDINATOR	NAME OF	THE REPRESENTATIVES		ROLL NO
		B.Agalya	01		

Mr.KArun

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VALUE ADDITION INTIATIVES (VAI) - REGULAR HOURS							
LIB/NET	Library / Internet	VAI	Mr.K.Arun	CIVIL	1		
NPTEL	NPTEL Swayam Courses	VAI	Mr.K.Arun	CIVIL	1		
RC	Refresher Course	VAL	Ms.S.Gayathri	CIVIL 1	2		
T&P (A)	Training & Placement - Aptitude	VAI	Ms.P.Suganya	T&P	1		
T&P(SS)	Training & Placement - Softskill	VAL	Dr.K.Sudhakar	T&P	1		

M.Jayaseelan

DEPT.

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REAR CONTRACTOR OF STREET, MARKET STREET, STRE

STRUCTURAL DESIGN AND DRAWING

CANTILEVER RETAINING WALL

Cantilever retaining wall:

Cantilever retaining walls are constructed of reinforced concrete. They consist of a relatively thin stem and a base slab. The base is also divided into two parts, the heel and toe. The heel is the part of the base under the backfill. The toe is the other part of the base.



Why use a cantilever wall instead of gravity?

Cantilevered retaining walls use much less material than a traditional gravity walls. The retaining wall operates like a beam, cantilevering the load to a large, fixed structural base, and converting horizontal pressures from behind the wall into vertical pressures on the ground below.

1/08/2022

1/08/2022

Maximum height for cantilever retaining wall:

Cantilever retaining walls are found best up to a height of **6m**. For greater heights earth pressure due to retained fill will be higher due to lever arm effect, higher moments are produced at base, which leads to higher section for stability design as well as structural design.

Design procedure :

- 1. Dimension Calculation
- 2. Design of stem
- 3. Stability calculation
- 4. Design of Toe slab
- 5. Design of heel slab
- 6. Check factor of safety against sliding
- 7. Design of shear key as per check
- 8. Reinforcement detailing



Kings College of Engineering, Punalkulam



1/08/2022

Step 5: Design of toe slab Find spacing g) Spacing = 1000*(ast/Ast) a) Find load h) Distribution reinforcement W= Area * Density Ast(dist) = (0.12% of b*d) a) Find moment i) Find spacing M= w*length Spacing = 1000*(ast/Ast) a) Deduction 1) Upward pressure 'abjh' Kings College of Engineering, Punalkulam 2) Upward pressure 'ghj' 3)Moment Deduction 'abjh' g) Find spacing 4)Moment Deduction 'ghj' Spacing = 1000*(ast/Ast) Distribution reinforcement Max. Service BM in heel slab h) d) M= M-Md Ast(dist) = (0.12% of b*d) Factored moment i) Find spacing e) Mu= M*1.5 Spacing = 1000*(ast/Ast) Find Ast f) Step 6: Factor of safety against sliding Mu= (0.87*fy*Ast*d) [(1-Ast*fy)/(b*d*fck)]

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ACADEMIC YEAR 2022-23 (ODD SEM) Bridge course - STRUCTURAL DESIGN AND DRAWING STUDENTS ENROLLMENT

IV YEAR CIVIL / 07 SEM

S.No.	Reg. Number	Student Name	Students Signature
1	821119103001	AGALYA B	B. Aquilya
2	821119103002	ANBUMANI S	S. Anbuman
3	821119103003	ARUNKUMAR M	m.Anunkuman
4	821119103004	ARUNPRASAD S	S. Annul.
5	821119103005	DIVYA S	S. DIVYA
6	821119103006	JANANI TS	T.S. Jund:
7	821119103007	JAYACHANDRAN N	N. Jayadardun
8	821119103008	JAYASEELAN M	M. Joyald
9	821119103010	KURALARASAN R	Phuralarasar
10	821119103011	MADHUMITHA R	R. Mapleury ithas
11	821119103012	MONIKA M	M. Nait
12	821119103013	PREMKUMAR J	J. grantino
13	821119103014	RENGESWARI R	of dingis way
14	821119103015	RUBIKA M	N. Dreff
15	821119103016	SANTHOSH S	5. Sarthard
16	821119103017	SATHYA P	Garey out
17	821119103018	STALIN P	P.Stin.
18	821119103019	VIMAL R	R.V.J.
19	821119103301	DANIEL NAVIS F	F. Dariel abus
20	821119103501	KARTHIKEYAN	R. Karthikeym.
21		ABIRAMI-S	2 Abirani

R. Romotordan SUBJECT INCHARGE

HOD/CIVIL



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEM) IV YEAR CIVIL / 07 SEM BRIDGE COURSE ON "STRUCTURAL DESIGN AND DRAWING" - ATTENDANCE REPORT

la casili		a la Nama	1/8/22	2/8/22	3/8/22	4/8/22	5/3/12	6/8/22	8/8/22	8/8/22	9/8/22	12/alzz	4/8/22	20/1/22	21/5/22	27/3/12	28/8/1
S.No.	Reg. Number	Student Name	7,8	7,8	7,8	7,8	7.8	7,8	1,2	3	1,23	1,2	1,2	1,2	1,2	1,2	1/2
1	821119103001	AGALYA B	1	1	1	1	1	1	1	1	1	/	/	1	/	1	1
2	821119103002	ANBUMANI S	A	1	1	1	1	1	1	1	A	1	1	/	/	1	1
3	821119103003	ARUNKUMAR M	1	1	1	1	1	1	1	1	A	1	1	/	1	1	1
4	821119103004	ARUNPRASAD S	A	1	1	1	1	1	1	/	1	1	1	1	1	1.	1
5	821119103005	DIVYA S	1	1	1	1	1	A	1	/	1		1	1	1,	,	1
6	821119103006	JANANI T S	1	1	1	1	1	1	1	/	/	1	1	1	1	1	1,
7	821119103007	JAYACHANDRAN N	1	1	1	1	1	1	1	/	A	1	1	1,	1,	1	1
8	821119103008	JAYASEELAN M	1	1	1	1	1	1	1	A	1	/	1	1	/	1	1
9	821119103010	KURALARASAN R	1	1	1	1	1	1	1	/	1	1	1	1	1	1	1
10	821119103011	MADHUMITHA R	1	1	1	1	1	1	1	A	1	1.	1	1	1	1	1
11	821119103012	MONIKA M	1	1	1	1	/	1	1	/	1/	1	1	1	1	1	A
12	821119103013	PREMKUMAR J	1	1	A	1	1	1	1	1	1	1	1		M	1	1
13	821119103014	RENGESWARI R	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1
14	821119103015	RUBIKA M	1	1.	1	/	1	A	1	1	1	1	A	1	1	1	1
15	821119103016	SANTHOSH S	A	1	1	1	1	1	1	1	1	1	1	1,	1	1	1
16	821119103017	SATHYA P	1	1	1	/	1	/	/	1	/	1	1	1.	1	1	1
17	821119103018	STALIN P	1	1	1	1	A	1	/	/	1			1	1		F
18	821119103019	VIMAL R	A	1	1	1	/	1	1	1	P	1	1	+	+ ;	1	+
19	821119103301	DANIEL NAVIS F	A	1	1	1	1	A	A	A	/	1	1,	1	+ /	1	
20	821119103501	KARTHIKEYAN R	1	1	1	1	1	1	1		/	/		/	+	1	1;
21		ABIRAMI S	1	1	1	1	1	1	1	1	1	1	1	-		21	21
	TOTAL S	TUDENTS	21	21	21	21	21	21	21	21	21	21	21	2	21	00	15
	PRE	SENT	16	21	20	21	20	17	20	18	17	21	20	21	20	20	
	AB	SENT	.5	-	0	-	01	04	10	03	04	-	0	-	01	4	A
	COURSE INC	CHARGE SIGN	A	A	A	A	At	A	A	AB	t	178	4	1	170		- 9



ACADEMIC YEAR 2022-23 (ODD SEM) BRIDGE COURSE ON "STRUCTURAL DESIGN AND DRAWING" ASSESSMENT MARKS

IV YEAR CIVIL / 07 SEM

S.No.	Reg. Number	Student Name	Total Marks (50)
1	921110103001	AGALYA B	46
2	021119103001	ANBLIMANI S	36
2	821119103002	ARUNKUMAR M	37
3	821119103003	ARUNPRASAD S	38
4	821119103004	DIVYA S	45
5	821119103006	IANANIT S	40
7	821119103000	IAYACHANDRAN N	36
9	821119103008	IAYASEELAN M	42
0 Q	821119103010	KURALARASAN R	45
10	821119103011	MADHUMITHA R	44
11	821119103012	MONIKA M	40
12	821119103013	PREMKUMAR J	38
13	821119103014	RENGESWARI R	42
14	821119103015	RUBIKA M	40
15	821119103016	SANTHOSH S	38
16	821119103017	SATHYA P	44
17	821119103018	STALIN P	40
18	821119103019	VIMAL R	40
19	821119103301	DANIEL NAVIS F	30
20	821119103501	KARTHIKEYAN R	30
21		ABIRAMI	45

30/8/22 K.

COURSE INCHARGE (Mr.R.RAMCHANDAR)

30/08/2022

HOD/CIVIL (DR.R.SARAVANAN)

A NAAC ACCREDITED INSTITUTION KONGE COLLEGE OF ENGINEERING Recognised by UGC 2(f) & 12(B) (Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai) Punalkulam, Near Thanjavur, Pudukkottai Dt - 613303

DEPARTMENT OF CIVIL ENGINEERING CERTIFICATE OF PARTICIPATION

This is to certify that Mr./Ms. <u>S.DIVYA</u> of <u>IV YR</u> Civil Engineering has completed <u>BRIDGE COURSE</u> in the topic <u>STRUCTURAL DESIGN AND DRAWING</u> organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during <u>AUGUST 2022</u>.

R. Rombardovi

Mr.R.RAMCHANDAR COURSE INCHARGE Dr.R.SARAVANAN HOD/CIVIL

Baron

Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL

JIM

A NAAC ACCREDITED INSTITUTION **KONSE COLLEGE OF ENGINEERING** Recognised by UGC 2(f) & 12(B) (Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai) Punalkulam, Near Thanjavur, Pudukkottai DL - 613303

DEPARTMENT OF CIVIL ENGINEERING CERTIFICATE OF PARTICIPATION

This is to certify that Mr./Ms. <u>S.SANTHOSH</u> of <u>IV YR</u> Civil Engineering has completed <u>BRIDGE COURSE</u> in the topic <u>STRUCTURAL DESIGN AND DRAWING</u> organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during <u>AUGUST 2022</u>.

R. Ramchandard

Mr.R.RAMCHANDAR COURSE INCHARGE Dr.R.SARAVANAN HOD/CIVIL

Evaron

J.M. J.ARPUTHA VIJAYA SELVI PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING

REFRESHER COURSE

UNITS AND MEASUREMENTS

YEAR/SEMESTER: III/05

ACADEMIC YEAR: 2022-2023(ODD SEM)

PREPARED BY

Mr.R.RAMCHANDAR/ AP /CIVIL

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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2022-23 (ODD)

Date: 20.07.2022

CIRCULAR

This is to inform, that our department is going to conduct a **Refresher Course on UNITS AND MEASUREMENTS** on this academic year 2022-2023, interested students are requested to enroll their name to Mr.R.Ramchandar AP/CIVIL on or before **30.07.2022**.

Coordinator (Mr.R.Ramchandar AP/CIVIL)

20/07/2022

HOD/CIVIL (DR.R.SARAVANAN)

SYLLABUS

OBJECTIVES:

- To introduce the fundamentals of units
- To know about the basic measurements
- To know about the imperial units

UNIT 1 - FUNDAMENTALS OF UNITS

Introduction - Systems of units - Traditional systems - Metric systems - Natural systems

UNIT II - TYPES OF UNITS

Metric System of units - The imperial system of units - US customary units - Basic standard quantity.

UNIT III - UNIT OF MEASUREMENT LIST

Length - Mass - capacity- Time - Temperature - Conversion of the units of measurement

UNIT IV - LENGTH, MASS & VOLUME

Imperial Units of Measurement - Units of Measurement for Length - Units of Measurement for Mass - Units of Measurement for Volume

UNIT V - TEMPERATURE, TIME & CHART

Units of Measurement for Temperature - Units of Measurement of Time - Units of Measurement Chart - Comparison of metric and imperial

TOTAL: 30 PERIODS

OUTCOMES:

At the end of the course the student will be able to understand

- Understand types of units and fundamentals. .
- Gain knowledge on system of units .
- Measuring using different system of units. .
- Gain knowledge on units and measurements
- The use of various units.

STAFF INCHARGE (Mr.R.RAMCHANDAR)

071 HOD/CIVIL (Dr.R.SARAVANAN)

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6

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KCE/DEPT. OF CIVIL

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DEPARTMENT OF CIVIL ENGINEERING **COURSE PLAN**

: UNITS AND MEASUREMENTS Sub Name : Mr.R.Ramchandar **Staff Name**

Branch / Year / Sem	: B.E Civil / 11/05
Batch	: 2019-2023
Academic Year	: 2022-23(ODD)
Iteano	

Topic No	Topic	Teaching Methodology	No. of Hours Required	Cumulative No. of periods
	FUNDAMENTALS OF UNITS			(6)
UNITI	FUNDAMENTALS OF CHILD	BB	2	2
1	Introduction - Systems of units		2	4
2	Traditional systems	РРТ	2	
3	Metric systems - Natural systems	BB	2	(6)
UNIT II	TYPES OF UNITS			(0)
	Motric System of units	BB	1	1
5	The imperial system of units	BB	2	9
6	US customary units	BB/PPT	2	11
7	Basic standard quantity.	BB	1	12
UNITI	UNIT OF MEASUREMENT LIS	T	T 1	13
8	Length	BB	2	15
9	Mass - capacity		1	16
10	Time	BB/PF1	1	17
11	Temperature	BB	1	18
12	Conversion of the units of measurement	ВВ	1	(6)
UNIT	IV LENGTH, MASS & VOLUME	DD (DD)	2	19
13	Imperial Units of Measurement	RR\bb1	2	
14	Units of Measurement for Length	BB	2	21
15	Units of Measurement for Mass	BB/PPT	1	22
16	Units of Measurement for Volume	BB	1	23
10		HADT		(6
UNIT	V TEMPERATURE, TIME & CI	RR /DDT	1	24
17	Units of Measurement for Temperature	DD/FF1		26
18	Units of Measurement of Time	BB	2	20

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		and the second		
19	Units of Measurement Chart	BB/PPT	2	28
20	Comparison of metric and imperial	BB	2	30

COURSE OUTCOME

At the end of the course the student will be able to understand

- Understand types of units and fundamentals.
- Gain knowledge on system of units
- Measuring using different system of units.
- Gain knowledge on units and measurements
- The use of various units.

R.P

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Prepared by (Mr.R.RAMCHANDAR)

2022 22/07

Verified By HOD/CIVIL

KCE/CIVIL/ RFC/IIIYR/UM

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Strength:20

DEPARTMENT OF CIVIL ENGINEERING SPECIAL TIME TABLE (1.8.2022 - 6.8.2022,ODD SEM) B.E - CIVIL (Regulation 2017) - With Effect from 1.8.2022

Batch:2020 - 2024

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icar: III		Seme	ster: v			Class R	oom:235				Block: I
Session	1	2	10.45 am	3	4	12.30 pm	5	6	02.40	7	8
Day	09.15am 10.00am	10.00am 	11.00 am	11.00am - 11.45am	11.45am 12.30pm	01.10 pm	01.10pm 01.55pm	01.55pm	02.50 pm	02.50pm	03.35pm
MON	ORIEN	TATION	1	COMM	COMM.SKILL		I	BC		CC	
TUE	R	FC	一個	СОММ	SKILL	X	BC			сс	
WED	R	FC	AK	T&P(A)	T&P(SS)	BREA	E	c	X	C	с
THU	RI	°C	BRE	СОММ	SKILL	CH E	E	C	BREA	c	с
FRI	RFC			СОММ	SKILL	TUN	B	C		/ c	c
SAT	RI	°C		СОММ	SKILL		B	c	161	C	c

SUB CODE	NAME OF THE SUBJECT	CREDITS	NAME OF THE STAFF	DEPT	PERIODS/WEEK
N	VALU	EADDITION	INTIATIVES (VAI)		
Orientation	Orientation Program		Mr.R.Sundharam	CIVIL	2
BC	Bridge Course		Ms.K.Elakkiya	CIVIL	12
COMM_SKILL	Communication Skill	-	Mr.J.Radhakrishnan	ENGLISH	10
RFC	Refresher Course		Mr.R.Ramchandar	CIVIL	10
T&P (A)	Training & Placement - Aptitude		Dr.K.Sudhakar	T&P	1
T&P(SS)	Training & Placement - Softskill		Mr.B.Suresh Babu	T&P	1
cc	Certification Course - AutoCADD	-	Mr.R.Chandrasekar	CIVIL	12
CLASS CO-OI	RDINATOR	NAMEOF	THE REPRESENTATIVES		Pott vo

CLASS CO-ORDINATOR	NAME OF THE REPRESENTATIVES	ROLL NO
Mr.R.Sundharam	G.Bharath	01
	S.Sneha	13

	VALUE ADDITIO	N INTIATI	VES (VAI) - REGULAR HOURS		all age of the
CC	Certification Course - AutoCADD	VAI	Mr.R.Chandrasekar	CIVIL.	
GATE / CE	GATE / Competitive Exam	VAI	Ms.D.Shrividhya	CIVIL	2
LIB/NET	Library / Internet	VAI	Mr.R.Sundharam	CIVIL	
NPTEL	NPTEL Swayam Courses	VAI	Mr.K.Arun	CIVIL	1
T&P (A)	Training & Placement - Aptitude	VAI	Dr.K.Sudhakar	T&P	1
T&P(SS)	Training & Placement - Softskill	VAI	Mr.B.Suresh Babu	T&P	1
VAC	Value Added Course on Urban Planning	VAI	Mr.R.Chandrasekar	CIVIL	3

DEPT. TTC

30/07 20022 HOD

30/7/2022 J.M

PRINCIPAL

UNITS AND MEASUREMENT

INTRODUCTION

Measurement of any physical quantity involves comparison with a certain basic, arbitrarily chosen, internationally accepted reference standard called **unit**. The result of a measurement of a physical quantity is expressed by a number (or numerical measure) accompanied by a unit. Although the number of physical quantities appears to be very large, we need only a limited number of units for expressing all the physical quantities, since they are interrelated with one another. The units for the fundamental or base quantities are called **fundamental or base units**. The units of all other physical quantities can be expressed as combinations of the base units. Such units obtained for the derived quantities are called **derived units**. A complete set of these units, both the base units and derived units, is known as the **system of units**.

THE INTERNATIONAL SYSTEM OF UNITS

In earlier time scientists of different countries were using different systems of units for measurement. Three such systems, the CGS, the FPS (or British) system and the MKS system were in use extensively till recently. The base units for length, mass and time in these systems were as follows :

- In CGS system they were centimetre, gram and second respectively.
- In FPS system they were foot, pound and second respectively.
- In MKS system they were metre, kilogram and second respectively.

The system of units which is at present internationally accepted for measurement is the Système Internationale d' Unites (French for International System of Units), abbreviated as SI. The SI, with standard scheme of symbols, units and abbreviations, was developed and recommended by General Conference on Weights and Measures in 1971 for international usage in scientific, technical, industrial and commercial work. Because SI units used decimal system, conversions within the system are quite simple and convenient. We shall follow the SI units in this book. In SI, there are seven base units as given. Besides the seven base units, there are two more units that are defined for (a) plane angle d θ as the ratio of length of arc ds to the radius r and (b) solid angle d Ω as the ratio of the intercepted area dA of the spherical surface, described about the apex O as the centre, to the square of its radius r, as shown in Fig. (a) and (b) respectively. The unit for plane angle is radian with the symbol rad and the unit for the solid angle is steradian with the symbol rad.


SI Base Quantities and Units

Base	SI Units							
quantity	Name	Symbol	Definition					
Length	metre	m	The metre is the length of the path travelled by light in vacuum during a time interval of 1/299,792,458 of a second. (1983)					
Mass	kilogram	kg	The kilogram is equal to the mass of the international prototype of the kilogram (a platinum-iridium alloy cylinder) kept at international Bureau of Weights and Measures, at Sevres, near Paris, France. (1889)					
Time	second	s 8	The second is the duration of 9,192,631,770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the cesium-133 atom. (1967)					
Electric current	ampere	X	The ampere is that constant current which, if maintained in two straight parallel conductors of infinite length, of negligible circular cross-section, and placed 1 metre apart in vacuum, would produce between these conductors a force equal to 2×10^{-7} newton per metre of length. (1948)					
Thermo dynamic Temperature	kelvin	K	The kelvin, is the fraction 1/273.16 of the thermodynamic temperature of the triple point of water. (1967)					
Amount of substance	mole	mol	The mole is the amount of substance of a system, which contains as many elementary entities as there are atoms in 0.012 kilogram of carbon - 12. (1971)					
Luminous intensity	candela	cd	The candela is the luminous intensity, in a given direction, of a source that emits monochromatic radiation of frequency 540×10^{12} hertz and that has a radiant intensity in that direction of 1/683 watt per steradian. (1979)					

Some units retained for general use (Though outside SI)

Name	Symbol	Value in SI Unit
minute	min	60 s
hour	h	60 min = 3600 s
day	d	24 h = 86400 s
vear	у	$365.25 d = 3.156 \times 10^7 s$
degree	e	$1^{\circ} = (\pi / 180)$ rad
litre	L	$1 \mathrm{dm}^3 = 10^{-3} \mathrm{m}^3$
tonne	t	10 ³ kg
carat	c	200 mg
bar	bar	$0.1 \text{ MPa} = 10^{5} \text{ Pa}$
curie	Ci	$3.7 \times 10^{10} \mathrm{s}^{-1}$
roentgen	R	2.58 × 10 ⁻⁴ C/kg
quintal	q	100 kg
barn	b	$100 \text{ fm}^2 = 10^{-28} \text{ m}^2$
are	а	$1 \text{ dam}^2 = 10^2 \text{ m}^2$
hectare	ha	$1 \text{ hm}^2 = 10^4 \text{ m}^2$
standard atmospheric pressure	atm	101325 Pa = 1.013 × 10 ⁹ Pa

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Physical Quantity	SI Unit of Measurement	Symbol
Length	Meter	m
Mass	Kilogram	kg
Temperature	Kelvin	К
Time	Second	S
Capacity/Volume	Litre	L
Current	Ampere	Α
Amount of Substance	Mole	mol

Unit of Measurement List

The table above shows the SI units but we use other units as well to measure the given physical quantities. Let us list some of the commonly used to units of measurement below:

- Length kilometer, meter, centimeter, millimeter
- Mass kilogram, gram, milligram
- Capacity kilolitre, litre, milliliter, centilitre
- Time Minute, Hour, Second, Days, Week, Month, Year
- Temperature Kelvin, Celsius, Fahrenheit

All the above units for a specific physical quantity can be expressed in terms of each other using the conversion of the units of measurement.

Imperial Units of Measurement

Imperial units of measurement are the units from the British Imperial System (System of Weights and Measures used in Great Britain). As we discussed the metric units, the imperial system uses different units to measure the physical quantities like length, mass, volume, and area. Let us go through imperial units of measurement in the table below:

Traditional systems

Historically many of the systems of measurement which had been in use were to some extent based on the dimensions of the human body. As a result, units of measure could vary not only from location to location but from person to person.

Metric systems

Metric systems of units have evolved since the adoption of the original metric system in France in 1791. The current international standard metric system is the International System of Units (abbreviated to SI). An important feature of modern systems is standardization. Each unit has a universally recognized size.

Both the imperial units and US customary units derive from earlier English units. Imperial units were mostly used in the British Commonwealth and the former British Empire. US customary units are still the main system of measurement used in the United States outside of science, medicine, many sectors of industry, and some of government and military, and despite Congress having legally authorised metric measure on 28 July 1866.^[7] Some steps towards US metrication have been made, particularly the redefinition of basic US and imperial units to derive exactly from SI units. Since the international yard and pound agreement of 1959 the US and imperial inch is now defined as exactly 0.0254 m, and the US and imperial avoirdupois pound is now defined as exactly 0.45359237 kg.

Natural systems

While the above systems of units are based on arbitrary unit values, formalised as standards, some unit values occur naturally in science. Systems of units based on these are called natural units. Similar to natural units, atomic units (au) are a convenient system of units of measurement used in atomic physics.

Also a great number of unusual and non-standard units may be encountered. These may include the solar mass $(2 \times 10^{30} \text{ kg})$, the megaton (the energy released by detonating one million tons of trinitrotoluene, TNT) and the electronvolt.

Metric Units of Measurement

The <u>metric units of measurement</u> in mathematics are standard units defined to measure length, height, weight, area, and capacity (volume). It is based on the <u>decimal</u> system as it includes numbers in powers of 10. The modern form of the metric units are called the SI units and are accepted worldwide. Each unit has a universally recognized size. Let us see some of the commonly used SI units in the table below.

SI Units of Measurement

SI units of measurement are units of the international system of units, also known as the metric system which is used across the world and each unit has a standard measure.

Physical Quantity	Imperial Units
Length	foot, inch, yard, mile
Mass	ounce, pound, stone, ton
Capacity	gallon, pint, quart, fluid ounce

Note: The imperial units of measurement can be expressed in terms of the metric units and viceversa as they are standard units.

Units of Measurement for Length

Length is a physical quantity that gives the measure of how long an object is. There are different aspects of measuring length such as distance covered, height, etc. Units of measurement for all the physical quantities belong to the same category. Each unit of measuring length can be expressed in terms of each other using the conversion method as these units have a standard value. Let us see the commonly used metric and imperial units of measurement of length below along with their relations with one another.

System	Units of Measurement	Conversion		
	Centimeter (cm)	1 cm = 10 mm		
	Meter (m)	1 m = 100 cm		
Metric Units	Kilometer (km)	1 km = 1000 m		
	Millimeter (mm)	1 mm = 0.001 m		
	Foot (feet)	1 foot = 12 inch		
	Inches (inch)	1 inch = 0.83333 feet		
Imperial Units	Mile	1 mile = 5280 feet		
	Yard	1 yard = 3 feet = 36 inch		

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Units of Measurement for Mass

Mass is a physical quantity that tells how heavy or light an object is. It is also commonly called the weight of the object. The SI unit of mass is the kilogram (kg). The table below shows the different and commonly used units of measuring mass in the metric and imperial systems along with their conversions:

System	Units of Measurement	Conversion		
	Milligram (mg)	1 mg = 0.001 g		
Metric Units	Gram (g)	1 g = 1000 mg		
	Kilogram (kg)	1 kg = 1000 g		
	Ounce (oz)	1 oz = 0.0625 lb		
Imperial Units	Pound (Ib)	11b = 16 oz		
	Ton	1 ton = 2000 lbs		

Please note that there are other units of measurement of mass that are used such as tonnes, stone, microgram imperial ton, etc. The above table shows the commonly used units only.

Units of Measurement for Volume

Volume, also known as the capacity, gives the amount of space that an object occupies or the maximum space the object has. The SI unit of volume is litre (L). We can also express the units of measuring volume in terms of cubic length units such as centimeter cube (cm³), meter cube (m³), etc. Let us go through some of the commonly used units of measurement of volume in the table below:

System	Units of Measurement	Conversion			
	Millilitre (ml)	1 m = 0.001 l			
	Litre (I)	11 = 1000 ml			
Metric Units	Kilolitre (kl)	1 kl = 1000 l			
	Cubic Centimeter (cm ³)	11 = 1000 cm ³			
	Fluid ounce (fl. oz.)	1 fl. oz. = 1/20 pt			
Imperial Units	Gallon (gal)	1gal = 128 fl. oz.			
	Pint (pt)	1 pt = 16 fl. oz.			

Units of Measurement for Temperature

Temperature is a physical quantity that describes how hot or cold an object or the weather is. We have mainly three units of measurement of temperature, Celsius, Kelvin, and Fahrenheit. Kelvin is the SI unit of measuring temperature. The table given below shows the different units of measuring temperature and their conversion.

Units of Measurement of Time

Time is a measure that tells about the time taken to complete a process, travel from one point to another. It is an ongoing process of continuous events. We measure time in three units, seconds, minutes, hours, days, weeks, months, and years. The table given below describes these units and their relation with each other.

Units of Measurement Chart

Now that we have discussed the different units of measurement used across different systems of measurement, let us summarize the units in a chart below for a quick review:

Quantity	Units of Measurement
Length	Meter, Kilometer, Centimeter, Millimeter, Feet, Yard, Inch, Mile
Mass	Gram, Milligram, Kilogram, Ounce, Pound, Ton
Volume	Litre, Millilitre, Kilolitre, Gallon, Pint, Fluid Ounce
Time	Second, Minute, Hour, Day, Month, Week, Year
Temperature	Kelvin, Celsius, Fahrenheit,

Important Notes on Units of Measurement

- The units of measurement are the units that are used to represent physical quantities like length, mass, temperature, current, area, volume, intensity, etc.
- We use two systems of units of measurement metric and imperial.
- In the early days, hand span, arm span, and foot span were used as units of measurement.

Example 1: What is the unit 'acre' used for? Express one acre in terms of sq. yards and sq. feet.

Solution: An acre is a unit of measurement of area. Earlier, it was used to measure the size of the field. One acre is equal to 43,560 square feet. We can also express acre in terms of square yards.

1 acre = 43,560 square feet = 4840 square yards.

Answer: 1 acre = 43,560 square feet = 4840 square yards.

Example 2: Convert 5 kilograms in an imperial unit of measurement pound.

Solution: We know that 1 kilogram is approximately equal to 2.2 pounds. So, 5 kg in pounds is given by,

 $5 \text{ kg} = 5 \times 2.2 \text{ pounds}$

= 11 pounds

Answer:5kg is equal to 11 pounds.

Example 3: How many feet are there in 3 miles?

Solution: We know that 1 mile is equal to 5280 feet. So, 3 miles in feet are given by,

 $3 \text{ miles} = 3 \times 5280 \text{ feet}$

= 15,840 feet

Answer: 3 miles is equal to 15, 840 feet.

43







DEPARTMENT OF CIVIL ENGINEERING

STUDENTS ENROLMENT

The following students were interested in enrolling their name in Refresher Course – UNITS AND MEASUREMENTS for the academic year 2022-2023.

S. No	Reg. No	Name of the Student	Signature of the Student
1	821120103001	BHARATH G	63 horette
2	821120103002	DHARUN KUMAR K	X. Dhasumatures.
3	821120103003	HARIHARAN B	B. Have
4	821120103004	JAILAKSHMAN S	5-Jailakshonan
5	821120103005	JENOVA JASMINE N	Junfour. N
6	821120103006	KATHIRESWARI P	Inter of
7	821120103007	KIRUTHIKASRI J	J'amtricass.
8	821120103008	MAHARISH H	Al. flor.
9	821120103009	MOHAMED FAISAL B	Bulle
10	821120103010	NIKESHA J	J. Niwering.
11	821120103013	SNEHA S	Shitherf. 5
12	821120103014	SRIRAM M C	M.C.S.A
13	821120103015	VISHNU R	R. V1285
14	821120103301	AKARAMUTHALVAN D	D. Alf
15	821120103302	ATHITHIYAN E	E. otherspan.
16	821120103303	DULASIRAM S	Sand
17	821120103305	HARI HARAN U	V. Kuhrt
18	821120103306	JOSHUVA M	7.52h
19	821120103307	KRISHNA KANTH N	pipenas
20	821120103308	MADHAVAN S	1. Amalhi

Total Number of students enrolled: 20

8122

Signature of Course Incharge

12022 HOD/CI



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEM)

III YEAR CIVIL / V SEM

REFRESHER COURSE ON "UNITS AND MEASUREMENTS" - ATTENDANCE REPORT

SNO	SNo Reg Number	Student Name	2/3/22	3/8/22	4/8/22	5/3/22	6/8/22	8/8/22	5/5/22	9/8/22	9/8/22	13/8/22	14/8/22	21/3/12	27/8/0	2 8/9/22	28/8/22
5.140.	Reg. Wullber	Student Manie	1,2	1,2	1,2	1,2	1,2	4,5	6	4,5	6	6,7	4,5,6	5,6	6,7,8	5,6	7,8
1	821120103001	BHARATH G	1	1	(1	1	A	1	1	/	1	1	1	1	1	1
2	821120103002	DHARUN KUMAR K	A	1	1	1	1	1	1	1	1	1	A	1	1	1	
3	821120103003	HARIHARAN B	1	1	1	1	A	1	1	1	1	1	1	/	1	1	/
4	821120103004	JAILAKSHMAN S	1	1	1	1	1	1	1	1	1	1	A	/	1	1	1
5	821120103005	JENOVA JASMINE N	A	1	1	1	1	1	1	1	1	1	1	/	1	1	1
6	821120103006	KATHIRESWARI P	A	1	1	1	1	1	1	1	1	1	1	/	1	1	/
7	821120103007	KIRUTHIKASRI J	1	1	1	1	1	1	A	1	1	1	1	/	1	1	/
8	821120103008	MAHARISH H	1	1	1	1	A	1	1	1	1	1	1	/	A	1	
9	821120103009	MOHAMED FAISAL B	1	A	1	1	1	/	1	A	A	1	1	1	1	1	1
10	821120103010	NIKESHA J	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1
11	821120103013	SNEHA S	1	1	1	1	1	1	r	1	1	1	1	1	(1	/
12	821120103014	SRIRAM M C	1	1	1	1	1	1	1	1	1	1	1	1	1	1	/
13	821120103015	VISHNU R	A	1	1	1	1	1	1	A	A	/	1	/	1	1	A
14	821120103301	AKARAMUTHALVAN	1	1	1	1	1	1	1	1	/	1	A	A	r	1	1
15	821120103302	ATHITHIYAN E	1	/	1	A	1	1	1	A	1	1	1	1	1	1	/
16	821120103303	DULASIRAM S	1	1	1	1	A	1	1	1	1	1	A	1	r	1	1
17	821120103305	HARI HARAN U	1	/	r	1	1	1	1	1	/	1	1	1	A	1	A
18	821120103306	IOSHUVA M	,	1	1	1	1	1	A	1	1	1	1	/	A	1	1
19	821120103307	KRISHNA KANTH N		1	1	1	1	A	A	. 1	1	1	1	1	A	1	1
20	821120103308	MADHAVAN S	1	1	1	A	1	1	1	1	1	A	1	/	1	1	1
	TOTAL STUDENTS		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
	PR	ESENT	16	19	20	17	17	18	17	- 17	18	19	16	19	16	20	18
	AB	SENT	04	01	-	03	63	02	03	03	02	0)	04	01	ol	+ -	02
1	COURSE IN	CHARGE SIGN	et.	At	A	A	44	A	A	- #	- #	- #	- 7	+	A	A	×



ACADEMIC YEAR 2022-23 (ODD SEM) RFC-UNITS AND MEASUREMENTS Assessment Marks

III YEAR CIVIL / 05 SEM

S.No.	Reg. Number	Student Name	Total Marks (50)				
1	821120103001	BHARATH G	45				
2	821120103002	DHARUN KUMAR K	38				
3	821120103003	HARIHARAN B	40				
4	821120103004	JAILAKSHMAN S	42				
5	821120103005	JENOVA JASMINE N	45				
6	821120103006	KATHIRESWARI P	46				
7	821120103007	KIRUTHIKASRI J	42				
8	821120103008	MAHARISH H	45				
9	821120103009	MOHAMED FAISAL B	40				
10	821120103010	NIKESHA J	42				
11	821120103013	SNEHA S	48				
12	821120103014	SRIRAM M C	42				
13	821120103015	VISHNU R	40				
14	821120103301	AKARAMUTHALVAN D	38				
15	821120103302	ATHITHIYAN E	36				
16	821120103303	DULASIRAM S	40				
17	821120103305	HARI HARAN U	40				
18	821120103306	JOSHUVA M	44				
19	821120103307	KRISHNA KANTH N	38				
20	821120103308	MADHAVAN S	40				

822

SUBJECT INCHARGE (Mr.R.RAMCHANDAR)

znan 30/08/2022 bar HOD/CIVIL (DR.R.SARAVANAN)



(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai) Punalkulam, Near Thanjavur, Pudukkottai Dt - 613303

DEPARTMENT OF CIVIL ENGINEERING CERTIFICATE OF PARTICIPATION

This is to certify that Mr./Ms. <u>G.BHARATH</u> of <u>III YR</u> Civil Engineering has completed <u>REFRESHER COURSE</u> in the topic <u>UNITS AND MEASUREMENTS</u> organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during <u>AUGUST 2022</u>.

R Ranchander

Mr.R.RAMCHANDAR COURSE INCHARGE

5. Jaron

Dr.R.SARAVANAN HOD/CIVIL

Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL



(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai) Punalkulam, Near Thanjavur, Pudukkottai Dt - 613303

DEPARTMENT OF CIVIL ENGINEERING CERTIFICATE OF PARTICIPATION

This is to certify that Mr./Ms. <u>S.SNEHA</u> of <u>III YR</u> Civil Engineering has completed <u>REFRESHER COURSE</u> in the topic <u>UNITS AND MEASUREMENTS</u> organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during <u>AUGUST 2022</u>.

R Ranchandard

Mr.R.RAMCHANDAR COURSE INCHARGE

Chivaron

Dr.R.SARAVANAN HOD/CIVIL

Time

Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2022-23 (ODD)

Date: 20.07.2022

CIRCULAR

This is to inform, that our department is going to conduct a **CERTIFICATE COURSE** on **"SKETCH-UP"** in this academic year 2022-2023, Final year students are requested to enroll their name to Mr.R.CHANDRASEKAR, AP/CIVIL on or before **01.08.2022**.

1/22

COORDINATOR 20 SILU (Mr.R.CHANDRASEKAR, AP/CIVIL)

20/07/2022 HOD/CIVIL

(DR.R.SARAVANAN)



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022 – 2023 ODD SEMESTER <u>CERTIFIED COURSE ON SKETCHUP 3D</u> <u>SYLLABUS</u>

UNIT I INTRODUCTION TO SKETCHUP 3D 6 Initial setup in sketchup – unit setup for imperial and metric units – overview of 3d – modeling and modify tools – dimension setting for different units – using help sketchup. 6

UNIT IICREATION OF 3D AND COMPONENTS FOR RESIDENTIAL BUILDING6Creation of plan in 2d – generating 3d model from 2d plan –placing door, windows in plan9view – 3d text – placing components using ware house export and importing.

UNIT III CREATION OF STAIRCASE RAILING RAMP

Standard size for riser and tread – straight stair staircase – dog-legged – spiral staircase – railing creation for stair and separate rail design – sloped ramp and circular ramp.

UNIT IV CREATION OF FLOOR AND ROOF

Floor creation – material choosing for floors – generating sloped roof, pitched roof, curved roof– roof tiles and material modification – elevation design concepts.

UNIT V INTERIOR DESIGN CONCEPTS AND RENDERING

Selection of materials – material editing and custom wall texture editing – lighting setup and intensity adjustments – different rendering engines used for rendering (Vray, Enscape, Artlantis Studio,Lumion etc) – rendering setup and rendering.

TOTAL: 30 PERIODS

6

6

6

50

COORDINATOR (Mr.R.CHANDRASEKAR, AP/CIVIL)

HOD/CIVIL (DR.R.SARAVANAN)

DEPARTMENT OF CIVIL ENGINEERING SPECIAL TIME TABLE (1.8.2022 - 6.8.2022, ODD SEM) B.E - CIVIL (Regulation 2017) - With Effect from 1.8.2022

Batch:2019 - 2023

Year: IV		Seme	ster: VII			Class Room : 233 Block:											
Session	1	2	10.45 am	3	4	12.30 pm	5	6	02.40 pm	1 7	8						
Day	09.15am 10.00am	10.00am 10.45am	11.00 am	11.00am 11.45am	11.45am 12.30pm	01.10 pm	01.10pm 	01.55pm 02.40pm	02.50 pm	02.50pm 	03.35pm 04.20pm						
MON	Orientation		- 34	CC			COMM.SKILL			B	C						
TUE	R	RFC		c	c	×	COMM_SKILL		M.SKILL		C						
WED	R	RFC		RFC		C	c	BRE	COMM	COMM.SKILL		COMM.SKILL		В	C		
тни	T&P(SS)	T&P(A)	BRE	C	cc		COMM.SKILL		BRE	8	IC						
FRI	R	FC	1	C C	C	C	C	C	C	C	cc		COMM.SKILL			BC	
SAT	R	RFC		0	:c		COMM	I.SKILL		B	C						
				· · · · · · · · · · · · · · · · · · ·					The second se								

SUB CODE	NAME OF THE SUBJECT	CREDITS	NAME OF THE STAFF	DEPT	PERIODS/WEEK
	VALU	EADDITION	NTIATIVES (VAI)		
Orientation	Orientation Program	S#2	Mr.K.Arun	CIVIL	2
COMMLSKILL	Communication Skill		Mr.D.Dinesh	ENGLISH	.12
BC	Bridge Course		Mr.R.Ramchandar	CIVIL	12
RFC	Refresher Course	-	Ms.S.Gayathri	CIVIL	08
T&P (A)	Training & Placement - Aptitude	-	Ms.P.Suganya	T&P	1
T&P(SS)	Training & Placement - Softskill		Dr.K.Sudhakar	T&P	1
CC	Certification Course - Sketchup	-	Mr.R.Chandrasekar	CIVIL	12
CLASS CO-0	RDINATOR	NAME OF	THE REPRESENTATIVES		ROLL NO
Mr.K.Arun		B.Agalya M.Jayaseel		01 08	

	VALUE ADDITIO	N INTIATI	VES (VAI) - REGULAR HOU	RS	
LIB/NET	Library / Internet	VAI	Mr.K.Arun	CIVIL	1
NPTEL	NPTEL Swayam Courses	VAI	Mr.K.Arun	CIVIL	1
RC	Refresher Course	VAI	Ms.S.Gayathri	CIVIL	2
T&P (A)	Training & Placement - Aptitude	VAI	Ms.P.Suganya	T&P	1
T&P(SS)	Training & Placement - Softskill	VAI	Dr.K.Sudhakar	T&P	1

DEP

07) 2092 HOD

7/202 J.M 301 PRINCIPAL

Strength:20



ACADEMIC YEAR 2022-23 (ODD SEM) CERTIFICATE COURSE ON "SKETCH-UP" ASSESSMENT MARKS

IV YEAR CIVIL / VII SEM

S.No.	Reg. Number	Student Name	Total Marks (50)
1	821119103001	AGALYA B	45
2	821119103002	ANBUMANI S	38
3	821119103003	ARUNKUMAR M	36
4	821119103004	ARUNPRASAD S	27
5	821119103005	DIVYA S	43
6	821119103006	JANANI T S	44
7	821119103007	JAYACHANDRAN N	39
8	821119103008	JAYASEELAN M	40
9	821119103010	KURALARASAN R	38
10	821119103011	MADHUMITHA R	42
11	821119103012	MONIKA M	41
12	821119103013	PREMKUMAR J	35
13	821119103014	RENGESWARI R	46
14	821119103015	RUBIKA M	39
15	821119103016	SANTHOSH S	38
16	821119103017	SATHYA P	37
17	821119103018	STALIN P	36 .
18	821119103019	VIMAL R	34
19	821119103301	DANIEL NAVIS F	35
20	821119103501	KARTHIKEYAN R	34
21		ABIRAMI	38

1 COURSE INCHARGE

(Mr.CHANDRASEKAR)

HOD/CIVIL (DR.R.SARAVANAN)



Introduction To SketchUp

- SketchUp is a 3D modeling computer program for a broad range of drawing and design applications including <u>anchitectural</u>, interior design, industrial and product design, landscape architecture, <u>civil</u> and <u>mechanical engineering</u>, theater, film and <u>video game</u> development.
- Owned by <u>Temble Ins.</u>, the program is currently available as a web-based application, SketchUp Free, and three paid subscriptions, SketchUp Shop, SketchUp Pro, and SketchUp Studio, each with increasing functionality.
- SketchUp was developed by startup company @Last Software of <u>Boulder, Colorado</u>, co-founded in 1999 by Brad Schell and Joe Esch.
- Google acquired @Last Software on March 14, 2006
- Trimble Navigation (now Trimble Inc.) acquired SkatchUp from Google on June 1, 2012

TOPICS IN THE 30 HOURS PROGRAM

Introduction to sketchup.
 3d Modeling in sketchup.
 Creation of 2D Plan and 3D plan.
 Creation of Door, Window.
 Creation of Floor and Different roof Types.
 Elevation Design Concepts.
 Creation of Stalicase, Railing and Ramp.
 Introduction to Interior design.
 Interior light setting in room.
 Components Import.
 Importing Toxtures for Wall tiles etc.
 Interior to Rendering Engine (Vrsy, Enscape, Artlantis Studio,Lumion etc).
 Photo Realistic rendering.

SKETCHUP TEMPLATE SELECTION



- Open sketchup 3D.
 Choose template and select
- simple template-feet & inches. Select start using sketchup.















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A NAAC ACCREDITED INSTITUTION



KINGS COLLEGE OF ENGINEERING

RECOGNISED UNDER 2(F) &12(B) OF UGC, APPROVED BY AICTE, NEW DELHI & AFFILIATED TO ANNA UNIVERSITY, CHENNAI PUNALKULAM, GANDARVAKKOTTAI TALUK, PUDUKKOTTAI DISTRICT - 613 303

CERTIFICATE OF PARTICIPATION



C

THIS IS TO CERTIFY THAT **M.JAYASEELAN** OF IV YR CIVIL ENGINEERING HAS PARTICIPATED IN THE **"CERTIFIED COURSE ON SKETCH UP 3D"** ORGANIZED BY DEPARTMENT OF CIVIL ENGINEERING, KINGS COLLEGE OF ENGINEERING,

THANJAVUR, FROM AUGUST 2022 TO OCTOBER 2022.

COURSE INCHARGE

HOD/CIVIL

Dr.R.SARAVANAN

PRINCIPAL

Dr.J.ARPUTHA VIJAYA SELVI







DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-2023 (ODD SEM) CERTIFICATE COURSE ON "SKETCH UP" STUDENTS ENROLMENT - IV YEAR CIVIL

S. No	Reg. No	Student name	Student Signature
1	821119103001	AGALYA B	B. Agalipa
2	821119103002	ANBUMANI S	S Anturrani
3	821119103003	ARUNKUMAR M	m. Anup kuman
4	821119103004	ARUNPRASAD S	SArinepresed.
5	821119103005	DIVYA S	S. Divya.
6	821119103006	JANANI T S	T.S. 044.
7	821119103007	JAYACHANDRAN N	Atsamm
8	821119103008	JAYASEELAN M	MJayelet
9	821119103010	KURALARASAN R	Chindorosay
10	821119103011	MADHUMITHA R	R. Hadhumitto
11	821119103012	MONIKA M	M. Nant
12	821119103013	PREMKUMAR J	J. Bremstern
13	821119103014	RENGESWARI R	R. fingeswary
14	821119103015	RUBIKA M	M. Rulls
15	821119103016	SANTHOSH S	S. Sapthugh
16	821119103017	SATHYA P	H. satur.
17	821119103018	STALIN P	Pestalin
18	821119103019	VIMAL R	R. Vá
19	821119103301	DANIEL NAVIS F	F. Danely nail.
20	821119103501	KARTHIKEYAN R	R-Karthikegan
21		ABIRAMI S	S. Abirami

Total Number of students enrolled: _____

COURSE INCHARGE

01/08/2022 HOD/CIVIL

58



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEM) IV YEAR CIVIL / VII SEM CERTIFICATE COURSE ON "SKETCH UP" - ATTENDANCE REPORT

S.No.	Reg. Number	Student Name	4/08/22	1/08/2	202/08/2	2/08/27	3/8/2	3/8/27	4/8/22	418/22	. Sb/ 12	518/22	17/8/22	25/21	10/9/22	10/9/22	15/27
in an	700 0 1.00.0000000000		3	4	3	4	3	4	3	4	3	4	5	5	5	6	5
1	821119103001	AGALYA B	1	1	1	1	-1	1	1	1	1	i	1	1	1	1	1
2	821119103002	ANBUMANI S	AB	AB	1	1	1	1	1	1	1	1	1	AB	1	1	1
3	821119103003	ARUNKUMAR M	AB	AB	1	1	1	1	1	1	1	1	1	AB	AB	1	1
4	821119103004	ARUNPRASAD S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	821119103005	DIVYA S	1	1	1	1	/	1	1	1	1	1	1	AB	1	AB	1
6	821119103006	JANANI T S	1	1	1	1	AB	AB	1	1	1	1	1	1	1	1	1
7	821119103007	JAYACHANDRAN N	1	1	1	1	1	1	1	1	1	1	1	1	AB	1	1
8	821119103008	JAYASEELAN M	ſ	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	821119103010	KURALARASAN R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	821119103011	MADHUMITHA R	1	1	1	1	AB	AB	1	1	1	1	1	1	1	1	1
11	821119103012	MONIKA M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	821119103013	PREMKUMAR J	AB	AB	1	1	1	1	1	1	1	1	1	1	1	1	1
13	821119103014	RENGESWARI R	1	1.	1	1	1	1	1	1	1	1	1	1	AB	1	1
14	821119103015	RUBIKA M	1	11	1	1	1	1	1	1	1	1	AB	1	1	1	1
15	821119103016	SANTHOSH S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	821119103017	SATHYA P	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	821119103018	STALIN P	1	1	1	1	1	1	1	1	1	1	AB	1	1	1	1
18	821119103019	VIMAL R	AB	AB	1	1	1	1	1	1	1	1	AB	AR	1	1	1
19	821119103301	DANIEL NAVIS F	-1	1	1	1	1	1	1	1	1	1	1	1	AB	1	1
20	821119103501	KARTHIKEYAN R	AB	AB	1	1	1	1	AB	AB	1	1	1	1	1	1	1
21		ABIRAMI S	1	1	1	1	1	1	1	1	1	1	1	AB	1	1	1
	TOTAL S	STUDENTS	20	20	20	21	21	21	21	21	21	21	2)	2)	21	21	21
	PRE	SENT	16	16	21	21	19	19	20	20	21	21	18	16	16	20	21
	AB	SENT	5	15	NIL	NIL	2	2	L	1	NIC	NIL	3	3	S	1	NIL
	COURSE IN	CHARGE SIGN	REM	REM	BEN	Rest	Real	REN	RG	Rest	REN	REY	Rey	Re	Rew	REA	Ran

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DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEM) IV YEAR CIVIL / VII SEM CERTIFICATE COURSE ON "SKETCH UP" - ATTENDANCE REPORT

SNo	Reg Number	Student Name	29/9/22	29/9/2	8/10/2	8/10/22	10/10/2"	10/10/22	11/10/22	11/10/22	Blidz	15/10/22	5/10/2	15/0/2	15/10/2	20/10/2	20/10/2
0.110.	Reg. Humber	Statentriane	5	6	7	8	7	8	7	8	5	5	6	7	8	7	8
1	821119103001	AGALYA B	1	1	1	1	1	1	1	1	1	1	1	1	1	AB	AB
2	821119103002	ANBUMANI S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	821119103003	ARUNKUMAR M	AB	AB	1	1	68	AB	AB	AB	1	1	1	1	1	1	1
4	821119103004	ARUNPRASAD S	1	1	1	1	AB	AB	AB	AB	1	1	1	1	1	AB	AB
5	821119103005	DIVYA S	1	1	1	1	1	1	/	1	AB	1	1	1	1	1	1
6	821119103006	JANANI T S	1	1	./	1	1	1	1	1	1	1	1	1	1	1	1
7	821119103007	JAYACHANDRAN N	1	1	AB	AB	1	1	1	1	1	1	1	1	1	1	1
8	821119103008	JAYASEELAN M	1	1	AB	AB	1	1	1	1	1	1	1	1	1	1	1
9	821119103010	KURALARASAN R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	821119103011	MADHUMITHA R	1	1	1	1	1	1	t	1	1	1	1	1	1	1	1
11	821119103012	MONIKA M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	821119103013	PREMKUMAR J	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	821119103014	RENGESWARI R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	821119103015	RUBIKA M	1	1 .	1	1	1	1	1	1	1	1	1	(1	1	1
15	821119103016	SANTHOSH S	1	1	1	1	AB	AB	1	1	AB	AB	AB	AB	AB	1	1
16	821119103017	SATHYA P	1	1	1	1	1	1	1	1	1	AB	AB	AB	AB	1	1
17	821119103018	STALIN P	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	821119103019	VIMAL R	AB	AB	1	1	1	1	1	1	1	1	1	1	1	1	1
19	821119103301	DANIEL NAVIS F	1	1	1	1	1	1	1	1	AB	1	1	1	1	1	1
20	821119103501	KARTHIKEYAN R	1	1	1	1	AB	AB	1	1	1	1	1	1	1	1	1
21		ABIRAMI S	AB	AB	1	1	1	1	1	1	1	1	1	1	1	1	1
	TOTAL	STUDENTS	21	21	21	21	21	1	1	1	1	/	11	1	1	1	1
	PRI	ESENT	18	81	19	19	17	17	19	19	18	19	19	19	19	19	19
	AB	SENT	3	3	2	2	4	4	2	2	3	2	2	2	2	2	2
	COURSE IN	CHARGE SIGN	PA	RCH	R.CX	REN	RCJ	ROY	RES	REA	RCD	RCM	REN	REAL	REN	RCX	REN







DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2022 - 2023 ODD SEMESTER

CERTIFICATE COURSE REPORT

The Department of Civil Engineering organized a certificate Course for IV Year students on 01.08.2022 to 20.10.2022.

OBJECTIVE

The objective of the course is:

- To learn the concepts of 3D modelling in sketchup.
- To know the concept of 3D elevation and interior design concepts in sketchup.
- To know about the various rendering concepts.

SESSION DETAILS

Mr.R.CHANDRASEKAR, AP/CIVIL, handled the session for IV year students. He explained about the Sketchup 3D, various elevation and interior design concepts.



IV YEAR CIVIL STUDENTS ATTENDING THE SKETCHUP PROGRAM



IV YEAR CIVIL STUDENTS ATTENDING THE SKETCHUP PROGRAM

OUTCOME OF THE COURSE

At the end of session, the students would be able to:

- Understand the concepts in 3D modelling.
- Know the concept of 3D elevation.
- Understand the various concept in interior design.
- Know the concept of lighting in interior design.
- Know about the rendering in sketchup.

2/2022 PREPARED BY

(R. CHANDRASERAR)

03/12/2022 HOD/CIVIL

PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2022-23 (ODD)

Date: 25.07.2022

CIRCULAR

This is to inform, that our department is going to conduct a **BRIDGE COURSE II (ENGINERING MECHANICS)**on this academic year 2022-2023, Second year students are requested to enroll their name to Mr.Ramdchandar AP/CIVIL on or before **04.08.2022**.

7/22 Coordinator

(Mr.Ramchandar AP/CIVIL)

25/07/22

HOD/CIVIL (DR.R.SARAVANAN)



DEPARTMENT OF CIVIL ENGINEERING

BRIDGE COURSE II

ENGINEERING MECHANICS

YEAR/SEMESTER: II/III

ACADEMIC YEAR: 2022-2023(ODD SEM)

PREPARED BY

MS.D.SHARMILA / AP /CIVIL







Strength:19

DEPARTMENT OF CIVIL ENGINEERING SPECIAL TIME TABLE (11.8.2022 - 20.8.2022,ODD SEM) B.E - CIVIL (Regulation 2017) - With Effect from 11.8.2022

Batch:2021 - 2025

Year: II

 Semester: III
 Class Room : 234
 Block: II

 2
 10.45 am
 3
 4
 12.30 pm
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Date	09.15am	10.00am 10.45am	11.00 am	11.00am 11.45am	11.45am 12.30pm	01.10 pm	01.10pm 	01.55pm 02.40pm	02.50 pm	02.50pm - 03.35pm	03.35pm - 04.20pm
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18.8.22	В	c(I)	1	(C	E	BC	:(11)		S	DC
20.8.22	S	DC	1	R	FC		BC	2(11)		B	C(I)

NAME OF THE SUBJECT	CREDITS	NAMEOFTHESTAFF	DEFT	FERIODS/WEER
VALUE AL	DITIONI	NTIATIVES (VAI)		
Orientation Program	-	Mr.R.Ramchandar	CIVIL	2
Pridao Course I (SOM)	2	Mr.R.Ramchandar	CIVIL	8
Shage course ((SOM)		Ms D Sharmila	CIVIL	8
Bridge Course II (EM)		Ms S Gavathri	CIVIL	10
Refresher Course		Mr.R.Chandrasekar	CIVIL	10
Certification Course - AutoCADD		M- D Cundhamm	CIVIL	10
Skill Development Course (MS OFFICE)		Mr.K.Sununaram		
D B R C S	VALUE AI rientation Program ridge Course I (SOM) ridge Course II (EM) efresher Course ertification Course - AutoCADD kill Development Course (MS OFFICE)	VALUE ADDITION I rientation Program - ridge Course I (SOM) - ridge Course II (EM) - refresher Course - rertification Course - AutoCADD - kill Development Course (MS OFFICE) -	VALUE ADDITION INTIATIVES (VAI) irientation Program - Mr.R.Ramchandar iridge Course I (SOM) - Mr.R.Ramchandar iridge Course II (EM) - Ms.D.Sharmila iefresher Course - Ms.S.Gayathri iertification Course - AutoCADD - Mr.R.Chandrasekar kill Development Course (MS OFFICE) - Mr.R.Sundharam	VALUE ADDITION INTIATIVES (VAI) irientation Program - Mr.R.Ramchandar CIVIL iridge Course I (SOM) - Mr.R.Ramchandar CIVIL iridge Course II (EM) - Ms.D.Sharmila CIVIL iefresher Course - Ms.S.Gayathri CIVIL iertification Course - AutoCADD - Mr.R.Chandrasekar CIVIL kill Development Course (MS OFFICE) - Mr.R.Sundharam CIVIL

CLASS CO-ORDINATOR	NAME OF THE REPRESENTATIVES	ROLL NO
	S.Mohan .	09
Mr.R.Ramchandar	G.V.Naaviniyaa	

	VALUE ADDITIO	N INTIATIV	VES (VAI) - REGULAR HOURS	
CC.	Certification Course - AutoCADD	VAI	Mr.R.Chandrasekar	CIVIL
LID/NET	Library / Internet	VAI	Mr.R.Ramchandar	CIVIL
LID/NEI	NDTEL Swarom Courses	VAI	Mr.R.Ramchandar	CIVIL
NPIEL TOD(A)	Training & Placement - Antitude	VAI	Dr.K.Sudhakar	T&P
T&P(SS)	Training & Placement - Softskill	VAI	Mr.B.Suresh Babu	T&P

DE

. Bendaram 10/08/2022 HOD

10/8/202 2.10 PRINCIPAL

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ENGINEERING MECHANICS

COURSE OBJECTIVE

- To Learn the use scalar and vector analytical techniques for analyzing forces in Statically determinate structures.
- To learn the principles of friction, forces and to apply the concepts of various engineering systems.
- To develop basic dynamics concepts force, momentum, work and energy.

UNIT I FUNDAMENTAL CONCEPTS OF UNITS

Fundamental Concepts and Principles - Systems of Units - Method of Problem Solutions -Resultant of Forces - Unit Vectors- Newton's First Law of Motion .

UNIT II EQUILIBRIUM OF RIGID BODIES

Principle of Transmissibility - Equivalent Forces - Vector Product of Two Vectors - Varignon's Theorem - Scalar Product of Two Vectors.

UNIT III DISTRIBUTED FORCES

Centroids of lines and areas – symmetrical and unsymmetrical shapes- Moment of Inertia – Radius of Gyration of an Area - Parallel-Axis Theorem - Moments of Inertia of Composite Areas.

UNIT IV FRICTION

The Laws of Dry Friction- Coefficients of Friction - Angles of Friction- Wedge friction- Wheel Friction- Rolling Resistance -Ladder friction.

UNIT V DYNAMICS OF PARTICLES

Kinematics - Newton's Second Law of Motion - Work of a Force - Principle of Work and Energy-Principle of Impulse and Momentum- Impact of bodies.

TOTAL PERIODS: 30

COURSE OUTCOME

At the end of the course the students would be able to

- Illustrate the vectorial and scalar representation of forces and moments
- Analyse the rigid body in equilibrium
- Evaluate the properties of distributed forces

1.5 **STAFF INCHARGE** (Ms.D.SHARMILA)

(Dr.R.SARAVANAN)

KCE/CIVIL/ BC/IIYR/EM

EM



ACADEMIC YEAR 2022-23 (ODD SEM) **BC-ENGINEERING MECHANICS** ASSESSMENT MARKS

II YEAR CIVIL / V SEM

S.No.	Reg. Number	Student Name	Total marks(50)
1	821121103001	AKALYA J	50
2	821121103002	ANITHA B	50
3	821121103003	ARULPANDIYAN A	50
4	821121103004	ARUNKUMAR M	50
5	821121103005	HALITH A M	40
6	821121103006	MADHAN D S	45
7	821121103007	MANIKKARAJ R	40
8	821121103008	MATHANKUMAR S	40
9	821121103009	MOHAN S	50
10	821121103010	NAAVINIYAA G V	50
11	821121103011	NITHISH KUMAR T S	45
12	821121103012	PASHAGAN G (VOC)	45
13	821121103013	PRAGADISH M	40
14	821121103014	PRASANNA R	40
15	821121103015	SARAVANAN K	40
16	821121103016	SURYA.V	50
17	821121103017	TAMILARASAN T	50
18	821121103018	VENKATACHALAM D	45
19	821121103019	VIJAY S	50
20		SANJAIMANI M	40
21		SINDHU G	50
22		SURUTHI A	45
23		MOHAMMED RIYAZ J	45

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SUBJECT INCHARGE (MS.D.SHARMILA)

HOD/CIVIL 30/08/23

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(DR.R.SARAVANAN)

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			11	YEAR (IVIL /	III SEM	- ATTI	ENDAN	CE REP	ORT							
BRIDGE COURSE IL - ENGINEERING MECHANICS																	
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S.No.	Reg. Number	Student Name	314	5,6	5,6	3.5	Bit	56	78	314	516	0310	818	3/4	28	54	7,8
1	821121103001	AKALYA J	3-Akdyn	-precho	D-Aricha	2-Atecher	5. Andy	3 Audyn	Attolyo	5.7467-	3 Attohe	3-AKdy	J-Andy	3-Attoly	3 Attom	5. Akoly	5.AKdy
2	821121103002	ANITHA B	B. Anika	B. Anila	F:Ask	B. Anil	b. haba	B.A.M	8 Anth	E.A.B	1 Auto	& Anth	t hat	674	EAnta	E hat	1. fort
3	821121103003	ARULPANDIYAN A	A-DAY	AFRIC	AAN	A.A.A	Ame	AB	A. Prote	AFR	Anne	AANP	hand	And	Amo	A. Fril	ANG
4	821121103004	ARUNKUMAR M	mapon	M.Am	Mith	M. Ares	N. AOV	N.A.R.	11. Ron-	MM	MAN	MAR	MANO?	AB	M.AM	M.Pon	M ADAM
5	821121103005	HALITH A M	pp. hali	Amila	AB	A m. fo	AB	ANION	A.W.	Smite	Prm. Jat	AB	Philippi	Alaf-m-A	5-mhole	her-mild	p-m.hol
6	821121103006	MADHAN D S	plashe	ladh	lladhe	Mach	Hart	Madh	AS	Mad	Mark	March	March	Made	AB	eled	Mach
7	821121103007	MANIKKARAJ R	Rounding	Reme	Repurso	RAME	AR	Roleitan	RALES	Ruki	AB	R. Make	Rhupi	Aury	RALE	RHER	Return
8	821121103008	MATHANKUMAR S	emf	SANA	spira	Brund	Stuf	Sping	8-put	Sprif	Spin	grund	Spirt	AB	s.p.f	8.1	Spul
9	821121103009	MOHAN S	Curto	SALTON	San	8.000	Sad	Sta	SADO	Sau	Sa	S. Atom	Stand	Storo	Sau	SAND	Same
10	821121103010	NAAVINIYAA G V	G-V VOS	0.1.19	C.VO	2 Co	-1'OD	Sicy	SE	Sp/	Store -	tot >	50	3	5.00	29	on D
11	821121103011	NITHISH KUMAR T S	Withish	withit	AB	withit	AB	AB	withis	witted	noithis	Mithe	Nithist	Niton	Nitha	with	Nittix
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13	821121103013	PRAGADISH M	MENT	M.C.A.	NBAR	AB	wilst	NAT	NXA	meg	infet	me	mpe	mbr	Mte	Ne	MA
14	821121103014	PRASANNA R	8. Park	R-Pread	+ Presh	R.P.ml	R.P.au	e. Prof	Ripaci	e-Bal	R. Puop	- R-Bal	RE	R.R.R.al	R-Bal	e.and	RPoul
15	821121103015	SARAVANAN K	1.aare	IT- have	K.900	hada	hear	Keau	h. Ball	t.eas	1-84	10.000	6.80	a pirm	Kiga	pasa	10800g
16	821121103016	SURYA.V	Condo.	Ser.	Sign	AB	AB	Cog	Goog.	South	80ge	(08	Sec.	Ende	(yog).	Seg.	Stage
17	821121103017	TAMILARASAN T	Stim	TITI	TTh	This	This	TIM	TTA	Trà	AB	Th	TAN	Thi	The	Tori	Tan
18	821121103018	VENKATACHALAM D	what a	Vers	WER	IS BEAR	THEFT	TENER?	1000 B	And a	Still B	and a	- San X	VIE	10 May	A.	BUL A
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Kings College of Engineering, Punalkular



ACADEMIC YEAR 2022-23 (ODD SEM) BC-ENGINEERING MECHANICS STUDENTS ENROLLMENT

II YEAR CIVIL / V SEM

S.No.	Reg. Number	Student Name	Students Signature
1	821121103001	AKALYA J	T. AKala
2	821121103002	ANITHA B	B. Ani Hha.
3	821121103003	ARULPANDIYAN A	A. AND
4	821121103004	ARUNKUMAR M	M. Anus Forman
5	821121103005	HALITH A M	A.n. Halith
6	821121103006	MADHAN D S	Madham
7	821121103007	MANIKKARAJ R	A. moni
8	821121103008	MATHANKUMAR S	Silesof
9	821121103009	MOHAN S	Same
10	821121103010	NAAVINIYAA G V	6. V. Naaviniyaa
11	821121103011	NITHISH KUMAR T S	Nithish-
12	821121103012	PASHAGAN G (VOC)	(n) Pal ballon,
13	821121103013	PRAGADISH M	M. Pragadish.
14	821121103014	PRASANNA R	Pasano
15	821121103015	SARAVANAN K	K Salavanen.
16	821121103016	SURYA.V	Source .
17	821121103017	TAMILARASAN T	J.Jon
18	821121103018	VENKATACHALAM D	p.Verbutchalom.
19	821121103019	VIJAY S	S. Juniones
20		SANJAIMANI M	N. Samusaillany
21		SINDHU G	Gro Sit
22		SURUTHI A	A. Enteri
23		MOHAMMED RIYAZ J	J. Hote:

-1.A Ø SUBJECT INCHARGE (MS.D.SHARMILA)

25 07 2)

HOD/CIVIL (DR.R.SARAVANAN)

Nings College of Engineering, Punalkula

ENGINEERING MECHANICS FUNDAMENTALS OF ENGINEERING MECHANICS

ENGINEERING MECHANICS: The subject of Engineering Mechanics is that branch of Applied Science, which deals with the laws and principles of Mechanics, along with their applications to engineering problems.

The subject of Engineering Mechanics may be divided into the following two main groups: 1. Statics, and 2. Dynamics

STATICS: It is that branch of Engineering Mechanics, which deals with the forces and their effects, while acting upon the bodies at rest.

DYNAMICS: It is that branch of Engineering Mechanics, which deals with the forces and their effects, while acting upon the bodies in motion. The subject of Dynamics may be further sub-divided into the following two branches: 1. Kinetics, and 2. Kinematics

KINETICS: It is the branch of Dynamics, which deals with the bodies in motion due to the application of forces.

KINEMATICS: It is that branch of Dynamics, which deals with the bodies in motion, without any reference to the forces which are responsible for the motion.

RIGID BODY: A rigid body (also known as a rigid object) is a solid body in which deformation is zero or so small it can be neglected. The distance between any two given points on a rigid body remains constant in time regardless of external forces exerted on it. A rigid body is usually considered as a continuous distribution of mass.

FORCE: It is defined as an agent which produces or tends to produce, destroys or tends to destroy motion. *e.g.*, a horse applies force to pull a cart and to set it in motion. Force is also required to work on a bicycle pump. In this case, the force is supplied by the muscular power of our arms and shoulders.

SYSTEM OF FORCES: When two or more forces act on a body, they are called to form a system of forces. Following systems of forces are important from the subject point of view;

1. **Coplanar forces**: The forces, whose lines of action lie on the same plane, are known as coplanar forces.

2. **Collinear forces**: The forces, whose lines of action lie on the same line, are known as collinear forces

3. **Concurrent forces:** The forces, which meet at one point, are known as concurrent forces. The concurrent forces may or may not be collinear.

4. **Coplanar concurrent forces**: The forces, which meet at one point and their lines of action also lie on the same plane, are known as coplanar concurrent forces.

5. **Coplanar non-concurrent forces:** The forces, which do not meet at one point, but their lines of action lie on the same plane, are known as coplanar non-concurrent forces. 6. **Non-coplanar concurrent forces:** The forces, which meet at one point, but their lines of action do not lie on the same plane, are known as non-coplanar concurrent forces.

7. **Non-coplanar non-concurrent forces**: The forces, which do not meet at one point and their lines of action do not lie on the same plane, are called non-coplanar non-concurrent forces.

FRICTION INTRODUCTION:

If a block of one substance is placed over the level surface of the same or different material, a certain degree of interlocking of the minutely projecting particles takes place. This does not involve any force, so long as the block does not move or tends to move. But whenever one of the blocks moves or tends to move tangentially with respect to the surface, on which it rests, the interlocking property of the projecting particles opposes the motion. This opposing force, which acts in the opposite direction of the movement of the block, is called *force of friction* or simply *friction*. It is of the following two types:

1. Static friction. 2. Dynamic friction

STATIC FRICTION: It is the friction experienced by a body when it is at rest. Or in other words, it is the friction when the body tends to move.

DYNAMIC FRICTION: It is the friction experienced by a body when it is in motion. It is also called kinetic friction. The dynamic friction is of the following two types:

1. **Sliding friction**: It is the friction, experienced by a body when it slides over another body. 2. **Rolling friction**: It is the friction, experienced by a body when it rolls over another body.

LIMITING FRICTION: The maximum value of frictional force, which comes into play, when a body just begins to slide over the surface of the other body, is known as limiting friction. It may be noted that when the applied force is less than the limiting friction, the body remains at rest, and the friction is called static friction, which may have any value between zero and limiting friction.

COEFFICIENT OF FRICTION: It is the ratio of limiting friction to the normal reaction, between the two bodies, and is generally denoted by μ . Mathematically, coefficient of friction,

 $\mu = \frac{F}{R} = \tan \phi$ or $F = \mu R$

 ϕ = Angle of friction,

F = Limiting friction, and

R = Normal reaction between the two bodies.

UNITS OF WORK:

The units of work (or work done) are :

1. **One N-m**: It is the work done by a force of 1 N, when it displaces the body through 1 m. It is called joule (briefly written as J), Mathematically. **1 joule = 1 N-m** 2. **One kN-m**: It is the work done by a force of 1 kN, when it displaces the body through 1 m. It is also called kilojoule (briefly written as kJ). Mathematically. **1 kilo-joule = 1 kN-m**

POWER: The power may be defined as the rate of doing work. It is thus the measure of performance of engines. e.g. an engine doing a certain amount of work, in one second, will be twice as powerful as an engine doing the same amount of work in two seconds.

UNITS OF POWER: In S.I. units, the unit of power is watt (briefly written as W) which is equal to 1 N-m/s or 1 J/s. Generally, a bigger unit of power (kW) is used, which is equal

CLOCKWISE COUPLE:

A couple, whose tendency is to rotate the body, on which it acts, in a clockwise direction, is known as a clockwise couple as shown in Fig. (a). Such a couple is also called positive couple.

ANTICLOCKWISE COUPLE:

A couple, whose tendency is to rotate the body, on which it acts, in an anticlockwise direction, is known as an anticlockwise couple as shown in Fig. (b). Such a couple is also called a negative couple.

CHARACTERISTICS OF A COUPLE:

A couple (whether clockwise or anticlockwise) has the following characteristics: 1. The algebraic sum of the forces, constituting the couple, is zero. 2. The algebraic sum of the moments of the forces, constituting the couple, about any point is the same, and equal to the moment of the couple itself. 3. A couple cannot be balanced by a single force. But it can be balanced only by a couple of opposite sense. 4. Any no. of co-planer

couples can be reduced to a single couple, whose magnitude will be equal to the algebraic sum of the moments of all the couples

EQUILIBRIUM: If the resultant of a number of forces, acting on a particle is zero, the particle will be in equilibrium. Such a set of forces, whose resultant is zero, are called equilibrium forces. The force, which brings the set of forces in equilibrium is called an equilibrant.

PRINCIPLES OF EQUILIBRIUM: Though there are many principles of equilibrium, yet the following three are important from the subject point of view : 1. Two force principle: As per this principle, if a body in equilibrium is acted upon by two forces, then they must be equal, opposite and collinear. 2. Three force principle: As per this principle, if a body in equilibrium is acted upon by three forces, then the resultant of any two forces must be equal, opposite and collinear with the third force. 3. Four force principle: As per this principle, if a body in equilibrium is acted upon by four forces, then the resultant of any two forces must be equal, opposite and collinear with the resultant of the other two forces.

METHODS FOR THE EQUILIBRIUM OF COPLANAR FORCES: Though there are many methods of studying the equilibrium of forces, yet the following are important from the subject point of view : 1. Analytical method. 2. Graphical method.

LAMI'S THEOREM: It states, "If three coplanar forces acting at a point be in equilibrium, then each force is proportional to the sine of the angle between the other two." Mathematically,

$$\frac{P}{\sin\alpha} = \frac{Q}{\sin\beta} = \frac{R}{\sin\gamma}$$
CENTROID AND MOMENT OF INERTIA

CENTRE OF GRAVITY: The point, through which the whole weight of the body acts, irrespective of its position, is known as centre of gravity (briefly written as C.G.). It may be noted that everybody has one and only one centre of gravity.

CENTROID: The plane figures (like triangle, quadrilateral, circle etc.) have only areas, but no mass. The centre of area of such figures is known as centroid. The method of finding out the centroid of a figure is the same as that of finding out the centre of gravity of a body.

KINETICS: It is the branch of Dynamics, which deals with the bodies in motion due to the application of forces.

KINEMATICS: It is that branch of Dynamics, which deals with the bodies in motion, without any reference to the forces which are responsible for the motion.

PRINCIPLE OF DYNAMICS:

1. A body can posses acceleration only when some force is applied on it. Or in other words, if no force is applied on the body, then there will be no acceleration, and the body will continue to move with the existing uniform velocity. 2. The force applied on a body is proportional to the product of the mass of the body and the acceleration produced in it.

NEWTON'S LAWS OF MOTION: Following are the three laws of motion, which were enunciated by Newton,

1. Newton's First Law of Motion states, "Everybody continues in its state of rest or of uniform motion, in a straight line, unless it is acted upon by some external force."

2. Newton's Second Law of Motion states, "The rate of change of momentum is directly proportional to the impressed force, and takes place in the same direction, in which the force acts."

$F = ma = Mass \times Acceleration$

3. Newton's Third Law of Motion states, "To every action, there is always an equal and opposite reaction."

(SUBJECT INCHARGE)

(100/UVIL)

KCE/ DEPT. OF CIVIL ENGG



DEPARTMENT OF CIVIL ENGINEERING

BRIDGE COURSE - I

STRENGTH OF MATERIALS

ACADEMIC YEAR 2022-2023

YEAR/SEMESTER: II/03

PREPARED BY

Mr.R.RAMCHANDAR, AP/ CIVIL

KCE/CIVIL/BC/IIYR/SOM

Kings College of Engineering, Punalkulam *



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2022-23 (ODD)

Date: 01.08.2022

CIRCULAR

This is to inform, that our department is going to conduct a **bridge Course on STRENGTH OF MATERIALS** on this academic year 2022-2023 for II year, 3rd semester students. All students are requested to enroll their name to Mr.R.Ramchandar AP/CIVIL on or before **11.08.2022**.

01/8/22

Coordinator (Mr.R.Ramchandar AP/CIVIL)

01/08/2022

HOD/CIVIL (DR.R.SARAVANAN)

SYLLABUS

STRENGTH OF MATERIALS

COURSE OBJECTIVE

- 1. To learn the fundamental concepts of Stress, Strain and deformation of solids.
- 2. To know the mechanism of load transfer in beams.
- 3. To analyze plane and space trusses

UNIT I STRESS, STRAIN AND DEFORMATION OF SOLIDS

Simple stresses and strains – Elastic constants – Relationship between elastic constants – Stress Strain Diagram – Ultimate Stress – Yield Stress .

UNIT II TRANSFER OF LOADS AND STRESSES IN BEAMS

Types of loads, supports, beams - Concept of Shearing Force and Bending Moment -Theory of Simple Bending - Stress Distribution due to bending moment and shearing force.

UNIT III DEFLECTION OF BEAMS

Elastic curve - Double integration method - Macaulay's method.

UNIT IV TORSION

Theory of Torsion - Power transmitted to shaft - Shaft in series and parallel - Closed and Open Coiled helical springs.

UNIT V ANALYSIS OF TRUSSES

Determinate and indeterminate trusses - method of sections and tension coefficient-Analysis of Space trusses by tension coefficient method.

TOTAL: 30 PERIODS

6

6

6

6

6

COURSE OUTCOME

At the end of the course, the students will be able to

- 1. Understand the concepts of stress and strain
- 2. Understand the concepts of Stresses In Beams.
- 3. Gain knowledge on Deflection Of Beams.
- 4. Apply basic equation of torsion in design of circular shafts and helical springs,
- 5. Analyze the pin jointed plane and space trusses.

STAFF INCHARGE

Janan 05/08/2022 HOD/CIVI







DEPARTMENT OF CIVIL ENGINEERING SPECIAL TIME TABLE (11.8.2022 - 20.8.2022,ODD SEM) B.E - CIVIL (Regulation 2017) - With Effect from 11.8.2022

Batch:2021 - 2025

Year: II		Semes	ter: III			Class R	oom:234				Block: II
Session	1	2	10.45 am	3	4	12.30	5	6	-02.40 pm	7	8
Date	09.15am 10.00am	10.00am 10.45am	- 11.00 am	11.00am 11.45am	11.45am 12.30pm	01.10 pm	01.10pm 01.55pm	01.55pm 02.40pm	02.50 pm	02.50pm 	03.35pm 04.20pm
11.8.22	ORIEN	TATION		C	C		R	FC		SI	DC
12.8.22	R	FC	1	C	c	×	BC	:(1)].	SI	oc
16.8.22	BC	(11)	AK	R	FC	BREA	(C	XK	SI	DC
17.8.22	BC	(11)	BRE	R	FC	NCH	BC	C(I)	BRI	C	C
18.8.22	BC	:(1)		C	C	TU	BC	(11)]	SI	oc
20.8.22	S	DC		RI	FC		BC	(11)		BC	:(1)

NAME OF THE SUBJECT	CREDITS	NAME OF THE STAFF	DEPT	PERIODS/WEEK
VALUE A	DDITION	NTIATIVES (VAI)	4	
Orientation Program	-	Mr.R.Ramchandar	CIVIL	2
Bridge Course I (SOM)	-	Mr.R.Ramchandar	CIVIL	8
Bridge Course II (EM)		Ms.D.Sharmila	ĊIVIL	8
Refresher Course	-	Ms.S.Gayathri	CIVIL	10
Certification Course - AutoCADD		Mr.R.Chandrasekar	CIVIL	10
Skill Development Course (MS OFFICE)	-	Mr.R.Sundharam	CIVIL	10
	NAME OF THE SUBJECT VALUE A Orientation Program Bridge Course I (SOM) Bridge Course II (EM) Refresher Course Certification Course - AutoCADD Skill Development Course (MS OFFICE)	NAME OF THE SUBJECTCREDITSVALUE ADDITION IOrientation Program-Bridge Course I (SOM)-Bridge Course II (EM)-Refresher Course-Certification Course - AutoCADD-Skill Development Course (MS OFFICE)-	NAME OF THE SUBJECTCREDITSNAME OF THE STAFFVALUE ADDITION INTIATIVES (VAI)Orientation Program-Mr.R.RamchandarBridge Course I (SOM)-Mr.R.RamchandarBridge Course II (EM)-Ms.D.SharmilaRefresher Course-Ms.S.GayathriCertification Course - AutoCADD-Mr.R.ChandrasekarSkill Development Course (MS OFFICE)-Mr.R.Sundharam	NAME OF THE SUBJECTCREDITSNAME OF THE STAFFDEPTVALUE ADDITION INTIATIVES (VAI)Orientation Program-Mr.R.RamchandarCIVILBridge Course I (SOM)-Mr.R.RamchandarCIVILBridge Course II (EM)-Ms.D.SharmilaCIVILRefresher Course-Ms.S.GayathriCIVILCertification Course - AutoCADD-Mr.R.ChandrasekarCIVILSkill Development Course (MS OFFICE)-Mr.R.SundharamCIVIL

CLASS CO-ORDINATOR	NAME OF THE REPRESENTATIVES	ROLL NO
	S.Mohan -	09
Mr.R.Ramchandar	G.V.Naaviniyaa	10

	VALUE ADDITIO	N INTIATI	VES (VAI) - REGULAR HOURS	
CC	Certification Course - AutoCADD	VAI	Mr.R.Chandrasekar	CIVIL
LIB/NET	Library / Internet	VAI	Mr.R.Ramchandar	CIVIL
NPTEL	NPTEL Swayam Courses	IAV	Mr.R.Ramchandar	CIVIL
T&P (A)	Training & Placement - Aptitude	VAI	Dr.K.Sudhakar	T&P
T&P(SS)	Training & Placement - Softskill	VAI	Mr.B.Suresh Babu	T&P

22 DEPT. TTC

HOD 10 108 2022

10[8] 202 5.1 PRINCIPAL

Kings College of Engineering, Punalkulam -



ACADEMIC YEAR 2022-23 (ODD SEM) BRIDGE COURSE ON "STRENGTH OF MATERIALS" ASSESSMENT MARKS

II YEAR CIVIL / 03 SEM

S.No.	Reg. Number	Student Name	Total marks(50)
1	821121103001	AKALYA J	48
2	821121103002	ANITHA B	42
3	821121103003	ARULPANDIYAN A	40
4	821121103004	ARUNKUMAR M	42
5	821121103005	HALITH A M	36
6	821121103006	MADHAN D S	38
7	821121103007	MANIKKARAJ R	37
8	821121103008	MATHANKUMAR S	40
9	821121103009	MOHAN S	48
10	821121103010	821121103010 NAAVINIYAA G V	
11	821121103011	NITHISH KUMAR T S	38
12	821121103012	PASHAGAN G (VOC)	36
13	821121103013	PRAGADISH M	42
14	821121103014	PRASANNA R	40
15	821121103015	SARAVANAN K	38
16	821121103016	SURYA.V	45
17	821121103017	TAMILARASAN T	. 48
18	821121103018	VENKATACHALAM D	46
19	821121103019	VIJAY S	46
20		SANJAIMANI M	40
21		SINDHU G	45
22		SURUTHI A	44

R. Ranchanda 30/0/22

COURSE INCHARGE (Mr.R.RAMCHANDAR)

Warga 108/22

HOD/CIVIL (DR.R.SARAVANAN)



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEM) II YEAR CIVIL / III SEM - ATTENDANCE REPORT BRIDGE COURSE - I ON STRENGTH OF MIDTERIAL I

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S.No.	Reg. Number	Student Name	03/08	05/08	05 08	05 08	07/08	08108	80/ 108	solpe	80/01	10/08	12108	12/08	13 08	13]-8	14/58	
	0		3,4	5.6	5,6	718	314	718	314	Sib	314	516	314	511	314	5.6	718	
1	821121103001	AKALYA J	5 AKUT	5-Relat	5-AKJY	5. ANULY	S-ARMY	5-Aldo	2 Ardy	Satrady	S. Ately	5-Archyn	Zabargah	J-ANLY	2. Hergh	J.pk/p	5. Mill	1
2	821121103002	ANITHA B	5. hal	8. He	B.M.	c fulle	B.J.	BAR	B-Anita	8 Ani	5.A	Bhil	- SAA	B fris	B-AN	& fail	\$.4	
3	821121103003	ARULPANDIYAN A	A	A.A.V	A'FAN	ARNU	Arport	And	A.Porul	AFFINIK	A	p. Exul	NAM	lunaia	ARNA	10 pml	p.A.W	
4	821121103004	ARUNKUMAR M	A	M. Por	M. Romy	M.A.	MARM	A	M. Arnor	M. Hory	MAN .	M. Ary	Mutor	M.Ray	mm	M. Arron	M.Mary	Ī
5	821121103005	HALJTH A M	A	A	pon hat	A.p. Jak	Amlet	a.m.t	a.p. tot	ANIO	orm. for	A.mfeld	amphable	A:mildi	A.S. Jols	A	p.m. fel	He.
6	821121103006	MADHAN D S	Madh	Mach	Mach	A	Aach	Mad	flare	llad	Start	lle	Mart	A	flat	eler	flad	
7	821121103007	MANIKKARAJ R	A	epulli	RMR	Roupi	RAME	A	Ruli	Rhuri	RAUR	Ronald	Rould	RALPI	Roula	RMaky	RHURA	
8	821121103008	MATHANKUMAR S	but	Spil	stu	8.m	Sma	sma	8mit	spint.	Brit	smf	8-14	Brut	8-1-4	- A	A	1
9	821121103009	MOHAN S	SATO	TO	9000	SAD	Sim	SAD	SED	SAD	Stade.	SRAP	Sm	Sub	Sand	TARA	(ap)	
10	821121103010	NAAVINIYAA G V	cito?	5:00	C'NO	estor	a'to	610	ato	GO	S.S	GAN	i st	and a	() ()	33	side	P
11	821121103011	NITHISH KUMAR T S	A	A	withigh	Alita	Loffit A	with	Niki	A	North	neited	Mido	NHO	NIHAN	Millish	Nilsh	-
12	821121103012	PASHAGAN G (VOC)	Cor Parla	k. party	G. Ballinson	1. Pap	A	A	A	G.Parm	Golding	apisture	Crip Palland	G Hinday	Ca Palla	6. Paska	Gifashe	
13	821121103013	PRAGADISH M	motor	Here	Co	02	not	200	R	K	R	SPP-	0	oft	A	A	8	-
14	821121103014	PRASANNA R	P-Rivel	Repay	R-Pres	R-P-	R. Pru	R-Prot	R-Para	R-P.S	R-P	A	A	Rikad	RAN	- R. Ba	R. R.P.	>
15	821121103015	SARAVANAN K	V'Yearia	4 King	A	jA	K- Drown	Kisking	1-3au	k. meua	Rigroo	Kan	h.san	t. acu	Liscur	K.204	10 2000	
16	821121103016	SURYA.V	A	Juge.	wy.	Souge	Guy-	Say.	Stor	Gafe.	Goge.	Storge	a.	Stage	60%	Sough	Sago.	
17	821121103017	TAMILARASAN T	Tar	The	TITL	15-	19-5	The	TIN	A	Dir	Tavi	5:2	Troi	1.55	Sin	55~	
18	821121103018	VENKATACHALAM D	the	bild	0:12	pl	Rig	6.4	200	8VV	24	100	5.4	Dir	87	D	A	
19	821121103019	VIJAY S	J. Au	S.	OR	P	de	e at	des.	B	- AR	E.	44.4	AP	AP.	at	APP-	
20		SANJAIMANI M	A	A	en start	+37	milayer	~ Sije	. Sol	milin	m. Sunt	m.Sale	m leger	maleter	m. Soy's	+ m Sugice	mayo	i
21		SINDHU G	A	A	18K	6.81	GAL	691	52-52	61-57	Grad	61.54	G 84	6.91	61 5]	61.21	G.ST	
21		SURUTHI A	A	A	ASON	ARO	ACA	AS	AGA	AR	P.D.	ASA	AUDO	NOR	e tek	ROM	D.R.B	
23		MOHAMMED RIYAZ J	5 min	1 342	Jeak	A	Tor	get '	A	sent	5 mart	C.P.M.	-50%	app	2 Al	Ford.	3AHH	
	TOTAL	STUDENTS	23	23	23	23	23	23	23	23	23	23	23	22	22	23	22	1
	PR	ESENT	14	18	22	21	22	20	21	21	22	22	22	22	22	2.0	21	
_	AE	BSENT	09	05	100	021	100	03	SPE	1021	01	01/11	1100	841	81	03	121	
	COURSE IN	ICHARGE SIGN	APA	+PLM	JKM	DAP	K.DA	Per MC	KAL	KKM	PR PJ	1 AAL	AR	1 X.ML	PZN	ALL	100	r

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Kings Colleyr of Engkteering, Punalkulard



ACADEMIC YEAR 2022-23 (ODD SEM) BC I -STRENGTH OF MATERIALS STUDENTS ENROLLMENT

II YEAR CIVIL / 03 SEM

S.No. Reg. Number		Student Name	Students Signature
1	821121103001	AKALYA J	T-AKcha
2	821121103002	ANITHA B	B.Anitha
3	821121103003	ARULPANDIYAN A	A. ACO
4	821121103004	ARUNKUMAR M	M. Arrin Kumar
5	821121103005	HALITH A M	A.M. Halith
6	821121103006	MADHAN D S	Madhan .
7	821121103007	MANIKKARAJ R	R. monsing
8	821121103008	MATHANKUMAR S	J. Logis U
9	821121103009	MOHAN S	
10	821121103010	NAAVINIYAA G V	Giv. Naavmiyaa
11	821121103011	NITHISH KUMAR T S	Nithishi
12	821121103012	PASHAGAN G (VOC)	or Paybagan D
13	821121103013	PRAGADISH M	M. Kiga
14	821121103014	PRASANNA R	V
15	821121103015	SARAVANAN K	Kalavanan,
16	821121103016	SURYA.V	Gayar.
17	821121103017	TAMILARASAN T	1. Tom
18	821121103018	VENKATACHALAM D	D. Venbasachaam
19	821121103019	VIJAY S	
20		SANJAIMANI M	0. 0.1
21		SINDHU G	01 Sul
22		SURUTHI A	A. Shym

22

SUBJECT INCHARGE (Mr.R.RAMCHANDAR)

11/08/2022 $(\gamma$

HOD/CIVIL (DR.R.SARAVANAN)

1.Define Strain Licergy When in elastic birds is under the action of external forces the birdy deforms and work is done by these forces. If a strained, perfectly clustic body is allowed to (conver stord) to its unstrained state. It is capable of giving back all the work done by these external forces. This work done in straining such a body may be regarded as energy stored in a borly and is called strain energy or restlience.

2 Define: Proof Resilience. The maximum energy stored in the body within the elastic limit is called. Proof Resilie

3 Write the formula to calculate the strain energy due to aso

 $U = \int \frac{p_{\rm cl}}{2\,AE} \,dx \qquad {\rm limit} \ 0 \ to \ L$ Where.

$$\begin{split} P &= Applied \ tensile \ load \\ L &= 1 \ ength \ of \ the member \\ A &= Area \ of \ the member \\ E &= Young's \ modulus \end{split}$$

4. Write the formula to calculate the strain energy due to bending

 $t)=\int\!\!\frac{M^{\pm}}{2H}d_N$ fimit U to L Whene.

$$\begin{split} M &= Bending moment due to applied loads \\ E &= Vontg's modulus \\ I &= Moment of inertia \end{split}$$

5. Write the formula to calculate the strain energy due to torsion

 $\begin{array}{lll} U=\int_{-}\frac{T^{2}}{2GJ}\,dx & \mbox{limit} \ 0 \ \mbox{to} \ L\\ T=\ \mbox{Applied Torsion}\\ G=\ \mbox{Shear modules of negativ}\\ J=\ \mbox{Polar moment of mertin} \end{array}$ Where.

6 Write the formula to calculate the strain energy due to pure shear

Where

 $\begin{array}{ll} U = K \cdot \int \frac{V}{2GA} \, dx & \mbox{limit} \ 0 \ \mbox{to} \ 1 . \\ V = Shear \ \mbox{load} \\ G = Shear \ \mbox{modulus} \ \mbox{or Modulus} \ \mbox{or rigidity} \\ A = Area \ \mbox{or cross section} \\ K = Constant \ \mbox{disponds upon shape of cross set} \end{array}$

ila to calculate the strain energy due to pure shear, if shear stress is given

 $\begin{array}{l} U = \frac{r}{r}^{2} \frac{\nabla}{2Gr} \\ \tau = Shear Stress \\ G = Shear modulus or Modulus of rigidity \\ Y = Volume of the material \end{array}$ Where,

8 Write down the formula to calculate the strain energy , if the moment value is given

 $\begin{array}{l} U &= \frac{M^{-2}L}{2EI} \\ M &= Bending moment \\ L &= Length of the beam \\ E &= Young's modulus \\ I &= Moment of mertia \end{array}$ Whene,

9. Write down the formula to calculate the strain energy, if the torston moment value is given $U = T - \frac{T}{2GJ}$ T = Applied Torsion L = Length of the beam G = Shear medialus of Modulus of rigidity J = Polar moment of merica Where. 10 Write down the formula to calculate the strain energy, if the applied tension load is given $U = \underbrace{p^2 L}_{2AE}$ Where, P = Applied tensile load L = Leagth of the member A = Ares of the member F = Young's modulus. 11. Write the Custigliano's first the In any beam or truss subjected to any load system, the deflection at any point is given by the partial differential coefficient of the total sitain energy stored with respect to force acting at a point

 $\widetilde{\alpha} = \underbrace{(\alpha, \beta)}_{(0, 1)} \underbrace{(\alpha$ Where, δ = Deflection, U= Strain Energy stored, P=Load

What are uses of Castigliano's first theorem?
 To determine the deflection of complicated structure
 To determine the deflection of curved beams springs

81

13. Define: Maxwell Reciprocal Theorem.

In any beam or truss the deflection at any point 'A' due to a load 'W' at any other point 'C' is the same as the deflection at 'C' due to the same load 'W' applied at 'A'.



14. Define: Unit load method.

The external load is removed and the unit load is applied at the point, where the deflection or rotation is to found.

15. Give the procedure for unit load method.

1. Find the forces P1. P2, in all the members due to external loads.

2. Remove the external loads and apply the unit vertical point load at the joint if the vertical deflection is required and find the stress.

3. Apply the equation for vertical and horizontal deflection.

16. Compare the unit load method and Castigliano's first theorem

In the unit load method, one has to analyze the frame twice to find the load and deflection. While in the latter method, only one analysis is needed.

17. Find the strain energy per unit volume, the shear stress for a material is given as 50 N/mm 2 . Take G= 80000 N/mm 2 .

 $U = \frac{\tau^{2}}{2G}$ per unit volume = 50² / (2 x 80000) = 0.015625 N/mm². per unit volume.

18. Find the strain energy per unit volume, the tensile stress for a material is given as 150 N/mm². Take $E = 2 \times 10$ N/mm².

 $U = \frac{f^{2}}{2E}$ per unit volume = (150) ² / (2 x (2x10 ²)) = 0.05625 N/mm ², per unit volume.

19.Define : Modulus of resilience.

The proof resilience of a body per unit volume. (ie) The maximum energy stored in the body within the elastic limit per unit volume.

20. Define : Trussed Beam.

A beam strengthened by providing ties and struts is known as Trussed Beams.

R. Ramethonda 30/8/22

5 20108/22



DEPARTMENT OF CIVIL ENGINEERING CERTIFICATE OF PARTICIPATION

This is to certify that Mr./Ms. <u>J.AKALYA</u> of <u>II YR</u> Civil Engineering has completed <u>BRIDGE COURSE</u> in the topic <u>STRENGTH OF MATERIALS</u> organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during <u>AUGUST 2022</u>.

Mr.R.RAMCHANDAR COURSE INCHARGE

R. Rame

Laron

Dr.R.SARAVANAN HOD/CIVIL

x Tim

Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING CERTIFICATE OF PARTICIPATION

S.VIJAY of II YR Civil This is to certify that Mr./Ms. Engineering has completed **BRIDGE COURSE** in the topic STRENGTH OF MATERIALS organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during AUGUST 2022.

R. Rom

Mr.R.RAMCHANDAR COURSE INCHARGE

Lavor

Dr.R.SARAVANAN HOD/CIVIL

t

Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2022-23 (ODD)

Date: 20.07.2022

CIRCULAR

This is to inform, that our department is going to conduct a CERTIFICATE COURSE on "AUTOCAD" in this academic year 2022-2023, Third year students are requested to enroll their name to Mr.R.CHANDRASEKAR, AP/CIVIL on or before 01.08.2022.

20 17/22

COORDINATOR (Mr.R.CHANDRASEKAR, AP/CIVIL)

relegia 68 HOD/CIVIL

HOD/CIVIL (DR.R.SARAVANAN)







DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022 – 2023 ODD SEMESTER <u>CERTIFIED COURSE ON AUTOCAD</u> SYLLABUS

UNIT IINTRODUCTION TO AUTOCADoInitial setup in autocad – UCS setting – limits – unit setup for imperial and metric units –
overview of ribbon icon – command line – using help autocad – drawing tools –
modification tools – dimension setting for different units.o

UNIT IIPLANNING OF 2D FOR RESIDENTIAL BUILDING6Creation of plan – standards for creating plan view – door window placing in plan view-text placing single muti-text and symbol – area calculation.6

UNIT IIICREATION OF DIFFERENT STAIRCASE IN PLAN VIEW6Standard size for riser and tread – straight stair staircase – dog-legged – spiral staircase –
array for stair creation – block and grouping staircase.6

UNIT IVCREATION OF ELEVATION AND SECTION6Projection plan view to elevation – construction line generation – different levels in
elevation – section line – cross-section projection of 2d plan – levels in section – leader and
multi-leader for annotation.6

UNIT VSITE PLAN CREATION AND SHEET SETUP6Generating site plan using document – different scales – sheet setup for A0, A1, A2, A3 & A4 –Legend setup and notes – page setup for printing and pdf exporting.

TOTAL: 30 PERIODS

R. Cur

CO-ORDINATOR (Mr.R.CHANDRASEKAR, AP/CIVIL)

5w 20/07/2022

HOD/CIVIL (DR.R.SARAVANAN)

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DEPARTMENT OF CIVIL ENGINEERING SPECIAL TIME TABLE (1.8.2022 - 6.8.2022,ODD SEM) B.E - CIVIL (Regulation 2017) - With Effect from 1.8.2022

Batch:2020 - 2024

Strength:20

ar: III	0-2024	Seme	ster: V			Class Ro	oom : 235				Block:
Session	1	2	10.45 am	3	4	12.30 pm	5	6	02.40 pm	7	8
Day	09.15am	10.00am	11.00 am	11.00am 11.45am	11.45am 12.30pm	01.10 pm	01.10pm 01.55pm	01.55pm 02.40pm	02.50 pm	02.50pm 	03.35pm 04.20pm
MON	ORIEN	TATION	d	COMM	M.SKILL		BC			CC	
TUE	R	FC		COMM	SKILL	X	I	BC		C	c
WED	R	FC	AK	T&P(A)	T&P(SS)	BREA	1	вс	EAK	0	:c
тни	R	FC	BRE	COMM	I.SKILL	NCH	1	BC	BRI	0	c
FRI	R	FC	1	COMM	SKILL	E		BC	190	9	:c
SAT	R	FC		COMM	I.SKILL	1	1	вс	35		c

SUB CODE	NAME OF THE SUBJECT	CREDITS	NAME OF THE STAFF	DEPT	PERIODS/WEEK
6	VALU	EADDITION	INTIATIVES (VAI)		
Orientation	Orientation Program	-	Mr.R.Sundharam	CIVIL	2
BC	Bridge Course	-	Ms.K.Elakkiya	CIVIL	12
COMM SKILL	Communication Skill		Mr.J.Radhakrishnan	ENGLISH	10
REC	Refresher Course		Mr.R.Ramchandar	CIVIL	10
T&P (A)	Training & Placement - Aptitude		Dr.K.Sudhakar	T&P	1
T&P(SS)	Training & Placement - Softskill		Mr.B.Suresh Babu	T&P	1
CC	Certification Course - AutoCADD	-	Mr.R.Chandrasekar	CIVIL	12
CLASS CO-0	RDINATOR	NAMEOF	THE REPRESENTATIVES		ROLL NO

CLASS CO-ORDINATOR	NAME OF THE REPRESENTATIVES	ROLL NO	
	G.Bharath	01	
Mr.R.Sundharam	S.Sneha	13	

	VALUE ADDITIO	N INTIATIV	VES (VAI) - REGULAR HOURS			
CC	Certification Course - AutoCADD	VAI	Mr.R.Chandrasekar	CIVIL	2	
GATE / CE	GATE / Competitive Exam	VAI	Ms.D.Shrividhya	CIVIL	2	
LIB/NET	Library / Internet	VAI	Mr.R.Sundharam	CIVIL	1	
NPTEL	NPTEL Swayam Courses	VAI	Mr.K.Arun	CIVIL	1	
T&P (A)	Training & Placement - Aptitude	VAI	Dr.K.Sudhakar	T&P	1	
T&P(SS)	Training & Placement - Softskill	VAI	Mr.B.Suresh Babu	T&P	1	_
VAC	Value Added Course on Urban Planning	VAI	Mr.R.Chandrasekar	CIVIL	3	_

D. Al 30/7/12 DEPT. TTC

30/07/2002 HOD

30/7/2022 5.1

PRINCIPAL



ACADEMIC YEAR 2022-23 (ODD SEM) CERTIFICATE COURSE ON "AUTOCAD" ASSESSMENT MARKS

III YEAR CIVIL / V SEM

S.No.	S.No. Reg. Number Student Name		Total marks(50)
1	821120103001	BHARATH G	10
2	821120103002	DHARUN KUMAR K	42
3	821120103003	HARIHARAN B	38
4	821120103004	JAILAKSHMAN S	36
5	821120103005	IENOVA JASMINE N	33
6	821120103006	KATHIRESWARIP	31
7	821120103007	KIRIITHIKASRII	36
8	821120103008	MAHARISH H	39
9	821120103009	MOHAMED FAISAL R	44
10	821120103010	NIKESHAI	33
11	821120103013	SNEHA S	40
12	821120103014	SRIRAM M C	45
13	821120103015	VISHNU R	37
14	821120103301	AKARAMUTHALVAN D	36
15	821120103302	ATHITHIYAN F	- 34
16	821120103303	DULASIRAMS	35 .
17	821120103305	HARI HARAN U	36
18	821120103306	IOSHUVA M	- 38
19	821120103307	KRISHNA KANTH N	40
20	821120103308	MADHAVAN S	35 .

COURSE INCHARGE (Mr.CHANDRA

(Mr.CHANDRASEKAR)

15/1012

HOD/CIVIL (DR.R.SARAVANAN)



Introduction To AutoCAD

- AutoCAD is a commercial computer-aided design and drafting software application. Developed and marketed by Autodesk, AutoCAD was first released in December 1982 as a desktop app running on microcomputers with internal graphics controllers.
- AutoCAD is used in industry, by architects, project managers, engineers, graphic designers, city planners and other professionals. It was supported by 750 training centers worldwide in 1994.

TOPICS IN THE 30 HOURS PROGRAM

- Introduction to AutoCAD.
- Initial setup in AutoCAD.
- Creation of 2D Plan in feet.
- Drawing and modification tools.
- Dimension setting and style.
- *Design center and tool palattes.
- Door, window in 2Dplan.
- Introduction to approval drawing concepts.
- Creation of 2D Plan, elevation, section and site plan in meter.
- Legends and sheet creation.
- Sheet setup for A0-A4 size.
- Printing setup and export pdf for all sizes.



DRAWING AND MODIFICATION AND DIMENSION SHORTCUTS

DRAWING SHORTCUTS	MODIFY SHORTCUTS	DIMENSION SHORTCUTS
line (L) Construction line (XL) ray(RAY)	Move(M) Copy(CO/CP)	Dimension Linear
Rectangle (REC)	Erase (E)	Dimension Aligned
Are (A)	Offset (O) Rotate(RO)	Dimension Angular
Polyline(PL) Polyline EDIT (PE)	Mirror (MI)	Dimension Radius
Polygon (POL) Ellipse (EL)	Trim (Tr) Extend (EX)	Dimension Diameter
Hatch (H)	Scale (SC)	Dimension ArLength
Hatch Edit (HE)	Stretch (S)	Dimension
Multi text (T)	Break (BR)	Dimension Continue
Spline (SPL)	Fillet (F)	Dimension Baseline
	Chamfer (CHA)	











A NAAC ACCREDITED INSTITUTION



KINGS COLLEGE OF ENGINEERING

RECOGNISED UNDER 2(F) &12(B) OF UGC, APPROVED BY AICTE, NEW DELHI & AFFILIATED TO ANNA UNIVERSITY, CHENNAL PUNALKULAM, GANDARVAKKOTTAI TALUK, PUDUKKOTTAI DISTRICT - 613 303

CERTIFICATE OF PARTICIPATION

THIS IS TO CERTIFY THAT **H.MAHARISH** OF III YR CIVIL ENGINEERING HAS PARTICIPATED IN THE **"CERTIFIED COURSE ON AUTOCAD"** ORGANIZED BY DEPARTMENT OF CIVIL ENGINEERING, KINGS COLLEGE OF ENGINEERING, THANJAVUR,

FROM AUGUST 2022 TO OCTOBER 2022.

COURSE INCHARGE

Mr.R.CHANDRASEKAR

HOD/CIVIL

Dr.R.SARAVANAN

PRINCIPAL

Dr.J.ARPUTHA VIJAYA SELVI



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEM) III YEAR CIVIL / V SEM CERTIFICATE COURSE ON "AUTO CAD" - ATTENDANCE REPORT

Т

S.No.	Reg. Number	Student Name	118/22	1/8/2	2/8/2	2/8/2	2 3/8/2	2 3/8/2	4/8/22	1/8/28	Stely	stel.	- clob	- chi	- alala	a Nati	alat
0.5	0011001000		7	8	T	8	7	8	7	8	7	0	7	2614	72 8/5/2	2 89 9 2	2 9/8/2
1	821120103001	BHARATH G	1	1	1	1	1	1	1	1	1	1	1	1	1	19	
2	821120103002	DHARUN KUMAR K	1	1	1	1:	AB	AB	1	1	1	1	1	1	- (1	AB
3	821120103003	HARIHARAN B	1	1	1	1	1	1	1	1	1	1	1	1		1	1
4	821120103004	JAILAKSHMAN S	1	1	1	1	1	1	1	1		1		1	-/-	1	1
5	821120103005	JENOVA JASMINE N	1	1	1	1	1	1	1	1	1		1	1	1	/	/
6	821120103006	KATHIRESWARI P	1	1	1	1	1	1	8.0	-	1	1	-	1	48	AB	/
7	821120103007	KIRUTHIKASRI J	1	1	1	1	1	1	1	np	1	1	/	/	1	1	1
8	821120103008	MAHARISH H	1	1	1	1	1	1	1			1	- (1	1	1	1
9	821120103009	MOHAMED FAISAL B	AB	AB	1	1	1	1	1	1		1	-	,		1	1
10	821120103010	NIKESHA J	1	1	1	1	1	1	1	-	1	1	(/	1	/	/
11	821120103013	SNEHA S	1	1	1	1	1	1		1			/	1	1	/	/
12	821120103014	SRIRAM M C	1		1	1	1	1		1	/	1	1	1	1	1	1
13	821120103015	VISHNU R	AR	AR	1	/	,	1	AB	AB		1	/	1	/	1	/
14	821120103301	AKARAMUTHALVAN	1	1.	1	1	1	/	1	1	1	· ·	1	/	/	1	/
15	821120103302	ATHITHIYAN E	1	1	1	1	1	1	1	1	1	1	1	/	1	/	1
16	821120103303	DULASIRAM S	1	1	1	1	1	1	1	1	1	1	<i>N</i>		1	1	AB
17	821120103305	HARI HARAN U	1	1	1	1	1	1	40	1	- /		/	/	1	1	1
18	821120103306	JOSHUVA M	1	1	1	1	1	1	AB	MB		1	-	/	/	/	1
19	821120103307	KRISHNA KANTH N	1	1	,	1	1	,	1	(1		AB	AB	1	1	AB
20	821120103308	MADHAVAN S	1	1	1	1	AP	40	1		1		1	/	1	1	1
	TOTAL ST	UDENTS	20	00	De	0	no	MB	/	/		/	/	1	1	1	1
	PRES	ENT	10	10	20	20	20	20	20	20	20	20	20	20	20	20	20
	ABSI	ENT	10	0	20	20	18	18	(1)	17	20	20	19	19	19	19	17
-	COURSE INCL	TARGE SIGN	DAN	0000	NIC	NU	2	2	3	3	NIL	NIL	1	1	1	1	3
	SS SHOL INCI	Initial State	Kere	CKC AL	Cort	Kar	RCP	RCP	EN.	Reit	RRM	ROY	RAN	RM	ROM	RRM	ROV



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEM) III YEAR CIVIL / V SEM CERTIFICATE COURSE ON "AUTO CAD" - ATTENDANCE REPORT

S.No.	Reg. Number	Student Name	9/8/21	14/8/2	2 14/8/2	21/8/2	221/8/2	2 4/9/22	4/9/2	24/9/2	2 0/9/2	2 17/0/2	17/4/5	alala	Che la	1061	151.1
			8	7	8	7	8	5	6	7	8	7	8	- 0/10/2	6	415/10/2	215/10/1
1	821120103001	BHARATH G	AB	1	1	1.	1	1	1	1	1	1	1	5	0	1	1
2	821120103002	DHARUN KUMAR K	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	821120103003	HARIHARAN B	1	1	1	1	1	,	1	1	1	AR	-	1		1	/
4	821120103004	JAILAKSHMAN S	1	1	1	1	1	1	1	1	1	MD	AB	1	/	AB	AB
5	821120103005	JENOVA JASMINE N	1	1	1	1	1	1	1	1		AB	AB	1	1	1	/
6	821120103006	KATHIRESWARI P	1	1	1	1	1	1	1	1	1	AB	AB	AB	AB	1	
7	821120103007	KIRUTHIKASRI J	1	1	1	AR	AR	1	1	1	1	1	1	-	1	1	
8	821120103008	MAHARISH H	1	1	1	1	1	1	1	1		1	1	/	/	-/	/
9	821120103009	MOHAMED FAISAL B	1	T	1	1	1	1	1	1	1	1	1	/	/	AB	AB
10	821120103010	NIKESHA J	1	1	1	1	1	1	1	1	1	1	1	1		1	/
11	821120103013	SNEHA S	1	1	1	1		1			1	1	/	/	1	AB	AB
12	821120103014	SRIRAM M C	1	1	1	1	,	1	1			AB	AB	/	/	1	1
13	821120103015	VISHNU R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	/
14	821120103301	AKARAMUTHALVAN	1	1	1	1	1	1	1	1	-	1	/	AB	AB	1	-
15	821120103302	ATHITHIYAN E	AB	1	1	1	1	,	1	1		1	/	1	/	1	/
16	821120103303	DULASIRAM S	1	1	1	1	1	1	1	1	1	-			1	/	1
17	821120103305	HARI HARAN U	1	,	1	,	1	1		/	1			1	1	AB	AB
18	821120103306	JOSHUVA M	AR	1	1	1	1	1	1				1	/	/	1	1
19	821120103307	KRISHNA KANTH N	1	1	1	1	1	1	1	1		/	1	AB	AB	/	-
20	821120103308	MADHAVAN S	1	1	3	AR	40	1	1	/	/	1	/	AB	AB	1	
	TOTAL ST	UDENTS	00	00	00	0.00	10	/	1	/	1	/	1	/	/	1	/
	PRES	ENT	50	20	20	20	90	20	20	20	20	20	20	20	20	20	20
	ABSI	ENT	2	20	20	18	2	20	20	20	20	10	16	16	16	16	16
	COURSE INCH	ARGE SIGN	nex1	ORX	PRIL	2000	non	NIL	NIL	NIL	NIL	pay a	04	04	04	04	04
	ANNUAL CONTRACTOR		Ker	NUM	Real P	467	Key	Key	KC-0	KS/	King	BEU	REAL	K-Q	REX	Est	REN







DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-2023 (ODD SEM) CERTIFICATE COURSE ON "AUTOCAD" STUDENTS ENROLMENT – III YEAR CIVIL

S. No	Reg. No	Student name	Student Signature
1	821120103001	BHARATH G	(7 Bhards
2	821120103002	DHARUN KUMAR K	K. Dhoumptunt.
3	821120103003	HARIHARAN B	B. Hard
4	821120103004	JAILAKSHMAN S	5-Jailarishman,
5	821120103005	JENOVA JASMINE N	Imbr moly N
6	821120103006	KATHIRESWARI P	Karmohi
7	821120103007	KIRUTHIKASRI J	J- Kinthi a. Sn'.
8	821120103008	MAHARISH H	41. april
9	821120103009	MOHAMED FAISAL B	Takk.
10	821120103010	NIKESHA J	J. n. westig .
11	821120103013	SNEHA S	Streng S
12	821120103014	SRIRAM M C	M.C.S-1
13	821120103015	VISHNU R	R.Wt.
14	821120103301	AKARAMUTHALVAN D	Dister
15	821120103302	ATHITHIYAN E	. Enthetheyen
16	821120103303	DULASIRAM S	J. Dund
17	821120103305	HARI HARAN U	V. Dog hora
18	821120103306	JOSHUVA M	r. Saluna
19	821120103307	KRISHNA KANTH N	Nº Encist
20	821120103308	MADHAVAN S	State.

Total Number of students enrolled: _____

R. Cu 52 COURSE INCHAF

101/08/2022 HOD/CIVIL



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022 – 2023 ODD SEMESTER CERTIFICATE COURSE REPORT

The Department of Civil Engineering organized a certificate Course for III Year students on 01.08.2022 to 15.10.2022.

OBJECTIVE

The objective of the course is:

- To learn the concepts of 2D drafting in AutoCAD.
- To know the concept of 2D planning and design concepts.

SESSION DETAILS

Mr.R.CHANDRASEKAR, AP/CIVIL, handled the session for III year students. He explained 2D planning and approval drawing concepts, unit conversion from feet to meter, sheet and printing setup for different paper size.



III YEAR CIVIL STUDENTS ATTENDING THE AUTOCAD PROGRAM



III YEAR CIVIL STUDENTS ATTENDING THE AUTOCAD PROGRAM

OUTCOME OF THE COURSE

At the end of session, the students would be able to:

- Understand the concepts in 2D planning.
- Know the concept of Imperial and metric planning.
- Learn the concepts in approval drawing.
- Know the sheet setup for all sizes.
- Learn about the layout plan.

12/2022

PREPARED BY

12/202 -HOD/CIVIL

PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2022-23 (ODD)

Date: 25.07.2022

CIRCULAR

This is to inform, that our department is going to conduct a **REFRESHER COURSE on BASICS IN SURVEYING** on this academic year 2022-2023, Second year students are requested to enroll their name to Ms.S.GAYATHRI AP/CIVIL on or before **04.08.2022**.

S. Ant F25/7/22

Coordinator (Ms.S.GAYATHRI AP/CIVIL)

5/07/2022 HOD/CIVIL (DR.R.SARAVANAN)



DEPARTMENT OF CIVIL ENGINEERING

RFC-REFRESHER COURSE

BASICS IN SURVEYING

YEAR/SEMESTER: II/III

ACADEMIC YEAR: 2022-2023(ODD SEM)

PREPARED BY

MS.S.GAYATHRI/ AP /CIVIL

KCE/CIVIL/ RFC/IIYR/SUR

KCE/DEPT. OF CIVIL

BASICS IN SURVEYING SYLLABUS

OBJECTIVES:

- To introduce the rudiments of plane surveying and geodetic principles to Civil Engineers.
- To learn the various methods of plane and geodetic surveying to solve the real world Civil Engineering problems.
- To introduce the concepts of Control Surveying

UNIT I FUNDAMENTALS OF CONVENTIONAL SURVEYING AND LEVELLING

5 Classifications and basic principles of surveying - Equipment and accessories for ranging and chaining - Methods of ranging - Compass - Levelling.

UNIT II THEODOLITE AND TACHEOMETRIC SURVEYING

6 Tacheometer - Stadia Constants - Analytic Lens - Tangential and Stadia Tacheometry surveying -Contour - Contouring - Methods of contouring - Tacheometric contouring - Contour gradient. UNIT III CONTROL SURVEYING AND ADJUSTMENT

Horizontal and vertical control - Methods - specifications - triangulation- baseline - satellite stations - Reduction to centre- trigonometrically leveling - single and reciprocal observations - traversing -Gale's table.

UNIT IV ADVANCED TOPICS IN SURVEYING

6 Hydrographic Surveying - Tides - MSL - Sounding methods - Three point problem - Strength of fix astronomical Surveying - Field observations and determination of Azimuth by altitude and hour angle methods.

UNIT V MODERN SURVEYING

Total Station: Advantages - Fundamental quantities measured - Parts and accessories - working principle - On board calculations - Field procedure.

GPS Surveying: Different segments - space, control and user segments - satellite configuration - signal structure -Traversing and triangulation.

TOTAL: 30 PERIODS

OUTCOMES:

At the end of the course the student will be able to understand

- The use of various surveying instruments and mapping
- Measuring Horizontal angle and vertical angle using different instruments
- Methods of Leveling and setting Levels with different instruments
- Concepts of astronomical surveying and methods to determine time, longitude, latitude and azimuth
- Concept and principle of modern surveying.

S. Molf. 11/8/22

STAFF INCHARGE (Ms.S.GAYATHRI)

SUR 2

1/08/2021 HOD/CIVIL (Dr.R.SARAVANAN)

101

KCE/DEPT. OF CIVIL



DEPARTMENT OF CIVIL ENGINEERING COURSE PLAN

Sub. Staff	Name : Basics in Surveying Name : Ms.S.Gayathri	Branch / Ye Batch Academic Ye	ar / Sem : B.E / : 2021- ear : 2022-	II /III -2025 -23 (ODD)
Topic No	Торіс	Teaching Methodology	No. of Y Hours Required	Cumulative No. of
UNITI	FUNDAMENTALS OF CONVENTION	AL SURVEYING AND	LEVELLING	periods (5)
1	Classifications and basic principles of surveying	BB	1	1
2	Equipment and accessories for ranging and chaining	BB	2	3
3	Methods of ranging – Compass Leveling.	BB	2	5
UNIT II	THEODOLITE AND TACHEOMETRIC	SURVEYING		(6)
4	Tachometer - Stadia Constants	BB	1	
5	Analytic Lens -Tangential and Stadia Tachometry surveying	BB	1	6
6	Contour – Contouring– Methods of contouring	BB/PPT	2	8
7	Tachometric contouring - Contour gradient		2	10
INIT III	CONTROL SURVEYING AND	ADJUSTMENT	1	11
9	Howing of L. L. A. A.			(6)
9	Horizontal and vertical control – Metho	ds BB	1	12
10	satellite stations – triangulation- baseline –	BB	2	14
10	Reduction to centre- trigonometrically leveling	BB/PPT	1	15
11	single and reciprocal observations	BB	1	16
12	Traversing –Gale's table.	BB	1	17
JNIT IV	CONTROL SURVEYING A	ND ADJUSTMENTS		(6)
13	Hydrographic Surveying – Tides – MSL – Sounding methods	BB/PPT	2	19
14	Three point problem -Strength of fix	BB	2	21
15	Astronomical Surveying	ВВ/РРТ	1	22
16	Field observations and determination of Azimuth by altitude and hour anglemethods.	BB	1	23

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UNIT IV	MODERN SURVEYING	1.		(7)
17	Total Station: Advantages - Fundamental quantities measured	BB/PPT	1	24
18	Parts and accessories - working principle - On board calculations - Field procedure.	BB	2	26
19	GPS Surveying: Different segments - space, control and user segments - satellite configuration	BB/PPT	2	28
20	Signal structure -Traversing and triangulation.	BB	2	30

COURSE OUTCOME

At the end of the course the student will be able to understand

- The use of various surveying instruments and mapping
- Measuring Horizontal angle and vertical angle using different instruments
- Methods of Leveling and setting Levels with different instruments
- Concepts of astronomical surveying and methods to determine time, longitude, latitude and azimuth
- Concept and principle of modern surveying.

S. Adfill 8/22 Prepared by Ms.S.GAYATHRI

Verified By HOD/CIVIL

KCE/CIVIL/ RFC/IIYR/SUR







Strength:19

DEPARTMENT OF CIVIL ENGINEERING SPECIAL TIME TABLE (11.8.2022 - 20.8.2022,ODD SEM) B.E - CIVIL (Regulation 2017) - With Effect from 11.8.2022

Batch:2021 - 2025

	Semes	ter: III			Class R	oom:234				Block: II
1	1 2 10.45 3 4 12.3		12.30 pm	5	6	-02.40 pm	7	8		
09.15am 10.00am	10.00am 10.45am	11.00 am	11.00am 11.45am	11.45am 12.30pm	01.10 pm	01.10pm - 01.55pm	01.55pm 02.40pm	02.50 pm	02.50pm - 03.35pm	03.35pm 04.20pm
ORIEN	ORIENTATION		C	C D		R	FC		SI	DC DC
R	FC		С	C			BC(1)		SDC	
BC(II)		AK	RFC		BREA	C	C	AK	SI	DC
BC	(11)	BRE	RI	FC	VCH	BC	:(1)	BRE	C	c
BC	:(I)		С	С	IUN	BC	(11)	1	SI	DC
SI	DC DC		RI	₹C		BC	(11)		BC	(1)
	1 09.15am 10.00am ORIEN R BC BC BC SI	1 2 09.15am 10.00am 10.00am 10.45am ORIENTATION RFC BC(II) BC(II) BC(I) SDC	I I	1 2 10,45 am 3 09.15am 10.00am 11.00am 11.00am 10.00am 10.45am 11.00am 11.45am 0RIENTATION C C C BC(II) Y RI RI BC(II) E C C SDC RI C RI	1 2 10,45 am 3 4 09.15am 10.00am 1 11.00am 11.45am 10.00am 10.45am 11.00am 11.45am 12.30pm 0RIENTATION KFC CC CC BC(II) KFC RFC CC BC(I) KFC RFC RFC SDC RFC RFC CC	Number Name Semester: III Class R 1 2 10.45 am 3 4 12.30 pm 09.15am 10.00am - 11.00am 11.45am 01.10 pm 10.00am - 11.00 am 11.45am 01.10 pm 00RIENTATION CC M M RFC Y RFC M BC(II) M RFC M M BC(I) CC RFC M M SDC RFC RFC M M	Semester: III Class Room : 234 1 2 10.45 am 3 4 12.30 pm 5 09.15am 10.00am - 11.00am 11.45am - 01.10pm 10.00am - 11.45am 12.30pm pm 01.10pm 01.00am - 11.45am 12.30pm 01.10pm 01.00am 10.45am am 11.45am 01.10pm 01.10 - 01.55pm 01.55pm ORIENTATION CC FR BC BC(II) H RFC H BC BC(I) E RFC H BC BC(I) CC RFC BC BC BC(I) E RFC BC BC	Semester: III Class Room : 234 1 2 10.45 am 3 4 12.30 pm 5 6 09.15am 10.00am - 11.00am 11.45am - 01.10pm 01.55pm 10.00am 10.45am am 12.30pm 01.10pm 01.55pm 02.40pm 0RIENTATION V CC RFC BC(I) BC(I	Semester: III Class Room : 234 1 2 10.45 am 3 4 12.30 pm 5 6 02.40 pm 09.15am 10.00am 1 11.00am 11.45am 01.10pm 01.55pm 02.50 02.50 pm 10.00am 1 11.45am 12.30pm pm 01.55pm 02.40pm pm 0RIENTATION X CC RFC RFC BC(I) III III <td>Semester: III Class Room : 234 1 2 10.45 am 3 4 12.30 pm 5 6 02.40 pm 7 09.15am 10.00am - 11.00 am 11.45am 01.10 pm 01.10pm 01.55pm 02.50 pm 02.50pm 03.35pm 03.35pm</td>	Semester: III Class Room : 234 1 2 10.45 am 3 4 12.30 pm 5 6 02.40 pm 7 09.15am 10.00am - 11.00 am 11.45am 01.10 pm 01.10pm 01.55pm 02.50 pm 02.50pm 03.35pm 03.35pm

SUB CODE	NAME OF THE SUBJECT	CREDITS	NAME OF THE STAFF	DEPT	PERIODS/WEEK
	VALUEA	DDITION I	NTIATIVES (VAI)		
Orientation	Orientation Program	•	Mr.R.Ramchandar	CIVIL	.2
BC(1)	Bridge Course I (SOM)	-	Mr.R.Ramchandar	CIVIL	8.
BC(II)	Bridge Course II (EM)	-	Ms.D.Sharmila	CIVIL	8
RFC	Refresher Course	-	Ms.S.Gayathri	CIVIL	10
CC	Certification Course - AutoCADD	-	Mr.R.Chandrasekar	CIVIL	10
SDC	Skill Development Course (MS OFFICE)	-	Mr.R.Sundharam	CIVIL	10

CLASS CO-ORDINATOR	NAME OF THE REPRESENTATIVES	ROLL NO
Ma D Damabaa daa	S.Mohan -	09
Mr.R.Ramchandar	G.V.Naaviniyaa	10

	VALUE ADDITIO	N INTIATI	VES (VAI) - REGULAR HOURS	
сс	Certification Course - AutoCADD	VAI	Mr.R.Chandrasekar	CIVIL
LIB/NET	Library / Internet	VAI	Mr.R.Ramchandar	CIVIL
NPTEL	NPTEL Swayam Courses	VAI	Mr.R.Ramchandar	CIVIL
T&P (A)	Training & Placement - Aptitude	VAI	Dr.K.Sudhakar	T&P
T&P(SS)	Training & Placement - Softskill	VAI	Mr.B.Suresh Babu	T&P

DEPT. T

HOD 10 108 12022

10/8/2022 2.1 PRINCIPAL



ACADEMIC YEAR 2022-23 (ODD SEM) RFC-BASICS IN SURVEYING ASSESSMENT MARKS

II YEAR CIVIL / V SEM

S.No.	Reg. Number	Student Name	Total marks(50)
1	821121103001	AKALYA J	50
2	821121103002	ANITHA B	50
3	821121103003	ARULPANDIYAN A	4-8
4	821121103004	ARUNKUMAR M	47
5	821121103005	HALITH A M	42
6	821121103006	MADHAN D S	43
7	821121103007	MANIKKARAJ R	42
8	821121103008	MATHANKUMAR S	42
9	821121103009	MOHAN S	50
10	821121103010	NAAVINIYAA G V	50
11	821121103011	NITHISH KUMAR T S	43
12	821121103012	PASHAGAN G (VOC)	45
13	821121103013	PRAGADISH M	45
14	821121103014	PRASANNA R	43
15	821121103015	SARAVANAN K	42
16	821121103016	SURYA.V	50
17	821121103017	TAMILARASAN T	50
18	821121103018	VENKATACHALAM D	50
19	821121103019	VIJAY S	50
20		SANJAIMANI M	47
21		SINDHU G	49
22		SURUTHI A	49
23		MOHAMMED RIYAZ J	48

S. efat 7:22/8/22

SUBJECT INCHARGE (MS.S.GAYATHRI)

22/05/2082 HOD/CIVIL (DR.R.SARAVANAN)

Kings College of Engineering, Punelkulain



INTRODUCTION

• Theodolite is used to measure the horizontal and vertical angles.

• Theodolite is more precise than magnetic compass.

- ^o Magnetic compass measures the angle up to as accuracy of 30°. However a vernier theodolite measures the angles up to and accuracy of 10°, 20°.
- ⁶ There are variety of theodolite vernier, optic, electronic etc.



Main parts of a theodolite * Levelling head (7): Levelling head is used to attach the instrument to tripod and attach the plumb boh along the vertical original has instrument.



MAIN PARTS-4

Plate level (5):

扫

- Spirit level (5): Spirit level with the hubble and graduation on glass cover. A single lovel or two levels fixed in perpendicular direction may be reactified.
- perpends provided
- The spirit level can be adjuste the foot screw (21) of the level head (7).

Telescope (19): The essential parts of the telescopes are eye-piece, disphragm with reass hairs, object lans and arrangements to focus the telescope.



TYPE OF THEODOLITE





efficiencle plate (18): ate with the gradue around, from 0 to 30 late with the gr around, from 0 rection. The gra ed in to 3 ports als to 20 min

ontal angles are measured with this Horis

The size of the thredelite is defined by the diameter of horizontal circle.

Upper plate (17): Horizontal plate of smaller diameter provided with two verties un dimensionally opposite parts of its incentifyeraper, These verties are designate as A and B. Thuy nee wide to raid fractions. The verties are graduated in 80 min and orch minute in thread in 80 min and orch minute in thread in 8 to 5 parts makin least count 200 m 107.



MAIN PARTS-5

Vertical circle (1): circular plat: supported on horizontal axis of the instrument between the A-frames. Vertical circle has graduation (540 in four quadrants. Vertical circle moves with the tolescope when it is restated in the vertical plane.

Vertical circle clump and tangent screw (11): Clumping the vertical tircle restrict the socements of telescope in vertical plane.

Altitude level (2): A highly sensitive bubble is used for levelling perticularly when taking the vertical angle observations.





Adjustment of the theodolite

- Temporary Adjustment
 The leveling screws use at the centre of their run.
 The stifting head of the incoddline is not its centre so that equal movement is possible in all the directions.
 The wing nuis on the flip of legs are tight enough to that when raised, the migod legs do not fall under their own weight.

- Setting up the theodolite
 Centing This involves setting the theodolite exactly over the station mark or on the station peg. It is done by the following acept
 The plenebook is suspended from assual book statehed to the varical axis, of the theodolite.
 The instrument is placed over the station mark with the telescope at a converting height and with the tripod legs set well spart.
 Two legs of the tripod are set firmly into the ground and the third leg is moved realistly to bring the plantb book stated your the station mark. Then the distancement is also pushed into the ground.
 If the instrument has a shifting had, the instrument is roughly control over the station mark.

In the case of a three screw leveling bead, the other plate level will then be parallel to the line joining the third foot screw and the mid-point of the line joining the first two foot screws, as shown in Fig. 4.4. 2. Bring the bubble of the longer plate level to the centre of its run by moving the two foot screws, asy A and B, uniformly either humards or outwards (Fig. 4.4(a)). It may be noted that the bubble always moves in the direction of the left thumb as the surveyor turns the screw. 3. Move the third foot screw C so that the bubble in the other plate level is centred (Fig. 4.4(b)). 4.9.3 FocUssing Ucconsists of focussine the evenince and the phiective.

It consists of focussing the eyepiece and the objective.

- Recursing the symplece. This operation is done to make the cross-hairs appear elarly visible. The following steps are involved:
 The telescope is directed towards the sky or a sheet of white paper held in front of the objective.
 The cycpice is moved in or out until the cross-hairs appear clear and distinct.
- this ince. consing the objective This operation is done to bring the image of the object the plane of the cross-bairs. The following steps are involved: 1. The telescope is directed towards the object. 2. The isoussing screw is turned until the image appears clear and sharp.

Reading a theodolite



the small c. the small c. two of the trip tre. To achi the left, i.e the third leg of the trip ed. This ley is then p



Measurement of horizontal angle

Measurement of Angle ABC * The insurances is set over B

- The lower clamp is kept fixed and upper clamp is lossened.
- loasened. Turn the Bioscope clockwise set vermur A to 0° and version B to supervisionately 160°. Upper clamp is tightened and using the upper tange serves the vermin A and B are exactly soft to 0° and 180°.
- Upper clamp is tightly fixed, lower nr telescope is directed towards A and b rod at A. Dobter

- red at Å Tightened the lower elamp and turn the lower tangent screw to perfissly bison tranging red at Å. Lasse the upper champ and turn the tolescope clockwise to bisect the ranging rod at C. tightened the upper clamp and da the fine adjustment with upper tangent transv. The reading on vertifier Å and B are noted. Verifies Å gives the angle directly and carrier B gives the refining by subtracting the initial reading (1807) from final vandors


Kings College of Engineering, Punalkulan



PROBLEM

Calculate the latitudes, departures and closing error for the following traverse conducted at allahabad. Adjust also the traverse using Bowditch's rule.

AB	89.31	45° 10'
BC	219.76	72° 05'
cə	151.18	161º 52'
DE	159,10	228* 45*
EA	232.26	300° 42'

Eleparture + 1285 = 3285 - 1785 - 7838 + 227.5 - 343.0 - 830.5 - 830.5 Balancing of traverse Astantion 2 Taxes or Arch - Bowditch's rule: Lations (1) Convex all ve Latinual Set Equina 10 Total error is distributed in proportion to the lengths of the reaverage logs. MO.04
 473.90
 106.57
 3014
 250.37 101.3 201.3 404.3 • 10.5 • 30.5 • 30.5 • 1 48 MC at in tertain of any side 145 6 · Irregit of flar sels . w total nes of all the st n to departer of any vid $\begin{array}{l} 0.050\, \mathrm{Herm}\, \mathrm{ser}\, \mathrm{mos}\, \mathrm{ser}\, \mathrm{mod}\, \mathrm{se}\, \mathrm{ser}\, \mathrm{mod}\, \mathrm{sea}\, \mathrm{mod}\, \mathrm{sea}\, \mathrm{se}\, \mathrm{se}\, \mathrm{sea}\, \mathrm{$ · brigth of this side a brial en to betrade of any side The number of the side * Transmission of the side action of a side of the side (b) Connection to departure of arty sole n of proteins of occultures joined by deted lines, 5 Q = (1900 × 423.3 + 1283 × 1803 + 480.3 × 70.0 + 330 + 200.0) = 159.263.23 Accurate of that side
 arithmetical search of all departments alterdanes = $\frac{1}{2}$ (E.P. - E.Q.) = $\frac{1}{2}$ (306.037.05 - 194.36325) = $\frac{1}{2}$ (306.03.05)

Calculation of traverse area



××*×*×** roducts of coordinates joined by solid ferms We produce of coordinate plant by wild the $\mathbf{x} = \mathbf{y}_{i,j,j} + \mathbf{y}_{i,j,j} + \mathbf{y}_{i,j,j} + \mathbf{y}_{i,j,j} + \mathbf{y}_{i,j,j} + \mathbf{y}_{i,j,j} + \mathbf{y}_{i,j,j}$ produce of coordinate plants by $\mathbf{x}_{i,j,j} + \mathbf{x}_{i,j,j} + \mathbf{x}_{i,j$ Here we are $= \frac{1}{2} + (\mathcal{K} \, P - \Sigma \, \mathcal{G})$

0



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEM) II YEAR CIVIL / III SEM BASICS IN SURVEYING - ATTENDANCE REPORT

S.No.	Reg. Number	Student Name	11/8/5	11/8/22	12/8/22	12/8/22	13/8/2	13/9/2	4-13/8/2	13/8/22	15/8/2	15/8/2	15/8/2	15/2	16/8/2	16/0/2	17/2/2
-			3	4	3	4	5	6	7	8	5	6	7	8	5	G	7
1	821121103001	AKALYA J	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	821121103002	ANITHA B	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	821121103003	ARULPANDIYAN A	1	1	1	1	1	1	1	1	1	1	1	1	1		1
4	821121103004	ARUNKUMAR M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	AD
5	821121103005	HALITH A M	AB	AB	1	1	1	1	1	1	1	1	1	1	1	1	1
6	821121103006	MADHAN D S	1	1	1	1	AR	AB	AR	AR	1		1	1	1	1	1
7	821121103007	MANIKKARAJ R	1	1	AR	AR	1	1	1	1	1	1	1	1	1	1	1
8	821121103008	MATHANKUMAR S	1	1	/	1	1	1	1	1	1	1	1	1	1	1	1
9	821121103009	MOHAN S	1	1	1	1	1	1	1	1	1	1	1	r	1	1	1
10	821121103010	NAAVINIYAA G V	1	1	1	1	1	1	1	1	1	1	1	1	1		1
11	821121103011	NITHISH KUMAR T S	AB	AR	1	1	1	1	1	1	1	1	1	1	1	1	-
12	821121103012	PASHAGAN G (VOC)	1	1	1	1	1	1	1	1	1	1	1	1	-	00	
13	821121103013	PRAGADISH M	AB	AB	1	1	1	1	1	1	1	1	1	1	AD	AB	1
14	821121103014	PRASANNA R	1	1	AR	AR	1	1	1	1	1	1	1	1	-		1
15	821121103015	SARAVANAN K	1	1	1	1	AR	AR	AR	AR	1	1	1	1	1		
16	821121103016	SURYA.V	1	1	1	1	1	1	1	1	1	1	1	1		1	1
17	821121103017	TAMILARASAN T	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-
18	821121103018	VENKATACHALAM D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	,
19	821121103019	VIJAY S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20		SANJAIMANI M	1	1	1	1	1	1	1	1	1	1	1	1	AD	40	1
21		SINDHU G	1	1	1	1	1	1	1	1	1	1	1	1	10	MD	1
21		SURUTHI A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23		MOHAMMED RIYAZ J	1	1	1	1	1	1	1	1	1	1	1	1	1	1	,
	TOTAL S	TUDENTS	23	23	23	22	23	23	23	23	23	22	22	23	20	0.0	1
	PRE	SENT	20	200	21	21	21	21	23	21	22	22	22	22	21	01	00
	AB	SENT	.3	2	2	2	2	2	2	2	NIL	NIL	NIL	NIL	2	2	22
	COURSE INC	CHARGE SIGN	RESA	Rest	Rest	RC	REN	RCJA	REM	REA	REA	RCA	Real	REA	READ	CM (REY



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEM) II YEAR CIVIL / III SEM BASICS IN SURVEYING - ATTENDANCE REPORT

S.No.	Reg. Number	Student Name	17/8/22	18/8/22	18/8/22	19/8/22	19/8/2	19/8/2	19/8/2	2/8/2	2 21/8/2	2 21/8/2	21/8/21	27/6/2	27/8/22	27/8/2	\$ 27/8/2
			8	3	4	1	2	3	4	5	6	7	8	5	6	7	8
1	821121103001	AKALYA J	1	1	1	1	1	1	1	1	r	1	1	1	1	1	1
2	821121103002	ANITHA B	1	1	1	1.	1	1	1	1	1	1	1	1	1	1	1
3	821121103003	ARULPANDIYAN A	1	AB	AB	1	1	11	1	1	1	1	1	1	1	AR	AR
4	821121103004	ARUNKUMAR M	AB	1	1	1	/	1	1	1	1	1	1	1	1	1	1
5	821121103005	HALITH A M	1	1	1	1	1	1	1	1	1	r	1	1	1	AR	AR
6	821121103006	MADHAN D S	1	AB	AB	1	1	1	1	1	1	1	1	1	1	1	1
7	821121103007	MANIKKARAJ R	1	1	1	1	1	1	1	1	1	1	1	AR	AR	1	1
8	821121103008	MATHANKUMAR S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	821121103009	MOHAN S	1	1	1	AR	AB	AR	AR	1	1	1	1	1	1	1	1
10	821121103010	NAAVINIYAA G V	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	821121103011	NITHISH KUMAR T S	1	1	1	1	1	1	10	1	1	1	1	1	1	1	1
12	821121103012	PASHAGAN G (VOC)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	821121103013	PRAGADISH M	1	1	1	1	1	1	1	1	1		1	1	1	AD	AP
14	821121103014	PRASANNA R	1	1	1	1	1	1	1	AP	AR	1	1	1	1	/	1
15	821121103015	SARAVANAN K	1	1	1	1	1	1	1	1	1	1	1	1	,	1	
16	821121103016	SURYA.V	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	821121103017	TAMILARASAN T	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	821121103018	VENKATACHALAM D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	821121103019	VIJAY S	1	1	1	1	1	1	1	1	1	1	1	1	,	1	1
20		SANJAIMANI M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21		SINDHU G	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21		SURUTHI A	1	1	1	1	1	1	1	1			1	1	1	1	1
23		MOHAMMED RIYAZ I	1	1	1	1	1	1	1	AB	AR	1	1		1	1	1
	TOTAL S	TUDENTS	23	23	23	23	23	23	03	23	27	22	22	22	22	22	22
	PRE	SENT	22	21	21	22	22	22	22	10	22	22	02	2.2	22	20	26
	AB	SENT	5	2	2	1	t	1	1	2	2	NIL	NIL	1	1	3	3
	COURSE INC	CHARGE SIGN	RCA	RCA	RCS	REA	RB?	REY	REZ	REN	Res	RCA	RA	REA	REM	RCH	REN

Kings College of Engineering, Punalkulam







ACADEMIC YEAR 2022-23 (ODD SEM) RFC-BASICS IN SURVEYING STUDENTS ENROLLMENT

II YEAR CIVIL / 1/ SEM

S.No.	Reg. Number	Student Name	Students Signature
· 1	821121103001	AKALYA J	J-ARalyoz
2	821121103002	ANITHA B	B. Antha
3	821121103003	ARULPANDIYAN A	A. Au
4	821121103004	ARUNKUMAR M	M. Arun Kumar
5	821121103005	HALITH A M	A.m. Halith
6	821121103006	MADHAN D S	psmalth.
7	821121103007	MANIKKARAJ R	R. Manikerny
8	821121103008	MATHANKUMAR S	E-100 1 Clady
9	821121103009	MOHAN S	S. Marip
10	821121103010	NAAVINIYAA G V	GI.V. Naaviniyaa
11	821121103011	NITHISH KUMAR T S	losthiskyme JU.
12	821121103012	PASHAGAN G (VOC)	Cn. Pashagap.
13	821121103013	PRAGADISH M	M. Vergadish
14	821121103014	PRASANNA R	R. Brash
15	821121103015	SARAVANAN K	Davavanan
16	821121103016	SURYA,V	luge -
17	821121103017	TAMILARASAN T	J. Jan
18	821121103018	VENKATACHALAM D	p. Yen 12ata Chalaim.
19	821121103019	VIJAY S	S.Villay
20		SANJAIMANI M	Sogniai warmen
21		SINDHU G	(H. Sinothy.
22		SURUTHI A	A Suruth
23		MOHAMMED RIYAZ J	J. Harging .

SI And Fin18 22 SUBJECT INCHARGE (MS.S.GAYATHRI)

11 | 08 | 2022. HOD/CIVIL

(DR. R. SARAVANAN)

111



CERTIFICATE OF APPRECIATION

This is to certify that Mr./Ms. <u>S.MOHAN</u> of <u>II YR</u> Civil Engineering has completed <u>REFRESHER COURSE</u> in the topic <u>BASICS IN SURVEYING</u> organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during

AUGUST 2022.

S. 4-

Ms.S.GAYATHRI COURSE INCHARGE

Dr.R.SARAVANAN HOD/CIVIL

Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL



CERTIFICATE OF APPRECIATION

This is to certify that Mr./Ms. <u>G.V.NAAVINYAA</u> of <u>II YR</u> Civil Engineering has completed <u>REFRESHER COURSE</u> in the topic <u>BASICS IN SURVEYING</u> organized by the Department of Civil Engineering, Kings College of Engineering, Thanjavur, during

AUGUST 2022.

S.A

Ms.S.GAYATHRI COURSE INCHARGE

Jaron

Dr.R.SARAVANAN HOD/CIVIL

t

Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL



ACADEMIC YEAR 2022-23 (ODD)

Date: 25.07.2022

CIRCULAR

This is to inform, that our department is going to conduct a **CERTIFICATE COURSE** on "**AUTOCAD**" in this academic year 2022-2023, Second year students are requested to enroll their name to Mr.R.CHANDRASEKAR, AP/CIVIL on or before **04.08.2022**.

25 /1/22

COORDINATÓR (Mr.R.CHANDRASEKAR, AP/CIVIL)

HOD/CIVIL (DR.R.SARAVANAN)



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022 – 2023 ODD SEMESTER <u>CERTIFIED COURSE ON AUTOCAD</u> <u>SYLLABUS</u>

UNIT I INTRODUCTION TO AUTOCAD

Initial setup in autocad – UCS setting – limits – unit setup for imperial and metric units – overview of ribbon icon – command line – using help autocad – drawing tools – modification tools – dimension setting for different units.

UNIT II PLANNING OF 2D FOR RESIDENTIAL BUILDING 6

Creation of plan – standards for creating plan view – door window placing in plan view – text placing single muti-text and symbol – area calculation.

UNIT IIICREATION OF DIFFERENT STAIRCASE IN PLAN VIEW6Standard size for riser and tread - straight stair staircase - dog-legged - spiral staircase -

Standard size for riser and tread – straight stair staircase – dog-legged – spiral staircase array for stair creation – block and grouping staircase.

UNIT IV CREATION OF ELEVATION AND SECTION

Projection plan view to elevation – construction line generation – different levels in elevation – section line – cross-section projection of 2d plan – levels in section – leader and multi-leader for annotation.

UNIT V SITE PLAN CREATION AND SHEET SETUP

Generating site plan using document – different scales – sheet setup for A0, A1, A2, A3 & A4 – Legend setup and notes – page setup for printing and pdf exporting.

TOTAL: 30 PERIODS

6

6

CO-ORDINATOR (Mr.R.CHANDRASEKAR, AP/CIVIL)

25/07/22

HOD/CIVIL (DR.R.SARAVANAN)

Format-QPD6





DEPARTMENT OF CIVIL ENGINEERING SPECIAL TIME TABLE (11.8.2022 - 20.8.2022,0DD SEM) B.E - CIVIL (Regulation 2017) - With Effect from 11.8.2022

Ratch:2021 - 2025

Class Boom : 234

Strength:19

Block: II

Vear II		Semes	ter: III			Class Ro	oom : 234		.02.40	7	8
	1	2	10.45	3	4	12.30 pm	5	6	pm	02.50pm	03.35pm
Session	09.15am	10.00am	11.00	11.00am	11.45am	01.10 pm	01.10pm - 01.55pm	01.55pm 02.40pm	02.50 pm	03.35pm	04.20pm
Date	10.00am	10.45am	am	11.45am	12.30pm	P	P	FC		S	DC
11.8.22	ORIEN	TATION		(.C			c(l)	1	S	DC
12.8.22	R	IFC		(CC	AK	B		1 2	s	DC
16.8.22	B	C(II)	AK	R	FC	BRF		CC	REAL		
17872		can	3RE	F	RFC	VCH	B	C(I)	8		
17.0.22	B	c(ii)			<u></u>	I PI	В	C(11)		5	DC
18.8.22	E	BC(I)				-		can	1	B	IC(I)
20.8.22		SDC		1	RFC	1					

	T	THE OF THE STAFF	DEPT	PERIODS/WEER
NAME OF THE SUBJECT	CREDITS	NAME OF THE STAT		·
VALUE A	DDITION I	NTIATIVES (VAI)	Com	2
1 D		Mr.R.Ramchandar	LIVIL	
Orientation Program		M- P. Ramchandar	CIVIL	8
Bridge Course I (SOM)		MLR.Rahlenhan	CIVIL	8
Bridge Course II (EM)		Ms.D.Sharmila	CIMI	10
Bridge course in (city)		Ms.S.Gayathri	LIVIL	10
Refresher Course		Mr.R.Chandrasekar	CIVIL	
Certification Course - AutoCADD	-	the D. Consideration	CIVIL	10
Skill Development Course (MS OFFICE)) -	Mr.R.Sundharan		
		THE DEPRESENTATIVES		ROLLNO
RDINATOR	NAMEOF	THE REPAIDENTITY OF		09
	S.Mohan			10
andar	G.V.Naavi	niyaa		
	NAME OF THE SUBJECT VALUE A Orientation Program Bridge Course I (SOM) Bridge Course II (EM) Refresher Course Certification Course - AutoCADD Skill Development Course (MS OFFICE) ORDINATOR andar	NAME OF THE SUBJECT CREDITS VALUE ADDITION I Orientation Program - Bridge Course I (SOM) - Bridge Course II (EM) - Refresher Course - Certification Course - AutoCADD - Skill Development Course (MS OFFICE) - ORDINATOR S.Mohan andar G.V.Naavi	NAME OF THE SUBJECTCREDITSNAME OF THE STAFFVALUE ADDITION INTIATIVES (VAI)Orientation Program-Mr.R.RamchandarBridge Course I (SOM)-Mr.R.RamchandarBridge Course II (EM)-Ms.D.SharmilaRefresher Course-Ms.S.GayathriCertification Course - AutoCADD-Mr.R.ChandrasekarSkill Development Course (MS OFFICE)-Mr.R.SundharamORDINATORNAME OF THE REPRESENTATIVESandarG.V.Naaviniyaa	NAME OF THE SUBJECT CREDITS NAME OF THE STAFF DEPT VALUE ADDITION INTIATIVES (VAI) Orientation Program - Mr.R.Ramchandar CIVIL Bridge Course I (SOM) - Mr.R.Ramchandar CIVIL Bridge Course II (EM) - Ms.D.Sharmila CIVIL Refresher Course - Ms.S.Gayathri CIVIL Certification Course - AutoCADD - Mr.R.Sundharam CIVIL Skill Development Course (MS OFFICE) - Mr.R.Sundharam CIVIL ORDINATOR S.Mohan G.V.Naaviniyaa - -

		INTIATIV	ES (VAI) - REGULAR HOURS	
	VALUE ADDITION	VAL	Mr. R. Chandrasekar	CIVIL
CC	Certification Course - AutoCADD	VAI	Mr.R. Ramchandar	CIVIL
LIB/NET	Library / Internet	VAI	M-D Remchandar	CIVIL
NPTEL	NPTEL Swayam Courses	VAI	Mr.K.Rahenandar	T&P
T&P (A)	Training & Placement - Aptitude	VAI	Mr.B.Suresh Babu	T&P
T&P(SS)	Training & Placement - Softskin			

DEPT. TT

. Senaran 2022 HOD 10 108 2022

Kings College of Englisering.

10/8/2022 2.M PRINCIPAL



ACADEMIC YEAR 2022-23 (ODD SEM) CERTIFICATE COURSE ON "AUTOCAD" ASSESSMENT MARKS

II YEAR CIVIL / III SEM

S.No.	Reg. Number	Student Name	Total marks(50)
1	821121103001	AKALYA J	45
2	821121103002	ANITHA B	43
3	821121103003	ARULPANDIYAN A	41
4	821121103004	ARUNKUMAR M	37
5	821121103005	HALITH A M	35
6	821121103006	MADHAN D S	36
7	821121103007	MANIKKARAJ R	34
8	821121103008	MATHANKUMAR S	36
9	821121103009	MOHAN S	38
10	821121103010	NAAVINIYAA G V	40
11	821121103011	NITHISH KUMAR T S	35
12	821121103012	PASHAGAN G (VOC)	36
13	821121103013	PRAGADISH M	35
14	821121103014	PRASANNA R	38
15	821121103015	SARAVANAN K	35
16	821121103016	SURYA.V	41
17	821121103017	TAMILARASAN T	42"
18	821121103018	VENKATACHALAM D	40
19	821121103019	VIJAY S	38
20		SANJAIMANI M	36
21		SINDHU G	42
22		SURUTHI A	41
23		MOHAMMED RIYAZ J	38

2 18/22

COURSE INCHARGE (Mr.CHANDRASEKAR)

27/07/2020

HOD/CIVIL (DR.R.SARAVANAN)

		CEAT
DEPART	MENT OF CIVIL ENGI	NEERING

II YEAR CIVIL / III SEM - ATTENDANCE REPORT

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S.No.	Reg. Number	Student Name	4/8/20	12/8/22	13/8m	13/812	19/8/00	16 1870	17/8/124	18/18/14	1818700	18 16/4	8:18 m	allem	22 1870	23 /8124	25/8/2
		Contraction and Access	314	314	210	7,8	516	218	314	516	3.4	Cib	516	818	1 3.4	516	74
1	821121103001	AKALYA J	3-Ardu	3-Aray	3.AKo4	2. Akely	2-Alton	S-AKOH	J-AKCHA	3. Alow	ZANSOA	2. Akon	5 AKUlyn	7. Akoly	STAKU	3-Pitch	2-Alterto
2	821121103002	ANITHA B	B.Anith	Robert	BAalt	BANK	B Anth	B. Anil	\$ All	8 1	Stall	S:Anth	BAR	3.All	\$ Aw	18. Alt	B. Ant
3	821121103003	ARULPANDIYAN A	ARNUL	Vient	AFRICA	A-A-A	AFRIN	April	AFFIN	north	erent.	Arra	APRIL	AFRU	DANY	RAW	panel
4	821121103004	ARUNKUMAR M	M.M	M. For	Million	MAN	N.PM	M. POHT	M' Mary	Py. Por	H.Am	M. Arro-	MAG	M. Arrey	N. And	M. Arz-	MAN
5	821121103005	HALITH A M	AB	am hour	im how	am tob	A M. hel	Ambelia	Amtob	2 milou	pm. has	A.W. Joy	an felt	Am.ha	Amle	amfabo	Amildi
6	821121103006	MADHAN D S	Noch	Mart	AB	then	Storel	the	Moh	Mark	flat	My	m	lar	Ulat	AR	Made
7	821121103007	MANIKKARAJ R	AB	Rhuki	R. Hunka	Rul	pruk	Portogia	RHuli	Prosi	RHAR	Robasi	RHala	Rolan"	Poplanda	Piller	P-Mak
8	821121103008	MATHANKUMAR S	SMI	sput	S-huf	Smit	AR	Sping	Sma	grus	Brut	sout	Spirt	Rowt	Sind	Smit	8ml
9	821121103009	MOHAN S	000	aus	an	SAD	Chino	E	3000	and	Can	Gar	Route	TON	Saun	Saint	G
10	821121103010	NAAVINIYAA G V	NU	er itor	ann	and P	CAS	AND	às	- D	and a	and a	in P	àd	inde	EL AND	AND
11	821121103011	NITHISH KUMAR T S	15 fin	withir	withis	Aitist.	AR	NILLis	Millish	Nittal	NIHISL	NI this	ACIHAN	neithia	Pit H	NRO	NALIN
12	821121103012	PASHAGAN G (VOC)	G Parks	Resperger	6.840	a paper of	a perform	G. Bally	Rashaf	AB	onport	1- pren	Ge Oak an	READ	0. PA4	Dupagar	Ashaa
13	821121103013	PRAGADISH M	A	Rec	0	WS	R	ALT	Q		Sec	AT I	S	att +	A	Sto	AB
14	821121103014	PRASANNA R	R-Pral	R-Put	R-Prod	R-Pack	Q.P.and	R-PWH	Ramil	AB	Republi	Real	R-Bas	- R. Rust	. p.o.l.	1 ago	P-Part
15	821121103015	SARAVANAN K	1.Rana	C.R.CLA	le-salar	kaded	K-gae	Kan	1-sal	b. bar	Kacy	keas	AB	k pasa	6.aque	k.Sos	Kaase
16	821121103016	SURYA.V	Stop.	Jup.	Cog	augo.	Sof	Says.	Sugp	Same	Self	Sug.	Surger.	Siege.	Sam	Stelyp	Sige
17	821121103017	TAMILARASAN T	TIN	TAL	r.m.	TIT	TEN	TTW	15-	THU	TTT'	RGN	TT	TSi	tim	RIS!-	TTi
18	821121103018	VENKATACHALAM D	pille	alle -	8×	0×	No	4.0	Q.Y	07	it	V	Que	NY	De	Be	8
19	821121103019	VIJAY S	Alle	P	5年(and a	AD	de.	at P	de l	ette	B	JEP-	a lie	. GP	. The	antited
20		SANJAIMANI M	AB	mSaya	n. Serge	Lansat	m Super	m. Sanja	merie	an Sayor	m.Seter	m. Saja	Mister	m.Sync	- Sof	ma. Sayar	AR
21		SINDHU G	51.52	GrSt	UT.CI	6.52	4.52	6.61	61.53	G.SI	G. 01	G1-51	6.01	G-97	GILL	61-91	4.2
21		SURUTHI A	A CON	A.D	XE	R.C	p. 8	AB	NO	A.A.S	P.90	A.8	AP	N.8.	ASS	A.R.	A BOY
23		MOHAMMED RIYAZ J	Jue	and	June	Jonth	5 m	Inc	J	54d	5A	AB	JHUTH	SA	ant	IN	Junt
	TOTAL S	STUDENTS	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
	PRE	SENT	20	83	22	23	21	23	23	21	23	22	22	23	23	22	21
	AB	SENT	00	-0-	D Dre	-0-	2	nº-	- 10	2	00	1	2	10-		1	2
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DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-2023 (ODD SEM) CERTIFICATE COURSE ON "AUTOCAD" STUDENTS ENROLMENT – II YEAR CIVIL

. No	Reg. No	Student name	Student Signature
1	821121103001	AKALYA J	J-AKalya
2	821121103002	ANITHA B	B. Ani the
3	821121103003	ARULPANDIYAN A	A. bas
4	821121103004	ARUNKUMAR M	M. Aray Luman
5	821121103005	HALITH A M	A.M. halitz
6	821121103006	MADHAN D S	Aledhan .
7	821121103007	MANIKKARAJ R	pinenon.
8	821121103008	MATHANKUMAR S	T. Jesst
9	821121103009	MOHAN S	S Revert
10	821121103010	NAAVINIYAA G V	G. v. Naavîniyaa
11	821121103011	NITHISH KUMAR T S	withish
12	821121103012	PASHAGAN G (VOC)	G. Palhtagan.
13	821121103013	PRAGADISH M	M. Rock
14	821121103014	PRASANNA R	R. June
15	821121103015	SARAVANAN K	F-Bacavanan
16	821121103016	SURYA.V	. Stuyer
17	821121103017	TAMILARASAN T	J.Jab 1
18	821121103018	VENKATACHALAM D	D. Van Katacharam.
19	821121103019	VIJAY S	S- Mary -
20		SANJAIMANI M	M. Sanghraan
21		SINDHU G	Gioding
22		SURUTHI A	A. Sutti
23		MOHAMMED RIYAZ J	J.Marky

Total Number of students enrolled: _____23

8/22 COURSE INCHARGE

04/08/2022 bar 10 HOD/CIVIL

A NAAC ACCREDITED INSTITUTION

KINGS

KINGS COLLÉGE OF ENGINEERING

RECOGNISED UNDER 2(F) &12(B) OF UGC, APPROVED BY AICTE, NEW DELHI & AFFILIATED TO ANNA UNIVERSITY, CHENNAI PUNALKULAM, GANDARVAKKOTTAI TALUK, PUDUKKOTTAI DISTRICT - 613 303

CERTIFICATE OF PARTICIPATION

THIS IS TO CERTIFY THAT **S.MOHAN** OF II YR CIVIL ENGINEERING HAS PARTICIPATED IN THE **"CERTIFIED COURSE ON AUTOCAD"** ORGANIZED BY DEPARTMENT OF CIVIL ENGINEERING, KINGS COLLEGE OF ENGINEERING, THANJAVUR,

FROM AUGUST 2022 TO OCTOBER 2022.

COURSE INCHARGE

Mr.R.CHANDRASEKAR

HOD/CIVIL

Dr.R.SARAVANAN

PRINCIPAL

Dr.J.ARPUTHA VIJAYA SELVI



DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022 - 2023 ODD SEMESTER

CERTIFICATE COURSE REPORT

The Department of Civil Engineering organized a certificate Course for II Year students on 01.08.2022 to 24.9.2022.

OBJECTIVE

The objective of the course is:

- To learn the concepts of 2D drafting in AutoCAD.
- To know the concept of 2D planning and design concepts.

SESSION DETAILS

Mr.R.CHANDRASEKAR, AP/CIVIL, handled the session for II year students. He explained 2D planning and approval drawing concepts. He explained the concepts in unit conversion from feet to meter, sheet and printing setup for different paper size.



II YEAR CIVIL STUDENTS ATTENDING THE AUTOCAD PROGRAM

OUTCOME OF THE COURSE

At the end of session, the students would be able to:

- Understand the concepts in 2D planning.
- Know the concept of Imperial and metric planning.
- Learn the concepts in approval drawing.
- Know the sheet setup for all sizes.
- Learn about the layout plan.

12/2022 PREPARED BY

Barra 03/12/2022 HOD/CIV

112/2000

PRINCIPAL

R-CHANDRASEKAR



29/09/2022

DEPARTMENT OF CIVIL ENGINEERING ACADEMIC YEAR 2022-2023/ODD INTERNAL STAFF SEMINAR – REPORT

Background & Objective

Department of Civil Engineering in collaboration with Research and Development section had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 29th Sep, 2022 at 3:00 P.M. The seminar was presided over by **Dr.R.Saravanan**, **HoD**. Department of Civil Engineering. All the faculties were present in the seminar. **Ms.S.GAYATHRI/AP** delivered her seminar talk on "LIBS and PXRF validation for the removal of Pb by bio-Caco3 nano particles from contaminated **3** water." (SPRINGER – Journal of Civil Engineering).



Seminar talk by Ms.S.GAYATHRI, AP/CIVIL

- In this work, laser-induced breakdown spectroscopy (LIBS) was applied to qualitatively evaluate lead adsorbed from industrial wastewater by nano-CaCO3.
- Eggshell as a natural source of CaCO3 has been used as a sorbent owing to its low cost and unrivalled adsorption capacity to remove Pb from contaminated water.
- The structure and morphology of CaCO3 nano-powders were investigated using scanning electron microscopy (SEM), transmission electron microscope (TEM) and Fourier transforms infrared (FTIR).
- LIBS results were experimentally validated by the results obtained using portable X-ray fuorescence spectroscopy (pXRF) and energy dispersive X-ray (EDS), which confirmed the feasibility of using LIBS to detect traces of Pb ions, while the adsorption process is applied under governing parameters.
- Langmuir and Freundlich isotherm models were used to model the experimental data.
- The kinetics of adsorption mechanisms were studied using Lagergren's pseudo-first-ord(and McKay and Ho's pseudo-second-order.
- The obtained results demonstrated that bio-CaCO3 nanoparticles could be used as an effective lead-sorbent from wastewater.
- Accordingly, it is possible to utilize this adsorption technique as a promising practical approach for the treatment of lead-contaminated industrial wastewater and its recirculation.

Outcome

The Seminar clearly highlighted the In this work, LIBS (a spectrochemical analytical technique) was exploited to monitor the removal of Pb (a toxic heavy metal) from contaminated water via bio-CaCO3nanoparticles. The economically natural source eggshell, was dried and ground to nanosize to be used as a discriminative sorbent to remove Pb from water. The effciency of eggshells in the adsorption of heavy metals is due to the presence CaCO3 as the main component, which has unrivaled adsorption capacity to remove heavy metals through ion exchange reactions with calcium ions. All LIBS results were confirmed using the pXRF and EDX techniques. Discussions were made among faculties in various new techniques. Staff members shared their views regarding seminar and gave their feedback.

From this paper I have understood the various new tests to for removal of Pb by bio-Caco3 nano particles from contaminated water.

17/10/2022

J. Artelalan

PRINCIPAL

Place: Punalkulam,

Date: 12-09-2022.

From

R.Sundharam, Asst. Professor, Department of Civil Engineering, Kings College of Engineering, Punalkulam.

To

The Principal, Kings College of Engineering, Punalkulam.

Respected Sir,

Sub: Permission for conducting Symposium 2022- reg.

I wish to bring your kind information that the Department of Civil Engineering is planned to conduct a National level Technical symposium "CIVISTA-2022" for the academic year 2022-2023 on 22.09.2022. So, I kindly request you to give permission for conducting the Symposium in our department.

Thanking you,

Yours faithfully, (R.Sundharam)

Submitted to the Principal Mama R. Januaran 12/09/2022 1400/CIVIL Sub-J.C. Sul. to Secretar & r J. Malaner.



CIVISTA'2022 - 22.09.2022

COMMITTEE INCHARGE DETAILS

14/09/2022

No	Committee Name	Responsibility	Faculty Incharge	Signature
•	Budget	Budget preparation	Mr. R.Sundharam	Return
2	Sponsorship	Letter to other companies for sponsorship	Mr. P. Chandracokar	mp &
3.	Identification of Chief Guest and Session Guest (Resource Person)	 Identification of chief guest Identification of judges(Internal) 	Mr.S.Kamaraj Mr.K.Arun	K.C.W.Sp
4.	Brochure and Banner	Designing Poster, Sending posters to various colleges by Post Fixing banners at different places	Mr. R.Sundharam Mr.R.Chandrasekar	R: hume
5.	Registration	 Preparation of registration form and feedback form, kit(files, pens, notepad) Collection of feedback form from participants Issuing snacks/tea token for participants 	Ms.D.Shrividhya Ms.K.Elakkiya	R. C. Antight
6.	Certificate	Certificate designing	Mr. R.Sundharam	RESTUNIA
7.	Prize	Momento for chief guest Prize winners- momentos	Mr.K.Arun	W R
8.	Paper collection	 Creation of new mail -id Check mail regularly / daily Receiving the papers daily Summary of the papers daily Handover the paper (area wise) to scrutinizing committee Convey the selected paper to participants 	Mr.K.Arun Ms.D.Sharmila	Walt
9	Review of paper, Proceeding and CD	 Collection of papers from reviewers and intimation of selected papers After correction of papers from authors to collection and submission to proceeding committee Collecting the papers from paper collection committee Aligning the papers, designing the cover page of the proceeding, preparing proceeding. 	Mr.K.Arun Ms.D.Sharmila	1.0 T. 1.0

0	Food			
	Pood	Arrangement of lunch and dinner for guest , participants	Mr.R.Ramchandar	g alala
1.	Refreshment	 Arrangement of snack(FN&AN) for chief guest , staff judges, participants & student Preparation of snack tokens Issue of tokens to registration committee for participants 	Mr.R.Ramchandar Ms.S.Gayathri	5-21-1714/12
12.	chief guest	 Receiving Chief guest Arrangement of guest house Arrangement of vehicle Arrangement of food/ snacks 	Mr.K.Arun Ms.K.Elakkiya	K-PLLE in
13.	Invitations	 Preparing Invitation and distributing to all departments, chief guest & Judges 	Mr. R.Sundharam Ms.D.Sharmila	R. Aliviala
14.	Audio & Video/ Photo arrangement and publicity	 Arrangement of audio system Arrangement of video/Photo Selected photos displaying in notice board the next day Arrangement of caller mike plus 2 cordless mikes 	Mr.R.Ramchandar	7
15.	Hall Arrangement Model Making	 Reserving the seminar hall Arrangement of generator ,Chairs ,water screen, Stopclock, Bell, LCD projector & OHP , PC Arrangement of halls for poster presentations and the full. 		
16.	Decoration & Stage arrangement	 Stage decoration Chair arrangement on stage Water bottle name plate, file agenda, podium with mike Decorating kuthu vilaku 	Mr.R.Kamchandar Mr.R.Chandrasekar	R.C.S.A.
17.	Reception& Rangoli	Rangoli Reception items	Ms.S.Gayathri Ms.K.Flakkiva	3. 2/0/7 41912
18.	Stage Management	Anchor , Preparation of agenda, Program schedule Session Management	Mr. R.Sundharam	R
19.	Session Incharge	 Introduction to key note speaker Collection of papers for the particular session. Giving the paper to the session judges Master of ceremony 	Mr.R.Sundharam Ms.D.Sharmila	R. Sturin
20.	Transport	Arrangement of college bus for the participants.	Ma D Dave 1	
21.	Water and Cleanliness	 Providing water facilities all required places and maintaining the campus clean after the event 	Mr.R.Ramchandar Mr.Paranthaman	
			Mr.P. I hamarai kannan	

11.A A. SF -1419122 STAFF COORDINATORS

Hod/civil 14/09/2021





National Level Technical symposium CIVISTA'2022

Venue: Pallava hall, Kings College of Engineering BACKGROUND & OBJECTIVE

Date: 21.09.2022

CERT

Department of Civil Engineering, Kings College of Engineering organised a One day National level Technical Symposium titled *CIVISTA* '22 on 21st September 2022.

It aims to provide a platform for the students across our country to express their ideas and technical skills in Civil Engineering. The symposium was well attended by students from reputed educational institutions. The symposium focuses to articulate new ideas in distinguished civil field and to result with sharing knowledge among the participants.

INAUGURAL SESSION

The Symposium was inaugurated by the Chief Guest at inaugural function, Er.R.Arumugam, President, CEAAT (Civil Engineers Association Thanjavur). As every function starts in a auspicious way, the symposium was inaugurated with the prayer song. As many as 52 participants from various engineering colleges participated in the symposium.



Inaugural Session

WELCOME ADDRESS

The welcome address was given by Dr.R.Saravanan, HoD/CIVIL. He welcomed the Dignitaries on the dais, faculty members and the students from various colleges across the state. He also added that he is very much delighted to see more external participants from various reputed colleges.



Welcome Address by Dr.R.Saravanan, HoD/CIVIL

HONOURING SESSION

The chief guest was felicitated by shawl and memento as sign of remembrance by Dr.R.Rajendran, Secretary.



Er.R.Arumugam receiving shawl from Dr.R.Rajendran, Secretary

INAUGURAL ADDRESS

Inaugural address was given by Dr.J.Arputha Vijaya Selvi, Principal. She addressed the gathering and appreciated the organizing teams for conducting CIVISTA'2022. She also highlighted the scope of Civil Engineering in various aspects.

PRESIDENTIAL ADDRESS

Our Secretary Dr.R.Rajendran delivered the presidential address. He expressed his happiness for





Inaugural Address by Dr.J.Arputha Vijaya Selvi / Principal

Presidential Address by Dr.R.Rajendran/Secretary

FELICITATION ADDRESS

Felicitation address was given by the Vice principal Dr.S.Sivakumar. He felicitated the Civil Department for their efforts in organizing CIVISTA'2022. He also briefed a few points about various alternative trends in Construction industry.

INTRODUCING THE CHIEF GUEST

The Chief Guest was introduced by Mr.R.Sundharam, Coordinator, CIVISTA'2022. He elaborated the qualification and work experience of the chief guest. He also detailed about various responsibilities held by the chief guest.



Felicitation Address by Dr.S.Sivakumar / Vice-Principal



Introduction of Chief Guest

KEYNOTE ADDRESS

Er.R.Arumugam, President, CEAAT (Civil Engineers Association Thanjavur) graced the occasion as chief guest and delivered the keynote address. In his address, he lauded the Management and the academic administration of the institute for hosting a technical symposium every year. He explained about the rising technology in civil Engineering field. He insisted that the opportunity is in every hand, the students have to make use of those various opportunities for their career. He also appreciated the students for their Model Making. He briefed a few points in Construction Technology. It was educative experience which offered the audience a rare opportunity to get a glimpse on the key note topics.



Chief Guest addressing the audience

RELEASE OF SOUVENIR

The Symposium Souvenir was revealed by the chief guest Er.R.Arumugam and received by Dr.J.Arputha Vijaya selvi, Principal and jointly felicitated all the members present.



Souvenir was released by Chief Guest and received by Principal.

EVENTS

Then the Events sessions were started. Technical events like Paper Presentation, Technical Connection, Model Making and Code Cracking were conducted. Mysterious Desk event and **competed** for the best performances. Afternoon fun events were also conducted for students **delight**. All events were successfully completed within the stipulated time schedule.



Students participating in Events

VALEDICTORY SESSION

The valedictory session was conducted in the evening. The session started with Prize distribution for the best performances in the various technical and Non-Technical events. The Symposium ended with a vote of Thanks delivered by Selvan. M.Jayaseelan of Final Year Civil Engineering who expressed his sincere thanks to the delegates for spending their precious time for the occasion. He heartily thanked the Management, Principal, all the faculty & Staff members and the students. He also lauded the students for their passionate efforts with which they carried out the arduous task of making the Symposium a grand success.





Prize Distribution in the Valedictory Session

SOME CHERISHING MOMENTS





A NATIONAL LEVEL TECHNICAL SYMPOSIUM

CERTIFICATE OF APPRECIATION

This is to certify that Mr./Ms. <u>P. NIGNESH</u> of <u>A.N.C. COLLEGIE OF ENGINEERING</u> has won Pasticipated in the <u>CODE CRACKING</u> in National Level Technical Symposium, CIVISTA'2022 organized by the Department of Civil Engineering, Kings College of Engineering, Punalkulam, on 21.09.2022.



ORGANIZING SECRETARY

Swanan

Dr.R.SARAVANAN HoD/CIVIL Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL









DEPARTMENT OF CIVIL ENGINEERING REPORT - ENGINEER'S DAY EVENTS-2022

17.10.2022

BACKGROUND & OBJECTIVE:

BUDDING ENGINEER'S CLUB (BE CLUB), Department of Civil Engineering, Kings College of Engineering organized the "ENGINEER'S DAY EVENTS-2022" for II year, III year & IV year Civil Students on 15.09.2022. The main objective of this event is to provide a platform the students to show their talents and skills. Ms.S.Gayathri, AP/Civil Coordinator of BE club, organized the event. Dr.R.Saravanan, HoD/Civil delivered the welcome address and given details about the events.

EVENT DETAILS:

SNo	EVENT NAME	ORGANIZED BY	
1	POSTER PRESENTATION	 Mr.K.Arun, AP/Civil Ms.D.Shrividhya, AP/Civil Mr.R.Sundharam, AP/Civil 	
2	MONO ACTING	 Mr.R.Chandra sekar, AP/Civil Ms.K.Elakkiya, AP/Civil 	
3	TECHNICAL CONNEXION	 Mr.R.Ramchandar, AP/Civil Ms.D.Sharmila, AP/Civil 	

PRIZE WINNERS LIST:

1. POSTER PRESENTATION

SNO	WINNERS	YEAR
1	KATHIRESWARI.P	
2	NIKESHA.J	III YEAR

SOME GLIMPSES OF THE EVENT



S. efattinlioise ORGANIZED BY



J. Rostinioner PRINCIPAL



ACADEMIC YEAR 2022-23 (Even SEMESTER)

Workshop REPORT

Session Details:		
Title of the Session:Workshop on "	Smart city- construction Perspective"	
Date : 17.02.2023		
Activity Category :Internal	Nature of the Session : Physical Mode	
Speaker Details:		
Name: Er.P.Lenin	Designation:Managing Director	
Organization: Ponni Constructions	&Consultants	
Name: Dr.K.Sakthi Murugan	Designation: Structural Consultant	
Organization: Sakthi Designers		
Programme Report:		21 Barris
Objective:		

- To provide a brief idea and awareness on 'Career Opportunities in Construction Projects' to the students.
- To provide a platform for the students to Know about Estimation survey, Tendering and construction methodologies in Smart city.
- Kings College of Engineering organized workshop on "Smart city- construction Perspective" on 17.02.2023. The session was started by 09.30A.M. The event had a number of 70 participants. Introduction about the resource person was delivered by Mr.D.NANDAKUMAR, AP/Civil. During the session resource person stated about the Career Opportunities with salary Package in Smart city Construction Projects. Also he broadly discussed about the Estimation survey, Tendering Process and construction methodologies in Smart city. The session was very useful and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to know about Career Opportunities in civil engineering. The feedbacks from the participants were collected. Mr.D.Nandakumar delivered the vote of thanks.

Outcome of the activity:

• All the participants have benefitted and gained knowledge on Fundamental concepts in civil engineering and Job awareness.

Participants Details:

Total No. of Student Participation: 64 Members Total No. of Staff (Teaching / Non-Teaching) Participation: 06

Workshop on "Smart city- construction Perspective"



Event Coordinator (D.NANDAKUMAR)

Jan 20/08/2003

5.000-2012/2023

HoD/Civil

(Dr.R.SARAVANAN)

Principal

(Dr.ARPUTHA VIJAYA SELVI)



3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

S. No	Date	Details	Beneficiaries	Page No
1	02.06.2022	Internal Staff Seminar on Implementation of fruit quality classification application using AI Algorithm	09	1-2
2	10.06.2022	National Conference	70	3-4
3	02.09.2022	External workshop on Web Designing	50	5-8
4	09.09.2022	Internal Staff Seminar on Comparison of Alternative Architecture for fog computing	12	9-10
5	15.09.2022	Engineers Day Event 2022	175	11-18
6	30.09.2022	External seminar on Web development using Angular JS	100	19-23
7	19.10.2022	External workshop on Python with Data Science	104	24-31
8	21.11.2022	Seminar on Passive Income through the Web development	50	32-34
9	22.12.2022	Internal Staff Seminar Human Computer Interaction	12	35-36
10	15.03.2023	Internal Staff Seminar on Diabetes Prediction using Machine Learning Techniques	10	37-38
11	16.03.2023	Workshop on Software Tools used for IoT	58	39
12	25.03.2023	Guest Lecture on "Data visualization techniques and tools for business"	53	40-41
13	10.04.2023	Workshop on Game Development using Scratch Software	46	42
14	19.04.2023	Internal Staff Seminar on Driver Assistant for the detection of drowsiness and emergency alert	10	43-44
15	26.04.2023	International Conference on Computing, Communication and Control (IC4)	153	45-52
16	26.04.2023	Seminar on Machine Learning with Python	29	53-56
17	28.04.2023	External Workshop on Machine Learning with Google COLAB	74	57-59
18	18.05.2023	Internal Workshop on Power Bi	99	60-61



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2021 – 2022 EVEN SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering and students branch of IEEE jointly organized an internal staff seminar on 2.6.2022 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about the application of AI algorithm in fruit quality classification.

SESSION DETAILS

Title: Implementation of fruit quality classification application using AI Algorithm

Internal seminar for faculty of Computer Science Engineering department was conducted on 2.6.2022 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.S.Priyadhashini, AP/CSE delivered the lecture on the topic "Implementation of fruit quality classification application using AI Algorithm". She explained the current issues to detect the quality of a fruit. She described an algorithm called "You only look once - (YOLO)-V3" which is used to track the quality of a fruit by tracking the image, size, height and size of a fruit. She concluded the seminar that the authors applied the Tiny - YOLO neural network model to perform object detection and compared several other models in terms of structural performance.

OUTCOME OF THE EVENT

- Got an idea about YOLO-V3 algorithm
- Understand the performance of that algorithm
- Assist the students to develop project in this domain
- Assist the faculty members to do their research in this domain

REFERENCE:

[1] Ming-Chih Chen, Yin-Ting Cheng and Chun - Yu Liu, "Implementation of a Fruit Quality Classification Application Using an AI Algorithm," *Sensors & Materials*, vol. 34, pp. 151 - 163, Nov, 2021.



Internal seminar session snapshot

NATIONAL CONFERENCE ON RECENT ADVANCEMENTS IN COMPUTERS & COMMUNICATION TECHNOLOGIES NCRACCT'22



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2021 - 2022 / EVEN SEMESTER

NATIONAL CONFERENCE ON RECENT ADVANCEMENTS IN COMPUTERS &

COMMUNICATION TECHNOLOGIES – NCRACCT'22 REPORT

The Department of Computer Science & Engineering organized a National Conference on Recent Advancements in Computers & Communication Technologies – NCRACCT'22 on **10th June 2022.**

OBJECTIVE OF THE CONFERENCE

The objective of the conference is to create a forum for Engineers in Academia and Industry to address the recent trends and advancements in Computer Science Engineering to present and discuss their new ideas, research results, applications and experience in all aspects of computers, communication and information technology.

THEME OF THE CONFERENCE

The National Conference on *Recent Advancements in Computers & Communication Technologies – NCRACCT'22* is an effort to paint the landscape of emerging technologies in the CSE domain and aims to bring together techno fraternity to exchange and share their experiences and research results about all aspects of Engineering Technology and Innovation.

The main intent of the conference is to let the participants acquaint with transcendental growth, innovations and security issues involved in the domain of communication technologies, artificial intelligence, deep learning, cloud computing, cyber security, Internet of Things (IoT), emerging technologies for next generation network, etc. and their impact on societal applications.

Department of Computer Science and Engineering

1

The Pasts well we address

1

12

14

NATIONAL CONFERENCE ON RECENT ADVANCEMENTS IN COMPUTERS & COMMUNICATION TECHNOLOGIES NCRACCT'22

PREWORK OF THE CONFERENCE

The National Level Conference was planned to be conducted on both offline & online mode. We have received 40 papers from various Engineering colleges in various domains. The received papers were sent to the technical committee for reviewing and the papers were scrutinized based on the originality, quality and writing styles. Based on the criteria, 24 papers were selected and intimated to the authors.

ON THE DAY OF CONFERENCE (10.06.2022)

The inaugural function started with the welcome address by the Head of the department Dr.S.M.Uma. The conference co-ordinators Ms.R.Sugantha Lakshmi and Ms.G.Chandra Praba spoke on the conference highlights and introduced the chief guest to the audience respectively. The chief guest was honored and the conference proceedings were released by the dignitaries on the stage.

The chief guest Ms.G.Archana delivered the Keynote address on the topic of "Career Exploration for Budding Engineers". She highlighted the most required skills that a student should gain to possess a better career and also spotted the current industry expectations and the trending job profiles. She shared various industry interview process and revealed the tips and tricks for clearing the interviews. The speaker suggested the websites that would be useful for interview preparation and also highlighted the importance of creating effective resume. At the end of inaugural function, Ms.G.Chandra Praba, AP/CSE conveyed the vote of thanks.

The technical session started at 11.30 am in both online and offline mode. Dr.S.M.Uma, Ms.K.Abhirami, Mr.S.Rajarajan, Ms.S.Puvaneswari acted as Jury for the presentation. The juries evaluated the presentation based on the originality, creativity, logical presentation of ideas, content delivery and knowledge of material by the participants.

Ms.R.Sugantha Lakshmi ,Ms.G.Chandra Praba

/CSF 23 6/2

Department of Computer Science and Engineering

2



ACADEMIC YEAR 2022-2023 (ODD SEMESTER)

ONE DAY WORKSHOP
On
"WEB DESIGNING"
02.09.2022

<u>REPORT</u>

Department of Computer Science & Engineering of Kings College of Engineering organised One day -Workshop on "WEB DESIGNING" on 02.09.2022.

Objective:

The main objective of this workshop is to provide ideas of fundamental knowledge about Web designing. It provides a platform for the students to upgrade and know about the concepts in Markup Languages and style sheets. In addition, this programme will help to improve the student's ability in carrying out simple innovation to bring the web designing through professional discussions.

Resource Person:

Mr. M. ARUN AP/CSE, KingsCollege of Engineering

Convener

Dr.S.M.Uma,HOD/CSE.KingsCollege of Engineering

Coordinators

Ms.S. Abikayil Aarthi, AP / CSE, KingsCollege of Engineering Ms.N. Dhamayandhi, AP / CSE, KingsCollege of Engineering Ms.S. Priyadharshini, AP/ CSE, KingsCollege of Engineering
Programme Type: Workshop

Inaugural Session:

Workshop inaugural session was handled by Mr. Senthilnathan and Introduction about the workshop byMs. N. Dhamayanthi, Assistant Professor / CSE.

Overview:

Mr. M. Arun, Ass.Prof/ CSE, handled the session in the topic of "Web Designing ", He explained the basic concepts of Web designing and also listed down the free software available to develop the websites. He clearly explained from basics of Style sheets. In addition, with other mark-up languages alongwith practical examples. He has provided plenty of exercises for real time working. Totally 50 participants registered and actively participated in this workshop. The session was very informative and the participants have interacted with the resource person. Under the guidance of our Head of the department Dr.S.M.Uma& by the support of our Principal Dr.J.Arputha Vijaya Selvi and the management, Co-ordinators successfully organised this event.

Benefits in terms of Learning / Skills / Knowledge obtained:

- All the participants have benefited about web designing applications.
- Workshop helps to initiate how to design a website.
- Students facilitated with knowledge of Web designing.
- Students acquire the basic proficiency in HTML
- Students gained knowledge in the concepts of CSS

Valedictory function:

The feedback Analysis from the participants were collected by Ms. S. Abikayil Aarthi,

AP/ CSE, delivered Vote of thanks.

Event Photographs:



Explanation part in session



Practical Examples Session



Discussion of Resource Person with participants

Feedback from the Participants:



Brochure:



Sample Certificate:

	www.kingsengg.ed Dne day Workshop on Web	Designing	
	CERTIFICATE OF PAR	TICIPATION	
This is to certify that _			
			_has activ
and Engineering, King Ms.S.Abikayil Aarthi, AP/CSE Ms.N.Dhamayandhi, AP/CSE Ms.S.Priyadharshini, AP/CSE	s College of Engineering, Pudukkottai or Dr.S.M.Uma, HOD Convener	n 02-09-2022. Dr.J.Arputha Vijaya Selvi Principal	



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2022 – 2023 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering and students branch of IEEE jointly organized an internal staff seminar on 9.9.2022 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about comparative study about fog computing architectures

SESSION DETAILS

Title: Comparison of Alternative Architecture for fog computing

Internal seminar for faculty of Computer Science Engineering department was conducted on 9.9.2022 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.P.Nalayini, AP/CSE delivered the lecture on the topic "Comparison of Alternative Architecture for fog computing". She explained the basics of fog computing and its different types of architectures such as hierarchical and flat types. she described about algorithms that can be used for creating fog computing systems that follow these architectures.

OUTCOME OF THE EVENT

- Got an idea about fog computing
- Understand the difference between flat and hierarchical architecture
- Assist the students to develop project in this domain
- Assist the faculty members to do their research in this domain

REFERENCE:

[1]. **"Comparison of Alternative Architectures in Fog Computing",** Vasileios Karagiannis, Stefan Schulte, 4th IEEE International Conference on Fog and Edge Computing (ICFEC 2020), pp. 1–10





Internal seminar session snapshot

S. Rw 12/9/22 Co-ordinator (Ms.S.Puvaneswari AP / CSE)

HOD/CSE'2/9/22

12/9/2022

PRINCIPAL



Every year, the country celebrates September 15 as National Engineer's Day to appreciate the contributions of Shri. Mokshagundam Visvesvaraya. The Bharat Ratna awardee, Visvesvaraya was born on September 15,1861. To remember the birth anniversary of him, one of the great legendaries and engineer himself, Sir Mokshagundam Visvesvaraya, We Kings College of Engineering also join hands together in the merriment.

The objectives of the celebration of Engineer's Day were

a) To take a guarantee to support and cheer the youth to select for engineering education.

b) To produce quality Engineers for the bright future of our country.

	AAC Accredited Institu CLLEGE OF ENGINEE acceptized under 2() & 1200 Approved by AlfCTS, News ItBlated to Anna University,	Tova Serves or use betha Themanat		STB16621
	Eng	jineers Da In Mer BHARA [®] Mokshagund	i y Celebrat nory of T RATNA am Visvesvara	ion ya
	Jointl	y organize	d by	
Depa	artment o	of CSE & R	& D Section	K
Events	QUIZ	ARTATHON	SPEECH COM	PETITON
Dates	29.08.2022	01.09.2022	02.09.2	022
All Stu	dents are inv	ited and exhib	it your talents	
	Regis	ter Quickly!!!		
Coordinator	C	onveners	Patr	on
Ms. S. Abikayil Aarthi AP/ CSE	Dr. S.M. Dr. PP Shantha	Uma, HOD/CSE raman, DRC Convene	Dr. J. Arputha	Vijaya Selvi pal

INVITATION

The engineering student community as a whole College devoted entire day and conducted the following activities as competition.

- 1. Speech Competition
- 2. Quiz
- 3. Artathon

We have organized the following events after getting necessary approval.

S.No	Event Name	Date	Faculty Name (Judges)	Location
1.	Quiz	29.08.2022	Er. Senthilnathan AP/ CSE	CSE LAB - 1
2.	Artathon	01.09.2022	Er. Arun AP/ Civil	Drawing Hall
3.	Speech Competition	02.09.2022	Er.Thiyagarajan / System Admin	Seminar Hall

Judges for the Events on Engineers' Day-2021

Event : QUIZ

Students Participation:



Students attending through Kahoot app



No of user at a time Participants list shown in the projector view



After attending question the rating speed of all users shown on projector view for each single question

Students winning on level:

Number of participants for these events is 137 students, in these batch wise selection process has been undertaken.

Ist Batch

1. Akilan - EEE/ III 2. Keerthika - ECE/ III 3. Praveen Kumar – EEE/ III IInd Batch 1. Krishnamoorthy - ECE/ III 2.Blesson - ECE/ III 3. Sajeevan- ECE/ III IIIrd Batch 1. Tamilarasan .T – Civil / II 2.Mukesh.T - ECE/ III 3. Venkatesh.D- ECE/ III IVth Batch 1. Fasila – CSE/ IV 2. Vindhiya - CSE/ III 3.Lavanya - CSE/ III Vth Batch 1. Ruthran - EEE/ II 2. Semili – EEE / III 3.Priya – Civil / III VIth Batch 1. Shashance - CSE/ II 2. Dharani - CSE/ IV 3. Priyadharshini – Civil / III

Final Winning



Final Winners

- 1. Krishnamoorthy ECE/ II
- 2. Fasila CSE/ IV
- 3. Praveen Kumar EEE / III

EVENT : ARTATHON

The event was held on 01.09.2022, there were 28 students from various departments eagerly attended the competition. The theme of the event is "Engineering Concepts through Art ". It takes place in Drawing Hall. Er. Arun AP, from Civil department being the Jury for this event.



Place of the Event

Participation of the Students



Usage of Tools in competition

Final Winning

Three students from various departments were chosen as winners.

First Prize - \rightarrow Mohamed Arsath. A / Mech III

Second Prize - \rightarrow Jaishree . A / ECE III

Third Prize - \rightarrow Karkuzhali. N / CSE IV



Ist Prize



IInd Prize



III rd Prize

EVENT : SPEECH COMPETITION

The event was held on 02.09.2022, there were nine students from various department eagerly attended the competition. The theme of the event is "Real Time Successful Engineer". Mr. Thiyagarajan System Admin from Computer Engineering department being the Jury for this event.





Participation of students - I

Participation of the Students - II



Participation of students - III

Final Winning

Three student from various departments were chosen as winners.

First Prize -→ Avudaiyappan. A.B / CSE IV Second Prize - \rightarrow Aiyappan. S / CSE IV Third Prize - \rightarrow Sultan Abdul / MECH II

DAY EVENT & PRIZE DISTRIBUTION

The Welcome address was addressed by IV Year student M. Gokul in that an engineering song was also composed by our CSE department students and Speech about engineers also took place by students and motivational talk by Dr.S.Sivakumar Vice Principal, Dr.S.M.Uma /CSE -HOD along with that R & D Cell coordinator Dr. P.P. Santharaman, gave a talk in the event and prize distributed. At last vote of thanks by Student M.Gokul, Student President/ CSE has been delivered.



Event Place



Engineering Song Composed by III year Students



Speech by Students of CSE



Inspiration talk by Vice Principal



Prize Distribution Clips-1



Prize Distribution Clips - 2



Team of EVENT

The Program has been ended successfully, the students shown their participation in a tremendous manner. This surprising outcome showed that not only students being entertained, they were also being socially educated. We planned to provide a greater number of such sessions to look forward. Thanks to all our students, and respected faculty members of all departments for making this event extravagant one.

The report prepared by Event Coordinator, Er. S. Abikayil Aarthi, AP/ CSE Kings College of Engineering, Thanjavur.







ACADEMIC YEAR 2022-2023 (ODD SEMESTER)

ONE DAY SEMINAR

ON

"WEB DEVELOPMENT USING ANGULAR JS"

30.09.2022

REPORT

Department of Computer Science & Engineering of Kings College of Engineering organised a One day Seminar on "WEB DEVELOPMENT USING ANGULAR JS" on 30.09.2022.

Objective:

The objective of this seminar is to provide the advanced knowledge about web development and the basic concepts of Angular JS, epitomize web designing applications with the structural framework for Dynamic Web Apps.

Resource Person:

Mr.S.Sivakumar, CEO, ASTONISH INFOTECH, Trichy

Convener

Dr.S.M.Uma, HOD/CSE, Kings College of Enginering

Coordinators

Mr. S. Senthilnathan, AP / CSE

Ms. B. Bavithra, AP / CSE

Programme Type: Seminar

Inaugural Session:

Workshop inaugural session was handled by Dr.S.M.Uma, HOD/CSE, Kings College of Engineering and Introduction about the seminar by Mr. S. Senthilnathan, AP / CSE

Overview:

Mr.S.Sivakumar., CEO., ASTONISH INFOTECH, Trichy, handled the session in the topic of "Web Development using Angular JS". He explained the basic concepts of Web designing and also listed down the free software available to develop the websites. He clearly explained from the basics of angular JS. In addition, internet programming was also explained with example. He has provided plenty of host accessing data and knowledge about creation of domain for real time working. Totally 93 participants registered and actively participated in this seminar. The session was very informative and the participants have interacted with the resource person. Under the guidance of our Head of the department Dr.S.M.Uma, support of our Principal Dr.J.Arputha Vijaya Selvi, The Management and the Co-ordinators successfully organised this event.

Benefits in terms of Learning / Skills / Knowledge obtained:

- All the participants have benefited about web development applications.
- Seminar helps to initiate how to create domain and accessing the host.
- Students facilitated with the knowledge of internet programming.
- Students gained knowledge about various domains of web development.

Valedictory function:

The feedback Analysis from the participants were collected by Ms. B.BAVITHRA, AP/ CSE, and delivered the Vote of thanks.

Event Photographs:



Client websites and Domain Registration in session I



Hosting and Uses of Angular JS in session II



Demo sessions



Feedback session



Certificate distribution

Feedback from the Participants:

		ISING-	1000 200	
Organizatio Registratio Communica Hospitality/ Overall Feed Other Comm	Departu Acade <u>"WEB D</u> on of the program in process and ition /Facilities Iback ients	tent of Computer Science & mit Year 2021-2022 / Even A ONE DAY SEMINAR ON DEVELOPMENT USING AN Feedback Form Excellent ame	Engineering Semester GULARJS" Good	Satisfactory
Ve	ry useful	Enfermation an	d Thank	you.
TUDENT NA	ME: S MAHAR	AJOTHE PLLEVIL OF ARTS AND		MA STAN

Brochure:

RESOURCE PERSON

Mr. K. Sivakumar, CEO, Astonish Infotech Pvt. LTD., Trichy.

WHO CAN ATTEND?

UG (Engineering, Polytechnic & Arts) & PG students (Engineering & Arts) from the Departments of CSE / IT / ECE / EEE/ MCA can attend this workshop.

DECISTRATION



Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. NAAC Accredited Institution Recognized Under 2(f) & 12 (B) of UGC Punalkulam, Gandarvakottai Taluk, Near Thanjavur, Pudukkottai - 613303

ORGANIZING COMMITTEE

Chief Patron Dr.R.Rajendran, Secretary.

Patron Dr. J.Arputha Vijaya Selvi, Principal.

Co-Patron

Dr. S. Sivakumar, Vice Principal.

Convener

Dr.S.M.Uma,

ABOUT OUR INSTITUTION

Kings College of Engineering (KCE) was born out of a dream and vision to provide education with unparallel quality to the young and enthusiastic students of our nation. The college is approved by AICTE, New Delhi and affiliated to Anna University, Chennai and accredited by NAAC. The drives from our management and dedication of the faculty





A ONE DAY SEMINAR ON "WEB DEVELOPMENT USING ANGULAR JS" REGISTRATION FORM

NAME (In Block Letters Only)

Date of Birth

Institution / Organization Name

Oualification ABOUT THE SEMINAR

Web Development using Angular JS is planning 10. and development websites. This includes information architecture, site user interface, structure, navigation, layout, colors, fonts, and Imagery. All of these are the with combined principles of design to create a website that meets the goals of the owner and the designer.









ONE DAY WORKSHOP ON

"PYTHON WITH DATA SCIENCE"

19.10.2022

REPORT



ORGANIZED BY

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

KINGS COLLEGE OF ENGINEERING

PUNALKULAM - 613303

PUDUKKOTTAI DT

BACKGROUND & OBJECTIVE

Department of Computer Science & Engineering, Kings College of Engineering organized a One-day workshop on **"PYTHON WITH DATA SCIENCE"** on 19.10.2022. This workshop introduces learning of Python for Data Science, as well as programming in general to diploma, UG & PG students, it aims at taking the participants from zero programming in Python. At the end of this workshop, participants will be able to write their own Python scripts and perform basic hands-on data analysis. Participants will be trained in such a manner that will start creating their own data science projects. Er. S. Abikayil Aarthi, AP/ CSE, Er. N. Dhamayandhi, AP/ CSE , Er. S. Priyadarshini AP/ CSE were the coordinators for this workshop.

REGISTRATION

An awe-inspiring response was received from the participants, all over colleges. This region more than 130 participants registered for the workshop, which increased our responsibilities to meet the expectations of the participants.

INAUGURAL SESSION

The workshop commenced at 10.00 am with Prayer song followed by the welcome address by Dr. S. M. Uma, HOD/ CSE. She briefed about the workshop theme and the reason for choosing the topic. She also applauded the participants from various educational institutions for their positive response to the workshop. Er.S. Abikayil Aarthi, AP/CSE introduced the resource person Mr. S. Ram Prakash, Teaching Faculty / CSE, UCE, Thirukkuvalai, to the audience.

PARTICIPANT DETAILS

Around 104 participants from various educational institutions all over the state eagerly participated in the workshop. We are very much excited to note that, a few participants from other various departments have also turned in for the workshop. The participant details are listed below.

PARTICIPANT'SSUMMARY

S.NO	DESCRIPTION	NO.OF PARTICIPANTS
1.	Diploma Participants	05
2.	UG Participants	95
3.	PG Participants	04
	TOTAL	104

PARTICIPANT'S FROM TAMIL NADU

S.NO	INSTITUTIONNAME	PLACE	NO.OFPARTICIP ANTS
1.	M. Kumarasami College of	Karur	06
	Engineering		0.0
2.	Ponnaiyah Ramajeyam Engineering College		08
3.	МКЕС		05
4.	Periyar Maniyammai Institute of Science & Technology		24
5.	PRIST		03
6.	Vandaiyar Engineering College	Thanjavur	03
7.	Star Lion College of Engineering Technology		12
8.	Annai College of Engineering		12
9.	Saranathan College of Engineering		07
10.	Ponnaiyah Ramajeyam Polytechnic College		04
11.	Periyar Centenary Polytechnic College		01
12.	Bharath College of Arts & Science		01
13.	Marudhupandiyar College		03
14.	Queens college of Arts & Science		15
	TOTAL		104

1

WORKSHOP SESSION

The workshop was handled by **Mr. S. Ram Prakash**, Teaching Faculty / CSE, UCE, Thirukkuvalai. He highlighted the importance of Python and basic requirements for that language.

- Anaconda IDE
- Jupyter Notebook

In addition to this, he also explained about the concepts of using Python pandas & Data Analysis, which was very well understood by the participants. The workshop was conducted in two sessions. Morning session involved the resource person presentation. In the afternoon session practical classes took place and queries from participants were clarified. Finally one Quiz competition was also conducted by coordinators through KAHOOT app, regarding the workshop content to analyze the student understanding about the workshop.



WORKSHOP INAGURAL SESSION



HONOURING RESOURCE PERSON BY HOD OF CSE



INTRODUCING THE RESOURCE PERSON



ABOUT PANDAS THEORETICAL SESSION IN PALLAVA HALL



PRACTICAL SESSION FOR DATASCIENCE CONCEPT



PRACTICAL SESSION ON FORECASTING MODEL IN DATASCIENCE -CSE LAB -1



CERTIFICATE DISTRIBUTION IN GREAT MANNER



CODING PRACTICES



PARTCIPANTS EAGERLY ATTENDING QUIZ



DISPLAY OF QUIZ RESULTS

VALEDICTORY SESSION

At the end of the workshop, the session was concluded with the vote of thanks by **Ms.N.Dhamayandhi**, AP/CSE. She expressed her sincere thanks to the participants for their interest and active participation. She heartily expressed her sincere gratitude to the Management, Principal, Vice Principal, Staff members and the students for their extended support. Finally, she concluded by appreciating the organizers for their passionate efforts with which they carried out the difficult task of making the workshop a grand success.

OUTCOME:

Participants gained knowledge about Python with Data Science and also gave very good feedback. All the Participants showed interest to attend our future workshop.

COLLECTED FEEDBACK SAMPLES BY PARTICIPANTS



DEPARTMENT OF COMPUTER Academic Year 2022-20 ONE DAY WORKSHOP ON "PYTE Feedback	SCIENCE & ENG 23 / ODD Seme 10N WITH DATA SO Form Excellent	INEERING ester HENECE" Good	Satisfactory
1. How useful this event for you?			
2. How well the workshop was organized?			
3. Rating - Hospitality4. Which session of the workshop did you like the most?	Pythor	lab	Excercise
5. Give me the suggestion about python pandas in worksh	nop?	-	
Altready token ver	y well		
6. Opinion on resource person:			A STATE OF THE STATE OF
Energetic talk			0.
			Student Signature

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING Academic Year 2022-2023 / ODD Semester ONE DAY WORKSHOP ON "PYTHON WITH DATA SCIENECE" Feedback Form
1. How useful this event for you? Excellent Good Satisfactory
2. How well the workshop was organized?
3. Rating - Hospitality
4. Which session of the workshop did you like the most?Quiz
5. Give me the suggestion about python pandas in workshop?
Norry useful.
6. Opinion en resource person:
Our instructor mas well knowledgebre and tauget very placey
Student Signature

****** Thank You******

WORKSHOP COORDINATOR

HOD/CSE

FEEDBACK







ONE DAY SEMINAR ON

"PASSIVE INCOME THROUGH THE WEB DEVELOPMENT"

21.11.2022

REPORT



ORGANIZEDBY

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

KINGS COLLEGE OF ENGINEERING

PUNALKULAM - 613303

PUDUKKOTTAI-DT

BACKGROUND&OBJECTIVE

Department of Computer Science & Engineering, Kings College of Engineering organized a Oneday seminar on "**PASSIVE INCOME THROUGH THE WEB DEVELOPMENT**" on 21.11.2022. This seminar introduces learning of web development to earn some money through web application , as well as programming in general to diploma, UG & PG students, it aims at taking the participants from zero programming in web development. At the end of this seminar, participants will be able to develop their own web application and perform basic hands-on data analysis. Participants will be trained in such a manner that will start creating their own web development projects. Er. S. Senthilnathan, AP/CSE, Er.B, Bavithra AP/CSE were the coordinators for this seminar.

INAUGURALSESSION

The seminar commenced at 10.00 am with Prayer song followed by the welcome address by Dr. S. M. Uma, HOD/ CSE. She briefed about the seminar theme and the reason for choosing the topic. She also applauded the participants for their positive response to the seminar. Mr.S. Senthilnathan, AP/CSE introduced the resource person Mr.R.Vijay, Senior developer, Vebbox software solutions, Kumbakonam.

PARTICIPANT DETAILS

Around 50 participants were eagerly participated in the seminar. We are very much excited to note that, The participant details are listed below.

S.NO	DESCRIPTION	NO.OF PARTICIPANTS
1.	II YEAR	15
2.	III YEAR	10
3.	IV YEAR	15
	TOTAL	40

PARTICIPANT'S SUMMARY

SEMINAR SESSION

The Seminar was handled by **Mr.R.Vijay**, Senior developer, **Vebbox** software solutions, **Kumbakonam.** He highlighted the importance of web development basic requirements for that language. In addition to this, he also explained about the concepts of using Passive income through web development which was very well understood by the participants. The seminar was conducted in two session(explanation and demo).In session I involved the resource person presentation and session II he gave demoto the participants.

VALE DICTORYSESSION

At the end of the seminar, the session was concluded with the vote of thanks by **Ms.B.Bavithra**, AP/CSE. She expressed her sincere thanks to the participants for their interest Active participation. She heartily expressed her sincere gratitude to the Management, Principal, VicePrincipal, Staff members and the students for their extended support. Finally, she concluded by appreciating the organizers for their passionate efforts with which they carried out the difficult task of making the seminar a grand success.

OUTCOME:

Participants gained knowledge about Passive income through web development and also gave very good feedback. All the Participants showed interest.

COLLECTED FEEDBACK SAMPLES BY PARTICIPANTS

		ICINO.			
DEPA	RTMENT OF Academic V ie DAY WORK	COMPUTER SCI (ear 2022-2023 shop on "Python" Eeedback.For Exe	ENCE & ENGI / ODD Semes with DATA SCI m cellent	NEERING ter ENECE	Satisfactory
. How useful this event for you	7	Г	-		
. How well the workshop was	organized?	Ē	2		
 Rating - Hospitality Which session of the workship 	op did you li	ke the most?	Python	lab 1	Alancise
Allealy	toke	n veny	well		1
Enen 34	tic	talk.			0.
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***** Thank You******



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2022 - 2023 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering and students branch of IEEE jointly organized an internal staff seminar on 20.12.2022 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about human computer interaction using machine learning techniques

SESSION DETAILS

Title: Human Computer Interaction

Internal seminar for faculty of Computer Science Engineering department was conducted on 20.12.2022 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms. S. Abikayil Aarthi, AP/CSE delivered the lecture on the topic "**Human Computer Interaction**". She compared computer with human and how the era of communication between human with computer created. She explained the hidden markov model's principles which is used to track the human emotions which depends on head gestures. She described about the types of input which is used for analyzing the human gestures which belongs to three inputs. She concluded that the existing inputs may be extended to capture the more emotions from the human.

OUTCOME OF THE EVENT

- Got an idea about human computer interaction
- Understand the techniques of machine learning
- Assist the students to develop project in this domain
- Assist the faculty members to do their research in this domain

REFERENCE:

[1]."**3D Hand Gestures Segmentation and Optimized Classification Using Deep Learning**", Fawad Salam Khan 1,2, (Member, Ieee), Mohd Norzali Haji Mohd 1, (Senior Member, Ieee), Dur Muhammad Soomro 1, Susama Bagchi 1, (Member, Ieee), And M. Danial Khan, IEEE Access, September 22, 2021,

[2]. **"Machine Learning for Single and Complex 3D Head Gestures: Classification in Human-Computer Interaction",** Dr. Amina Atiya Dawood, Balasem Alawi Hussain, Webology, Volume 19, Number 1, January, 2022





DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ACADEMIC YEAR 2022 – 2023 EVEN SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 15.03.23 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about Diabetes Prediction using Machine Learning Techniques.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 15.3.23 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.N.Dhamayandhi explained the basics of Diabetes Prediction using Machine Learning Techniques.In many research studies, well-known machine learning techniques, including the Naïve Bayes classifier, support vector machines, decision trees, random forests, K-nearest neighbors, and logistic regression, have been widely used in diabetes classification.We apply Naive Bayes, Logistic Regression, Random Forest, and Support Vector Machine techniques to predict diabetes disease. The proposed mechanism is implemented using Python. To analyse the proposed mechanism, a real dataset is collected from Kaggle. Voice technology has the potential to remove these barriers entirely." The team at Klick Labs looked at a number of vocal features, like changes in pitch and intensity that can't be perceived by the human ear. Using signal processing, scientists were able to detect changes in the voice caused by Type 2 diabetes.

OUTCOME OF THE EVENT

People having diabetes have high risk of diseases like heart disease, kidney disease, stroke, eye problem, nerve damage, etc. Current practice in hospital is to collect required information for diabetes diagnosis through various tests and appropriate treatment is provided based on diagnosis.



Ms.N.Dhamayandhi shared their concepts of Diabetes Prediction using Machine Learning Techniques

Co-ordinator (Ms.S.Puvaneswari AP / CSE)

HOD/CSE

PRINCIPAL



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022 - 2023 EVEN SEMESTER

Report

- 1. Type of the Event : Workshop
- 2. Name of the Event : Introduction to Tinkercad tool
- 3. Objective : The students should know about Tinkercad online tool
- 4. Date : 17.03.2023
- 5. Level of the Event : Department Level
- 6. Name of the organizer : Ms.S.Puvaneswari AP / CSE
- 7. Target Group : III Year students
- 8. Number of Participants : 58
- 9. Outcome
 - understand the functionalities of each component
 - know about the implementation of various sensors in a project
 - create a new project based on current requirement
 - know about the programming aspects of Arduino software

Snapshots



III year students actively participating in the event

Co-ordinator

HOD/CSE

Principal



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022 - 2023 / EVEN SEMESTER

REPORT

1.	Name of the event	: Guest Lecture on "DATA VISUALIZATION TECHNIQUES AND
		TOOLS FOR BUSINESS"
2.	Date & Session	: 25.03.2023 (10.00am – 12.30pm)
3.	Venue	: LAB 1
4.	Name of the Organizer	: Mrs.P.Nalayini, AP/ CSE
5.	Resource Person	: Mr. Ramprakash Singaravel
5.	Resource Person	: Mr. Ramprakash Singaravel Teaching Faculty/CSE,
5.	Resource Person	: Mr. Ramprakash Singaravel Teaching Faculty/CSE, University College of Engineering,
5.	Resource Person	: Mr. Ramprakash Singaravel Teaching Faculty/CSE, University College of Engineering, Thirukkuvalai.
5.	Resource Person Objective	: Mr. Ramprakash Singaravel Teaching Faculty/CSE, University College of Engineering, Thirukkuvalai. : To create an exposure to the students for interpreting and

Department of Computer Science and Engineering organized a guest lecture on "**DATA VISUALIZATION TECHNIQUES AND TOOLS FOR BUSINESS**" on March 25th of 2023 with the objective of making the students exposed to the basics of data visualization techniques and tools and the various real time challenges based on that. Around 53 students from our department attended the session and got exposed to the topic which is widely developing now. The resource person Mr. Ramprakash Singaravel elaborated the techniques and tools in data visualization and its applications for business.



Glimpses of the Guest Lecture on "Data visualization techniques and tools for business"

Outcome:

The students will make use of this guest lecture to know about the areas where data visualization techniques and tools are used in real world and the way of developing reports, the knowledge of which can help them in their career.

SIGNATURE OF COORDINATOR

PRINCIPA






DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022 - 2023 EVEN SEMESTER

Report

1.	Type of the Event	:	Workshop
2.	Name of the Event	;	Game Development using Scratch Software
3.	Objective	;	The students should know about Scratch Software Tool
4.	Date	:	10.04.2023
5.	Level of the Event	:	Department Level
6.	Name of the organizer	:	Ms.S.Puvaneswari AP / CSE
7	Resource Person	:	Ms.R.Sugantha Lakshmi AP/CSE
/. 0	Terest Croup	(1)	II Year students
8.	Target Group		
9.	Number of Participants	:	46

10. Outcome

- understand the functionalities of each component
- know about the implementation of various controls in a project
- develop a new gaming application using SCRATCH

Snapshots



II year students actively participating in the event

X Pur 12/4/23 Co-ordinator

HOD/CSE

Frincipal



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ACADEMIC YEAR 2022 – 2023 EVEN SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 19.04.2023 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about Driver Assistant for the detetion of drowsiness and emergency alert.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 19.04.23 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.B.Bavithra explained the basics of Driver Assistant, Driver assistance systems for the detection of drowsiness and emergency alert play a vital role in enhancing road safety by mitigating the risks associated with driver fatigue. With ongoing advancements in sensor technology and data processing algorithms, these systems are expected to become more sophisticated and widely adopted in the automotive industry, ultimately saving lives and reducing accidents on the roads. By monitoring various parameters, these systems can detect signs of fatigue and issue timely alerts to drivers, enabling them to take necessary actions.

OUTCOME OF THE EVENT

The system will detect the early symptoms of drowsiness before the driver has fully lost all attentiveness and warn the driver that they are no longer capable of operating the vehicle safely. To address this critical issue, the development of driver assistance systems has gained traction. These systems aim to detect signs of drowsiness in drivers and issue alerts to prevent accidents. This seminar report explores the technology behind such systems and their role in enhancing road safety. This device will not, however, guarantee that the driver will be fully awakened and that an accident will be avoided.



Ms.B.Bavithra shared their concepts of Driver Assistant

Co-ordinator (Ms.S.Puvaneswari AP / CSE)

HOD/CSI





A detailed report on the

International Conference on Computing, Communication and Control (IC4)

> Held on 26.04.2023



Conference Chair: Dr.J.Arputha Vijaya Selvi, PrincipalConference Convener: Dr.A.Albert Martin Ruban, HoD/EEE



contact@kingsengg.edu.in | www.kingsengg.edu.in



A detailed report on the

International Conference on Computing, Communication and Control

(IC4) Held on 26.04.2023



Conference Chair: Dr.J.Arputha Vijaya Selvi, PrincipalConference Convener: Dr.A.Albert Martin Ruban, HoD/EEE

Kings College of Engineering has organized the International conference on Computing, Communication and control (IC4) on 26.04.2023. The participants from other institution and host institution have actively involved themselves in the technical event under the discipline of ECE, EEE and CSE.

Theme of the conference

The international conference on computing, communication and control (IC4) is committed to become the preferred and common hub for the researchers, academicians, practicing engineers and industrialists to exhibit their new research findings. It seeks solutions for the research/ industrial challenges/ problems and makes avenue to develop networking with hundreds of professional in the field of computer science, electrical, electronics and communication.

Objective of the conference

- 1. To present current research findings.
- 2. To explore solutions to research and industrial difficulties.
- 3. To establish networking with hundreds of professionals in the relevant field.

International Conference on Computing, Communication and Control



The Dignitaries of IC4 on the Dias



The gatherings of International Conference IC4

The conference was started with the Inaugural session by 10.15 a.m. Dr.J.Arputha Vijaya Selvi, Principal and Conference Chair had delivered the welcome address to the conference gathering.



Dr.J.Arputha Vijaya Selvi, Principal and Conference Chair has delivered the Welcome Address

Dr.R.Rajendran, Secretary and Patron of IC4 had delivered the presidential address. Dr. K.Vasudevan, Professor, Emeritus, CUST, Cochin, Kerala delievered the inaugural address to the galaxy of intellectuals. Dr. Arun.K.Majumdar, Adjunct Professor (Former), Colorado State University, USA had delivered the special address.



Presidential address by Dr.R.Rajendran, Secretary and Patron of IC4

The dignitaries on the dias released the International conference proceedings. After a short tea break the invited talk sessions were held in three different halls.



Felicitaion of Chief Guest



Releasing of IC4 Proceedings

Dr.K.Vasudevan, Professor, Emeritus, CUSAT, Cochin, Kerala had delivered the invited talk in **"Microwave Communication"** at Pallava Hall. The speaker started his presentation on the basic evolution of communication and spectrum of the communication. He elaborately explained the basics of antennas, various types of antennas and its application in microwave communication.

He also explained the various microwave devices which are used in the real time applications and military applications. Finally he concluded the various applications of microwave devices and recent trends of Microwave Communication.



Invited talk in "Microwave Communication" by Dr.K.Vasudevan at Pallava Hall

Dr.S.Albert Alexander, Associate Professor, VIT, Vellore, had given away the invited talk under the title **"Nuances of Machine learning"** at Seminar Hall. He said that there exists an evergrowing taxonomy in the field of AI and ML and understanding all its nuances and branches isn't just an exercise in vocabulary: it is paramount in deciding if AI is right for your business and end users.



Invited talk under the title "Nuances of Machine learning" by Dr.S.Albert Alexander at Seminar Hall.

Invited talk on the topic **"Power of Predictive Analytics Data science Perspective"** was delivered at Chera Hall by Dr.G.Tamilarasi, Professor, Department of IT, University of Technology and Applied science, Almusannah, Sultanate of Oman.

Dr. Arun K.Majumdar, Adjunct Professor (Former), Colorado state university, USA had presented an invited talk on **"Free - Space unguided optical wireless communication: Fundamentals, recent advances and applications"** at pallava hall.

After the lunch break, parallel sessions on technical presentation were held in different halls under three different categories.

Track 1- First category is for external participants in physical mode.

Track 2- Second Category is for external participants through online mode.

Track 3 -Third category is for internal participants in physical mode.

Based on the domain the jury for the technical evaluation has been allotted as a session chair for the above mentioned track. Based on the session plan, the technical presentation was conducted successfully.

For the department of CSE, 43 papers were received. Out of that 35 papers were scrutinized and selected for the conference technical session. Apart from this 10 internal papers were received.

For the department of ECE, 17 external papers were received. Among that 13 papers were selected for final presentation. 11 internal papers were received.

The department of EEE received 20 technical papers. After scrutiny 10 papers were selected for technical presentation. Apart from that 11 papers received from internal participants. Through this technical presentation, this international conference has exhibited some new research findings to seek solution for research and industrial challenges.

Dr.A.Albert Martin Ruban had summarized the conference activities by having presented the IC4 report in the valedictory session.



Dr.A.Albert Martin Ruban is summarizing the conference activities IC4

The dignitaries on the dias had distributed the certificates to the winners and the participants of the technical presentation.



The Dignitaries on the Dias has Distributed the IC4 Certificates

Dr.S.Uma, HoD/CSE had delivered the vote of thanks to the gathering. Finally the international conference ended up with National anthem.





Dr.S.Uma, has Delivered the Vote of Thanks

IC4 ended up with National Anthem

Conference Outcome:

- International conference facilitate the participants to discuss new ideas, share information, and hone professional skills.
- IC4 has allowed the participants to nurture the brain while also allowing them to be open to new ideas and concepts.

CHERISHABLE MOMENTS OF IC4











DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

MACHINE LEARNING WITH PYTHON REPORT

Seminar Topic	Machine Learning with python
Date	27.04.2023
Venue	Smart Class Room- CSE
Time	9.00am to 4.00pm
Resourceperson	Mr.M.Manoharan Green soft technology, Trichy
No.of participants	30

A seminar on "27.04.2023" by the resource person **Mr.M.Manoharan**, Project team head, Greensoft technology, Trichy. He has **15+years** of experience in industrial side. The students have actively participated in the seminar and they got more knowledge about Machine learning with python. The demo session was given by the resource person that should be useful for the students to get more practical knowledge.

Morning Session:

The session started with the warm welcome and inaugural speech by seminar co-orinator.Resoruce person started with the introduction of the language and made all the students familiar with the topic. He has covered simple topics of Machine learning with python and successfully initiated a good relationship with the students. Session started with python basics and some coding fundamentals for the new coders. Session focused more on basic theroies.

Afternoon Session:

In this session a demo on python was given to the students.Python includes a modular machine learning library known as PyBrain, which provides easy-to-use algorithms for use in machine learning tasks. Stuents learned more on python during demo session and they practiced with several topics related to machine learning with python.

- > Machine Learning is a step into the direction of artificial intelligence (AI).
- > Machine Learning is making the computer learn from studying data and statistics
- Machine Learning is a program that analyses data and learns to predict the outcome.

VALEDICTORY SESSION

At the end of the seminar, the session was concluded with the vote of thanks by **Mrs.B.Bavithra**, **AP/CSE**. She expressed her sincere thanks to the participants for their interests & Active participation. She heartily expressed her sincere gratitude to the Management, Principal, Vice Principal, Staff members and the students for their extended support. Finally, she concluded by appreciating the organizers for their passionate efforts with which they carried out the difficult task of making the seminar a grand success.

OUTCOME:

Participants gained knowledge about **MACHINE LEARNING WITH PYHTON** and also gave very good feedback.

Photos of the event sessionwise:

Morning Session:



Introduction



Students actively listening

Afternoon Session:





FEEDBACK:

Academic Year A ONE <u>"MACHINE LI</u>	2022-2023 / Even DAY SEMINAR OF EARNING WITH PY	Engineering Semester I THON"	
F	Excellent	Good	Satisfactory
Organization of the programme			
Registration process and Communication			
Content clearness			
Overall Feedback			
Other Comments			
and the second second			

Ácademic Year ' A ONE <u>"MACHINE LE</u> Fé	2022-2023 / Even DAY SEMINAR OF CARNING WITH PY Cedback Form	Semester V <u>(THON"</u>	
Organization of the programme	Excellent	Good	Satisfactory
Registration process and Communication			
Content clearness	\cap		
Overall Feedback	\square		
Other Comments			
The session is goo	id and Inter	ding	Ser. Lak
DATE: 27 . 4.23)<	(JEmel

FEEDBACK IS GIVEN BY THE PARTICIPANTS

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PRINCIPAL

SEMINAR CO-ORINATOR

HOD/CSE



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Workshop Topic	Machine Learning with Google COLAB
Date	28.04.2023
Venue	Smart Class Room
Time	9.00 am to 4.00 pm
Resource person	Dr. K. Rajiv Gandhi, M.Sc, M.E, Ph.D/ Ass.Pro CSE Govt Arts & Science College for women, Paramakudi
No.of participants	74

MACHINE LEARNING WITH GOOGLE COLAB WORKSHOP REPORT

The Event was organized on 28th of April 2023 with the intention to serve proper guidance on Machine learning concepts as well as practical knowledge with Python along with Google COLAB. Dr. Rajiv Gandhi were the Academician and undertaken more than 50+ workshops including reputed institutes alike PMIST's and NIT's.

The Event was a great success and interactive for both the ends. Students showed their active participation in following coordinators' guidance and they handled to worst to best situations wisely.

Morning Session:

It started with warm welcome and inauguration of the event. Mentors started with the R language and made all the students familiar with R studio. They covered simple topics of Machine learning with Google COLAB and successfully initiated the good relationship with the students. Technical problem was handled wisely by volunteers alike R setup and R studio setup. They started withpython basics and some coding fundamentals for the new coders and were successful in igniting the spark of interest in coding with Google COLAB with machine learning. They focused more on theories and were very practical on python basics.

Afternoon Session:

They raised the level of workshop to intermediate by practical hands-on projects like speech to text, chat bots, classification, and regression. New students found bit difficult initially as they were not much familiar but with the help of volunteers, they tried at their best to deliver quality. Technical problems like internet connection suffered but mobile hotspots were arranged accordingly.

Photos of the event session wise:

Morning Session:



Introduction Part takes place





Theory session handling

Afternoon Session



Hands-on session



Difficulties may solved by persons

Certificate Distribution:

Other college students also eagerly participated in the one-day workshop. So far to encouraging those, certificates are provided for both internal and external students.





Certificate distribution by HOD/ CSE

Certificate distribution by Resource Person



WORKSHOP TEAM - COORDINATORS with VOLUNTEERS

On behalf of the department of Computer Science and engineering, the hosting department, our faculty Coordinator extended her gratitude to the College Management and Principal. After the felicitation the program came to end with the National Anthem.



ACADEMIC YEAR 2022-23 (EVEN SEMESTER) Internal Workshop

On "POWER- BI" 18.05.2023

<u>REPORT</u>

Department of Computer Science & Engineering in Kings College of Engineering organized an internal workshop on "POWER-BI" on 18.05.2023.

Objective:

The main aim of the workshop is to know the power of modern AI system at hand. Create awareness and insist the need of data through innovation, in order data-driven culture across our world by offering everyone BI and analytics capabilities with Power BI Desktop.

Resource person:

Er. S. Abikayil Aarthi, Assistant Professor, Department of Computer Science & Engineering, Kings College of Engineering, Punalkulam, Pudukkottai.

Participants:

IInd & IIIrd Year students of CSE discipline totally 120 participants.

Inaugural Session:

Inaugural session was started with Welcome address and Introduction about the Resource Persons delivered by Ms. N. Dhamayandhi, AP/ CSE.

Session highlights: (Implement in the Real time Problems)

In this session, resource person explained about the technology-driven business intelligence tool which is an array of software services. Opportunities and scope for engineers also elaborated the key aspects and role of innovation in choosing POWER-BI as career option. Also, she explained with real world examples. She listed the availability of components and features in that tool. The resource person explained about the direct and indirect benefits of business available with the help of tool. The program was eagerly attended by all participants, who gained new knowledge from it.

Benefits in terms of Learning/Skills/Knowledge obtained:

- The students are aware about the concept of data.
- How to drag that tool in the real time problems.
- To make use of the opportunities available to before them to become successfulengineers.

Valedictory Function:

Finally, vote of thanks was given by Student Coordinator.

Event Photographs



Event Photograph-1



Event Photograph-2

Boucher Sample:



Workshop Coordinator

HOD/CSE

Vice Principal

Principal

2



3.2.2 - Number of workshops/seminars conducted on Research . Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

S.No	Date	Title of the Seminar	Beneficiaries	Page No
		ECE		
1.	25.08.2022	Report on regulation 2021 Highlights	60	1
2.	29.08.2022	Advanced Applications of IoT and LTE beyond	120	8 .
3.	15.09.2022	How to Prepare for Competitive exams	113	13
4.	15.09.2022	Mini Project Expo	46	17
5.	12.10.2022	CCTV Installation and Servicing	85	22
6.	20.10.2022	Guest Lecture on Renewable Energy Sources	45	32
7.	11.01.2023 - 13.01.2023	Winter Crash course on C,C++ Programming	23	36
8.	23.02.2023	Two days National level workshop on Real Time Project Design Using Arduino	56	42

2000000000 all 29/5723 HOD/ECE

H.O.D. ELFCTPONICS AND COMMUNICATION ENGINEERING KINGS COLLEGE OF ENGINEERING PUMALKULAM - 613 303. GANDARYARDTAL TALKK, PUDUKGITAL DEFINEE

29/5/2023 J.Mr

PRINCIPAL PRINCIPAL Kings College of Engineering, PUNALKULAM - 613 303





CERT

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING ACADEMIC YEAR (2022-2023) ODD SEMESTER

REPORT ON REGULATION 2021 HIGHLIGHTS

DATE: 25.08.2022

VENUE: SMART CLASS ROOM

Department of Electronics & Communication Engineering have organized an orientation session regarding the highlights of regulation 2021 for the Second year B.E-ECE students on 25th August 2022, between 10.00am to 11.30am in Department Smart Class Room. Nearly 60 Students have enthusiastically participated in the orientation session.

The following points were discussed in that session.

- 1. Details of Course Category:
 - ✓ Humanities, Social Sciences and Management Courses (HSMC)
 - ✓ Basic Sciences Courses (BSC)
 - Engineering Sciences Courses (ESC)
 - ✓ Professional Core Courses (PCC)
 - ✓ Professional Elective Courses (PEC)
 - ✓ Open Elective Courses (OEC)
 - ✓ Employability Enhancement Courses (EEC)
 - ✓ Audit courses (AC)
- 2. Personality and Character Development: Each student should enroll in any one of the following programmes.
 - ✓ National Cadet Corps (NCC)
 - ✓ National Service Scheme (NSS)
 - ✓ National Sports Organization (NSO)
 - ✓ Youth Red Cross (YRC)
- 3. Credit Assignment:

Contact Period Per Week	CREDITS
1 Lecture Period	1
1 Tutorial Period	1
1 Laboratory Period (also for EEC courses like Seminar / Project Work /Case study / etc.) 0.5	0.5

4. Industrial Training:

- ✓ During summer or winter vacation, all the students should undergo Industrial Training for a period of at least two weeks in an Organization.
- ✓ If Industrial Training/ Internship is not prescribed in the curriculum, the student may undergo Industrial Training/ Internship optionally and the credits earned will be indicated in the Grade Sheet.

Duration of Training/Internship	CREDITS	
2 Weeks*	1	
4 Weeks	2	
6 Weeks	3	

*1 Week = 40 Internship Hours

- 5. Industrial Visit: Every student is required to go for at least one Industrial Visit every semester starting from the second year of the Programme.
- 6. Value Added Courses: The students may optionally undergo Value Added Courses (VAC) over and above the topics covered in the curriculum to obtain practical and industry specific knowledge.
- **7.** Audit courses: The student may optionally study audit courses prescribed by the University and it will be mentioned in the Grade Sheet. However, it will not be considered for computation of CGPA.
- 8. Advancement of Courses: The student, who completed their final semester courses (except project work) in advance, shall be permitted to carry out their final semester Project Work for six months in an industry/research organization.
- 9. Course Registration: The courses that a student registers in a particular semester may include i. Courses of the current semester. ii. Courses dropped in the lower semesters and iii. Courses advanced to Semester VI and VII from Semester VIII (as per clause 4.10).
- **10.Flexibility to Drop courses:** From the second to final semesters, the student has the option of dropping existing courses in a semester during registration. Total number of credits of such courses shall not exceed 6 per semester. The student is permitted to drop the course(s) within 30 days of the commencement of the academic schedule.

11.System of examination:

- ✓ For all theory courses, the continuous internal assessment will carry 40 marks while the End Semester University examination will carry 60 marks.
- ✓ For all theory courses with aboratory component, the continuous internal assessment will carry 50 marks while the End Semester University examination will carry 50 marks.
- ✓ For all boratory courses, the continuous internal assessment will carry 60 marks while the End Semester University examination will carry 40 marks.

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Assessment I (40% weightage) (Theory Component		Assessment II (60% (Laboratory Con	Total	
Individual Assignment / Case Study / Seminar / Mini Project	Written Test	Evaluation of Laboratory Observation, Record	Test	Internal Assessment
40	60	75	25	200

*The weighted average shall be converted into 50 marks for internal Assessment

16.Project work:

- ✓ The student shall register for Project Work-I in pre-final semester and Project Work-II in final semester. Project work may be allotted to a single student or to a group of students not exceeding 4 per group.
- ✓ There shall be three reviews during the semesters VII and VIII by the review committee. The student shall make presentation on the progress made by him / her before the committee. The total marks obtained in the three reviews shall be reduced for 40 marks and rounded to the nearest integer.

Review	Review	Review	Market Star	End Ser	nester Exa	minations	
1	П	III	Project Report		Viva-Voce Examination		
			Internal	External	Internal	External	Supervisor
10	15	15	10	10	10	20	10

- **17.Assessment for Value Added Courses:** The one / two credit course shall carry 100 marks and shall be evaluated through continuous assessments only. The total marks obtained in the assessments shall be reduced to 100 marks and rounded to the nearest integer.
- **18.Conduct of Academic Audit by every Institution:** In order to ensure the above, Academic Audit is to be done for every course taught during the semester. The Head of the Institution shall arrange to conduct the Academic Audit for every course in a semester by forming the respective committees with an external course expert as one of the members drawn from a Technical institution of repute near the institute.
- **19.Passing Requirements:** A student who secures not less than 50% of total marks prescribed for the course [Internal Assessment + End semester University Examinations] with a minimum of 45% of the marks prescribed for the end-semester University Examination, shall be declared to have passed the course and acquired the relevant number of credits. This is applicable for both theory and laboratory courses.

Kings College of Engineering, Punalkulam

3

- ✓ The continuous internal assessment for the project work will carry 40 marks while the End Semester University examination will carry 60 marks.
- ✓ Industrial Training and Seminar shall carry 100 marks and shall be evaluated through internal assessment only.

12. Procedure for awarding marks for internal assessment

- ✓ For all theory, laboratory courses, theory courses with laboratory component and project work the continuous assessment shall be awarded as per the procedure given below:
- Two assessments each carrying 100 marks shall be conducted during the semester by the Department / College concerned.
- **13.Theory Courses:** The total marks obtained in all assessments put together out of 200, shall be proportionately reduced for 40 marks and rounded to the nearest integer.

Assessment I (100 Marks)		Assessment	Total		
	Individual Assignment / Case Study / Seminar / Mini Project	Written Test	Individual Assignment / Case Study / Seminar / Mini Project	Written Test	Internal Assessment
Ī	40	60	40	60	200

14.

Laboratory courses:

The maximum marks for Internal Assessment shall be 60 marks in case of practical courses. Every practical exercise / experiment shall be evaluated based on conduct of experiment / exercise and records to be maintained. There shall be at least one test.

Evaluation of Laboratory	
Observation Decard	Test
75	25

* Internal assessment marks shall be converted into 60 marks

15. Theory courses with aboratory component:

- ✓ If there is a theory course with laboratory component, there shall be two assessments: the first assessment (maximum mark is 100) will be similar to assessment of theory course and the second assessment (maximum mark is 100) will be similar to assessment of laboratory course respectively.
- ✓ The weightage of first assessment shall be 40 % and the second assessment be 60 %. The weighted average of these two assessments shall be converted into 50 marks and rounded to the nearest integer.

20.Award of Letter Grades: The award of letter grades will be decided using relative grading principle. The performance of a student will be reported using letter grades, each carrying certain points as detailed below:

Letter Grade	Grade Points
0 (Outstanding)	10
A + (Excellent)	9
A (Very Good)	8
B + (Good)	7
B (Average)	6
C (Satisfactory)	5
RA (Re-appearance)	0
SA (Shortage of Attendance)	0
W (Withdrawal)	0

21. Classification of the Degree Awarded:

(a) First class with distinction:

- ✓ Should have secured a CGPA of not less than 8.50.
- ✓ Should have passed the examination in all the courses of all the eight semesters (10 Semesters in case of Mechanical (Sandwich) and 6 semesters in the case of Lateral Entry)

(b) First class:

- ✓ Should have secured a CGPA of not less than 6.50.
- ✓ Should have passed the examination in all the courses of all eight semesters (10 Semesters in case of Mechanical (Sandwich) and 6 semesters in the case of Lateral Entry).

Enrolment for B.E /B.Tech (Honours) / Minor Degree:

A student can also optionally register for additional courses (18 credits) and become eligible for the award of B .E /B.Tech (Honours) / Minor Degree.

- For B.E /B.Tech (Honours), a student can register for additional courses (18 credits) from semester V onwards. These courses shall be from the same vertical or a combination of different verticals of the same programme of study only.
- ✓ For Minor degree, a student shall register for the additional courses (18 credits) from semester V onwards. All these courses have to be in a particular vertical from any one of the other programmes. Moreover, for Minor degree the student can register for courses from any one of the verticals also.

Sample snapshots of regulation 2021 highlights session;



-Kings-College-of-Engineering, Punalkulam-







Department of Electronics and Communication Engineering

IN AICTE

Research & Development Section

Webinar on

Advanced Applications of IoT and LTE Beyond

Department of Electronics and Communication Engineering in association with R&D Section and IEEE STB 16621 organized a webinar on Advanced Applications of IoT and LTE Beyond on 29.08.2022. Dr. Vaddi Naga Padma Prasunna, Associate Professor, IEEE WIE AG Advisor, Atria Institute of Technology, Bangalore delivered lecture. Ms. K. Priyanka, student of IV ECE, welcomed the gathering. Ms. Jothika, student of II ECE introduced the resource person.

In her lecture,

- She has introduced the concept of Internet of Things and its applications on various areas such as farming, health, traffic monitoring and energy savings etc.
- Also she explained the challenges in providing IoT solutions for various applications.
- She gave an overview on scenario, requirements and applications of Long Term Evaluation Technology (LTE) technology which offers a faster and better broadband connectivity with speeds upto 300 Mbps.
- Students' queries were clarified at the end of the session.

Ms. Kavinila, student of II ECE proposed vote of thanks. A total of 120 Students (CSE-34, ECE 46 and Mechanical-40) participated in the programme. The programme was coordinated by Mr. T. Pasupathi, AP/ECE and Mr. J. Niranjan Samuel, JRF/R&D.

Outcome:

At the end of the session, students came to know about

- Fundamentals of IoT
- Challenges in designing IoT
- Applications of IoT in various sectors
- LTE Fundamentals
- LTE Applications

Coordinators

HOD/ECE

Principal







 \bigcirc

A view of the participants attending the programme in smart classroom



Request for consent - reg

Niranjan Samuel J <niranjansamuel@kingsengg.edu.in> To: vnp.prasunna@atria.edu

Frl, Aug 26, 2022 at 12:26 PM

Madam,

Greetings from Kings College of Engineering - IEEE STB 16621

Kings College of Engineering (KCE) is an institution which was formed with the single aim of providing quality education to the poor and underprivileged students. KCE is approved by All India Council for Technical Education, New Delhi (AICTE) and is affiliated to Anna University, Chennai. The institution was established in the year 2001 on a sprawling campus of around 60 acres on the Thanjavur-Pudukkottai Highway and run by Raj Educational Trust (RET). The institution offers six U.G and four P.G programmes and is certified with ISO 9001:2008.

Department of ECE in association with IEEE Student Branch and R&D Section is organizing a webinar on IOT on 29.08.2022. In connection with this, we would like to invite you to deliver a lecture of one hour duration in the webinar scheduled on 29.08.2022 (11:30 a.m. - 12:30 p.m.)

Expecting a favourable reply in this regard.

Kindly send us your profile.

Thank you,

Regards.

J. Niranjan Samuel JRF/ECE-R&D Coordinator - Social Media & Press Incharge - IEEE STB 16621 Kings College of Engineering Punalkulam, Near Thanjavur



Request for consent - reg

Prasunna VNP <vnp.prasunna@atria.edu>

To: Niranjan Samuel J <niranjansamuel@kingsengg.edu.in>

Fri, Aug 26, 2022 at 2:53 PM

Dear Sir,

Thank you for your invitation and I am happy to deliver a lecture in the webinar scheduled on 29.08.2022 at the scheduled time. PFA of my profile.

Regards Dr. Prasuna VNP Associate Professor, ECE dept, WiE AG advisor, Atria Institute of Technology

[Oucted text hidden]

My profile.docx 286K







CAREER GUIDANCE PROGRAM

In the title of

"How to prepare for Competitive Exams"

ON

15th SEPTEMBER 2022



Organized by

Department of Electronics and Communication Engineering

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

A NAAC Accredited Institution

Recognized under 2(f) & 12(B) of UGC

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

Phone : 04362-282474, 282395 Website : <u>www.kingsindia.net</u>

ABOUT THE PROGRAM:

The career guidance program was organized for second and third year ECE students on 15th september, 2022 by 11.30 A.M. in Chera Hall. Totally 113 students have enthusiastically participated in this Program.

The programme started with Tamizh Thai Vazhththu. Dr.J.Arputha Vijaya Selvi, Principal, delivered the Felicitation address. Mrs.N.Mangaiyarkarasi, HOD/ECE delivered the welcome address and introduced the Chief Guest **Mr.J.Alexander**, **M.E.**, **Assistant Engineer**, **Public Works Department**, **Thanjavur**.

OBJECTIVE:

The main objective of this career guidance program was to give the awareness about the job opportunities for Electronics Engineers in the core field and How to prepare for the competitive Exams.

KEY NOTE SPEECH BY THE RESOURCE PERSON:



Resource Person Mr.J.Alexander, delivering the key note speech to the students.

He gave an excellent speech to the students and interacted with the students about the various issues related to students' community. He is having 15 years of teaching experience also so, he can able to read the students mentality easily.

In his speech, he pointed out that students' should follow a protocol to become bright in the future. His talk focused on **"How to prepare for the competitive Exams?"** What are all the books to be referred? He explained how to study the concept clearly with some real time examples. He also taught how to solve a circuit by using mesh and Nodal analysis.

He shared his experience about his preparation for the examination. He also gave some tips to prepare for the exam. In this competitive world students should work hard for many years to crack the exam, but only few of them will succeed. So, it is essential to strategize the studying methodology to succeed in the exams.

- ✓ Choose the subject and the field of work as per your interest.
- ✓ The candidate must understand the syllabus of the examination & outline what types of questions are asked in the exam.
- ✓ Create a studying strategy for this after knowing the exam pattern.
- ✓ It is essential to have a grip on the latest current affairs while preparing for a government job.
- ✓ When you prepare for the exam, keep making notes of it to remember things well, and it would help in last-minute revision.
- ✓ To check your performance, attend the mock tests and practice atleast recent 5 years question papers based on the exam pattern.
- ✓ Maintain Self Confidence & Stay Positive

He insisted that so many opportunities are there, we have to utilize it properly. Finally he insisted that the students should have hard work, Time management, good personality development, good communication skills, sincerity, honesty and discipline.

In addition, acquiring leadership skills helps the students to set their goal to achieve a better position in the society.



Students eagerly listening to the key note speech.


Students enthusiastically listening to the key note speech.

OUTCOME:

- At the end of the program, students gathered more knowledge about the availability of job opportunities in our core field.
- Students gained more knowledge on How to prepare for the competitive Exams.
- Students acquired knowledge about the job opportunities in Government and private sectors.

Coordinator

HOD/ECE

8/11/2022 PRINCIPAL







A REPORT

MINI PROJECT EXPO - 15th September 2022



Organized by Department of Electronics and Communication Engineering KINGS COLLEGE OF ENGINEERING, PUNALKULAM A NAAC Accredited Institution

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai) Phone : 04362-282474, 282395. Website : <u>www.kingsengg.edu.in</u> In KCE, Department of Electronics and Communication Engineering have organized a Mini Project Expo-2022 on 15-09-2022 at Digital Electronics Lab.

The chief guest for the expo was Mr.J.Arokiaraj, AP/EEE and Dr.P.Narasimman, AP/EEE from Kings College of Engineering.

Our honorable principal, Dr.J.Arputha Vijaya Selvi, graced the occasion with her presence.

Totally 52 students, i.e 13 Teams with (46 students) from Kings College of Engineering and 2 Teams with (06 students) from Periyar Maniyammai University have enthusiastically participated in this event.

OBJECTIVE:

- ✓ The major objective of organizing this exhibition was to provide the platform and to bring out the potential of the students by showcasing their innovative projects developed.
- It provides an opportunity for the students to demonstrate their personal abilities and skills required to produce and to present an extended piece of work.

✓ Also to engage in personal inquiry, action and reflection on specific topics and issues and reflect on learning and share knowledge, views and opinions.

About the Expo:

Students exhibited the projects based on different technologies like

- ✓ Internet of Things
- ✓ Embedded System
- ✓ Machine Learning
- ✓ Artificial Intelligence
- ✓ Smart Agriculture
- ✓ Solar Power etc.,

The students participated actively and exhibited their projects. The presentation was very interesting and the students sincerely contributed themselves in doing their mini projects. All the projects were useful for the Society.



A live demo of project was presented by students

Each panelist visited the students and looked over their projects and asked variety of questions, including "What is the purpose of the project?" "How will they continue to develop the project in the future?" and "Importance of their project to the society".

They also interacted with the students and responded to their inquiries about the various discipline and also gave career development guidance.

Points were awarded for the projects by considering varieties of factor like novelty of the project, technology used, way of presentation and capability of answering to queries.

Students and staff from various disciplines have visited the expo and learned about the innovative ideas presented by the students of ECE. After reviewing each project, the three outstanding projects were selected and awarded with cash prize.

PRIZE WINNERS:

S.No	Project Title	Team Members	Prize	
1.	Smart Vapor Sanitization	Ajay.A, Gururagavan.R.K Sivasethumathavan.D	1 st Prize (Rs.1000)	
2.	Wi-Fi Robot	Sajjeevan.M, Seran.B Prithish.M, Saravanan.S	2 nd Prize (Rs. 750)	
3.	Arduino Based Piano	Karthik.S Mohamed Nowsath.M	3 rd Prize (Rs.500)	



Awards & Prize distribution to the participants by Mrs.N.Mangaiyarkarasi, HOD/ECE

Mrs.N.Mangaiyarkarasi HOD/ECE distributed the cash prize for the winners and also issued the participation certificates **to** all the participants. Mr.R.Thandayuthapani, AP/ECE coordinated the entire EXPO.

The Mini Project Expo sparkled with success. The conceptions from the visitors regarding the Expo were outstanding. The students were very much thankful for the management for giving a chance to exhibit their talents which are useful for the upcoming students.

OUTCOME:

Department of ECE is conducting Mini Project Expo since 2012, keeping in mind the pursuance of student's natural curiosity and imagination to showcase their creativity.

This expo provides a unique platform to the participating students for their innovations and new experiences with the community.

Finally, the Mini Project Expo-2022 highly motivated the other students, apart from the participants to come up with their innovative ideas in the future.

in

Mini Project In-Charge

HoD/ECE

PRINCIPAL PRESCIPAL Kings College of Engineering PUNALKULAH - \$13 303.





Organized by

Department of Electronics and Communication Engineering

In Association with

IEEE - Madras Chapter - STB16621

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ABOUT THE WORKSHOP:

Three days workshop was organized for third and final year ECE students in the title of **"CCTV Installation and Servicing"** from 12th October 2022 to 15th October 2022. Totally 85 students have enthusiastically participated in this workshop.

The Workshop started with Tamizhthai Vazhththu. Ms.K.Gayathri, Final ECE welcomes the gathering. Mrs.N.Mangaiyarkarasi, HOD/ECE delivered the Inaugural address. Mrs. D.Vennila, AP/ECE introduced the Resource persons.

Day-1 - Mr.P.Raja Pirian, Assistant Professor, Kings College of Engineering.

Day-2 - Mr.T.Jeyaseelan, Assistant Professor, Kings College of Engineering.

Day-3 - Mr.Jeorge Nelson and their team from Jeorge Tech Solutions, Kumbakonam.

OBJECTIVE:

The main objective of this workshop is to know the basics of Closed Circuit Television System and have the ability to install and service the system by their own knowledge. It's a part of an entrepreneur development initiative.



Dignitaries on the Dias.





Welcome address by Mrs.N.Mangaiyarkarasi, HOD/ ECE

Dignitaries and participants during Tamizhthai Vaazhthu



Resource Person Mr.P.Rajapirian, AP/ECE , KCE delivering the lecture to the Participants

DAY-1 WORKSHOP:

The resource person gave an excellent lecture to the students and interacted with the students about the need for Closed Circuit Television System, Basics of CCTV and its assembly. He also explained about the Digital Video Recorder system and IP address concepts,

Basics of CCTV:

CCTV (Closed-Circuit Television) is a system of cameras which record or transmit video footage for surveillance and security purposes. A complete CCTV system consists of:

- Security cameras (analogue or digital)
- ➤ Cables
- A video recorder (DVR or NVR)
- A storage unit, usually a hard drive
- A display unit, such as a monitor (optional)

Digital Video Recorder System:

A Digital Video Recorder (DVR) is an electronic device that records video in a digital format to a disk drive, USB flash drive, SD memory card, SSD or other local or networked mass storage device. The term includes set-top boxes with direct to disk recording, portable media players and TV gateways with recording capability, and digital camcorders. Many DVRs are classified as consumer electronic devices; such devices may alternatively be referred to as Personal Video Recorders (PVRs).

Benefits of surveillance cameras in public places to ensure the public safety:

- Cameras keep you and your personal property safe.
- The police can identify criminals recorded with cameras.
- Surveillance cameras protect against property theft, and vandalism. It is very difficult to get away with stealing something if there are cameras filming you. Therefore, the thief will often get caught. Surveillance cameras will catch the thief before, or during the process of committing the crime.
- If no one is aware of the crime until after it has been committed, the surveillance footage is always a crucial piece of evidence during a police investigation.
- Criminals are less likely to commit crimes in the area if they know they're going to be being filmed the whole time.
- Having cameras in public places make people feel safe.
- The growth of facial recognition and analytical software enables much greater predictive insights into criminal behavior and more accurate reporting.

IP Networking Basics

- Each device on an IP network requires 3 different pieces of information in order to correctly communicate with other devices on the network: an IP address, a subnet mask, and a broadcast address. Usually each of these numbers written as four "octets" (e.g. 198.41.12.151, 255.255.255.0, and 198.41.12.255).
- Every IP address is really made up of two pieces: a "network" portion, which tells routers what group of devices a packet should go to (e.g., any, a campus, etc.) and a "host" portion which tells routers what specific device among that group the packet should go to.
- By examining the destination address in an IP packet that must be forwarded, and by using information that has either been statically configured or dynamically gathered from other routers, any router can determine the optimal path for forwarding packets from one group to another.
- Each group of devices on an IP internet needs to have a unique network portion, and each device within that group also needs a unique host portion. In the case of the Internet, this uniqueness is made possible by indirectly getting all network portion assignments through a central clearinghouse called the Network Information Center or "NIC." The NIC assigns blocks of addresses to Internet Service Providers (ISPs), who then assign these addresses to their customers.
- If CCTV network will be, connected to the Internet, it will need to get a unique network address from your ISP or network administrator.
- How much of any given address is the network part and how much is the host part is determined by the "class" of the network. In each case, the part of the address not used for the network portion is left as the host portion.
- The following table shows the IP classes.

Class	Network Portion	Hosts Allowed
А	from 1.0 to 127.0	approx. 16 million
В	from 128.0 to 191.255	65,536
С	from 192.0 to 223.255.255	255

Table 1 : IP Address Classes

DAY-2 WORKSHOP:

The resource person started the session by explaining the block diagram of CCTV and he gave the introduction about DVR, how to install the hard disk and its accessories. He explained about the hard disk used for DVR and the recording system. Finally, he summarizes the real-time functionalities of CCTV in a detailed manner.

He gave a nice explanation about the block diagram of CCTV and also explained each and every block clearly.

- The camera tube is used to transform light from an item that the camera is focused on into electrical impulses.
- The lens mechanism focuses light from the object on the light-sensitive surface (called the mosaic or photoconductive material) in the camera tube.
- An electron gun is housed in the camera tube, which creates and regulates a stream of electrons.
- The narrow stream of electrons is directed by the cannon in such a way that it crosses (scans) the mosaic line by line. When the beam hits a point in the mosaic, it creates a little electrical impulse that corresponds to the brightness or darkness of that specific small area of the image.
- > The visual amplifier receives the electrical impulses created in this manner.

He also explained about the Control Unit and Receiver/Monitor unit.



Resource Person Mr.Jeyaseelan, AP/ECE, KCE delivering the lecture to the Participants

In his lecture, he explained how to choose the right equipment

- Digital Video Recorders (DVRs) It is a device which process video signals from cameras and transmit them through a coaxial cable.
- Network Video Recorders (NVRs) It differs from DVRs by recording and transmitting video footage via a network cable.

- Dash Cams and Accessories It is also called as dashboard cameras, they're installed in vehicles to monitor road scenery to capture evidence in an accident or collision.
- CCTV Cameras and Accessories Cameras, record the video footage and it is the forefront of security installations.
- Monitors These are used to transmit video signals to people monitoring the footage, for surveillance purposes.
- Dummy cameras These are wireless false cameras designed to look like real ones, providing a less maintenance and cost-effective deterrent.
- Mirrors Designed to be used alongside cameras, they help to increase visibility to improve the effectiveness of cameras by reflecting a wider angle view.

DAY-3 WORKSHOP:

This session was completely hands on session. The resource person have demonstrated about the various cameras and its accessories, how to install camera with DVR. They gave clear explanation about how to setup the DVR for real-time capturing.





Resource Person Mr.Jeorge Nelson gave demo to the participants during the Hands on Session



Finally, Mr.W.Newton David Raj, AP/ECE gave the vote of thanks with words and he appreciated all the student participants and the resource persons for their endless effort. Thus the workshop ended successfully.

OUTCOME:

- At the end of the workshop the students gathered more knowledge on how to install and Repair CCTV system. Able to identify the different types of camera.
- Students can able to identify the functional components through visual inspection and by using multi meter.
- Students can able to select suitable cameras & DVR to provide the better solution to the customers.
- They have understood the CCTV camera installation and the requirement in terms of equipment, system, tools, and applications for a particular site.

Coordinator(s)

PRINCIPAL PRINCIPAL Kings College of Engineering PUNALKULAM-613 303.

Annexure: I

BROCHURE







Department of Electronics & Communication Engineering

Organizes THREE DAYS WORKSHOP on CCTV INSTALLATION AND SERVICING Date : 13-10-2022 to 15-10-2022 Time : 10 : 00 am - 04.00 pm Resource Persons Mr.P.Raja Pirian AP/ECE Mr.T.Jeyaseelan AP/ECE Technical Support Mr.Jeorge JEORGE TECH SOLUTIONS KUMBAKONAM



TOPICS TO BE COVERED Basics of Security & Surveillance. Functions of Video Surveillance. Types of cameras and their functions, Sensors, Light, Lens and Zoom. DVR and switcher. Principles of network, remote accessing.

Installation of CCTV camera.

Safety procedures. Registration Fee : Rs.150/-

Last Date for Registration : 12/10/2022

Mrs.N.Mangaiyarkarasi CONVENER

Mr.W.Newton David Raj

Mr.R.Thandayuthapani COORDINATORS

30

Dr.J.Arputha Vijaya Selvi PATRON Dani Mrs.D.Vennila

Page. No.9

Annexure: II Sample Certificates

Cortificate of Particination	621
Commune of Aparticipation	
This is to certify that Mr./Ms	
fromhas actively participated in the "Th	ree
Days National Level Workshop on CCTV Installation and Servicing" from 13-10-2022	2 to
5-10-2022 organized by Department of Electronics and Communication Engineering	•
Mrs.N.Mangalyarkarasi Dr.J.Arputha Vijaya Selvi CONVENER PATRON	
Coordinators : Mr.W.Newton David Raj Mr.R.Thandayuthapani Mrs.D.Vennila	
VEARS OF ACADEMIC EXCELLENCE Provided by MC 12, for Manjarur, Pudukkontral- 613303	21
Certificate of Participation	
This is to certify that Mr./MsSATHISHKANNAN S	
fromhas actively participated in the "Three	e
	to /
Days National Level Workshop on CCTV Installation and Servicing" from 13-10-2022	13
Days National Level Workshop on CCTV Installation and Servicing" from 13-10-2022	-
Days National Level Workshop on CCTV Installation and Servicing" from 13-10-2022 15-10-2022 organized by Department of Electronics and Communication Engineering. Mrs.N.Mangaiyarkarasi CONVENER Dr.J.Arputha Vijaya Selvi PATRON	



A REPORT FOR GUEST LECTURE

ON

RENEWABLE ENERGY SOURCES

20th OCTOBER 2022



Organized by

Department of Electronics and Communication Engineering

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

A NAAC Accredited Institution

Recognized under 2(f) & 12(B) of UGC

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai) Phone : 04362-282474, 282395 Website : <u>www.kingsindia.net</u>

Name of the Event	: GUEST LECTURE ON RENEWABLE ENERGY SOURCES				
Department	: ECE				
Number of Beneficiaries	: 45				
Name of the Resource Person : Mr.J.Arockia Raj,					
	Assistant Professor /EEE,				
	Kings College of Engineering, Punalkulam				
Date	: 20.10.2022				

OBJECTIVE:

- To have an interactive session for students with professional who can share their valuable knowledge and experience.
- An expert lecture helps the students to develop the multiple skills like critical thinking, reasoning, planning for the future, etc.
- Students get new perspectives and opinions that are often missed in a regular class.

ABOUT THE GUEST LECTURE:



Welcome Address by Mr.P.Rajapirian, AP/ECE

Resource person Mr.J.Arokiaraj, AP/EEE delivering the lecture on RES.

He gave an excellent talk on "Renewable Energy Sources" through the following sub topics.

- ✓ Solar Energy
- ✓ Wind Energy
- ✓ Tidal Energy
- ✓ Wave Energy
- ✓ Bio Mass

Solar Energy:

He explained clearly about the concept of solar power generation, photovoltaic cell and how much amount of solar energy utilized in India. He explained about the environmental impact created to get solar energy. What are all the measurements involved to measure the solar energy etc. He gave a very clear idea about these concepts with video clippings.

> Wind Energy:

In this concept, he explained about the structure of wind machine and the type of energy generated from wind machine, its types etc. He also explained about the selection of site to erect the wind machine, operation and principle of wind machine.

> Tidal Energy:

In this topic, he gave an overview about its arrangement and How to create the Tidal energy? He also explained about the single basin arrangement and double basin arrangement also about the energy utilization technique.

Wave Energy:

He gave a nice explanation through a video about this Wave energy concept which is one of the proposed technique.

> Bio Mass:

In this topic, he explained clearly about the types of Biomass and the convenient place for Biomass setup etc.

Finally he demonstrated the above mentioned topics with some videos.



Students Eagerly listening the lecture on Renewable Energy Sources



Snapshots of the Guest lecture on Renewable Energy Sources

OUTCOME:

- Students gained some practical knowledge related to the theoretical concept. They have gained knowledge about the types of energy utilized in India.
- Series of such session fetch an extra enthusiasm to the students to have practical knowledge about the subject.

11/2022 Coordinator

du 600000 9 11/202

HOD/ECE

Principal

PRINCIPAL Kings College of Engineering PUNALKULAN - 640-55



A REPORT

on

Winter Crash Course on "C, C++ Programming for Placements" 11th January 2023 to 13th January 2023.



Organized by

Department of Electronics and Communication Engineering

in Association with

IEEE Student Branch - STB16621

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

A NAAC Accredited Institution

Recognized under 2(f) & 12(B) of UGC

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai) Phone : 04362-282474, 282395 Website : www.kingsengg.edu.in

CONTENTS

SL.NO.	PARTICULARS	PAGE NO.
1.	Detailed Report	03
2.	Annexure: I (Brochure)	05
3.	Annexure: II (Sample Certificates)	07

ABOUT THE WORKSHOP:

Three days winter crash course was organized for final year ECE students in the title of "C, C++ programming for placements" from 11th January 2023 to 13th January 2023. Totally 23 students have enthusiastically participated in this workshop.

The workshop started with Tamizhthai Vazhththu. Ms.K.Gayathri, Final ECE welcomes the gathering. Mrs.N.Mangaiyarkarasi, HOD/ECE delivered the inaugural address. Mrs. D.Vennila, AP/ECE introduced the resource persons. The resource person details were as follows :

Day-1-Session-1: Mr.T.Pasupathi , Assistant Professor, Kings College of Engineering.Day-1-Session-2: Mr.P.Raja Pirian, Assistant Professor, Kings College of Engineering.Day-2-Session-3 &4: Mr.T.Jeyaseelan, Assistant Professor, Kings College of Engineering.Day-3 -Session-5&6: Mrs.U.Jeyamalar, Assistant Professor, Kings College of Engineering.

OBJECTIVE:

The main objective of this workshop is to train the students in C and C++ programming and to prepare them towards placements.

DAY 1 - Session 1: The resource person Mr.T.Pasupatthi, Assistant Professor/ ECE, begins with fundamentals of C- Language, he covered data types, key words and how the keywords are used in C-Programming. He also explains about operators used in C-language such as arithmetic operators, relational operators, conditional statements and loop statements. He delivers the syntax with simple examples.



Resource Person Mr.T.Pasupathi, AP/ECE, KCE delivering the lecture to the participants K

Resource Person Mr.P.Raja Pirian, AP/ECE, KCE,delivering the lecture to the participants

DAY 1 - Session 2 : The resource person Mr.P.Raja Pirian Assistant Professor /ECE trained the students with arrays in C, string handling, function, pointers, structures and unions, linked list & file management. Finally he trained the student with a project named "student Information system", which includes the details such as student's personal information and academic details. The students were actively participated in both the sessions.

DAY 2 - Session 3 & 4 : Mr.T.Jeyaseelan, Assistant Professor/ECE, delivers lecture on fundamentals of C++ Programming. In this, he covered the topics such as data types, variables, strings, if-else statement, loops, functions call by value and call by reference, recursion and recursive function in C++, data input and output, classes & objects, constructors and destructors, operator overloading. A hand on session was arranged during the afternoon session. In that the students were practiced to write and execute the programs based on the topics learned in the forenoon session.



DAY 3 - Session 5 & 6 : Mrs.U.Jeyamalar Assistant Professor /ECE, delivers the lecture on header files, arrays, pointers, memory management basics, classes and objects, operator overloading, and vectors, inheritance, polymorphism & exception handling.



The afternoon session was hands on session. The students were practiced with various programs. Finally Mr.R.Thandayuthapani Assistant Professor / ECE, delivered the vote of thanks. Thus the workshop ended successfully.







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Electronics & Communication Engineering



Register Now : https://tinyurl.com/KECINDC

https://www.kingsengg.edu.in fb:/Kings College of Engineering

Outcomes:

At the end of this workshop the students gained more knowledge to

- Develop a C program.
- Manage 1/O operations in C program.
- Apply code reusability with functions and pointers.
- Use functions and pointers in C++ program.
- Understand tokens, expressions, and control structures.
- Describe and use constructors and destructors.
- Understand and employ file management.

0) oordinator(s)

Cla 7/2/2023 HOD/ECE

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A REPORT

on

Two Day National Level Workshop on "Real Time Project Design using arduino" 23rd February 2023 & 24th February 2023.



organized by

Department of Electronics and Communication Engineering

in Association with

IEEE Student Branch - STB16621

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

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CONTENTS

ABOUT THE WORKSHOP:

The two day National Level Workshop on "Real Time Project Design using Arduino" was organized for the benefit of students community those who are interested to implement their innovative ideas using the arduino Kit. The workshop conducted from 23rd February & 24th February. Totally 56 students have enthusiastically participated in this workshop.

The workshop started with Tamil Thaai Vaalthu. Ms.U.Jeyamalar, Assistant Professor / ECE welcomes the gathering. Mrs.N.Mangaiyarkarasi, HOD/ECE delivered the Inaugural address. In her speech, she motivates the students towards innovation and how the workshop helps the students to do their ideas in implementation. Ms. K.Jayashree, III year ECE, introduced the Resource persons. The resource person details were as follows:

Day-1-Session -1 : Mr.P.Raja Pirian, Assistant Professor, Kings College of Engineering.

Day-1-Session -2 : Mr.T.Pasupathi , Assistant Professor, Kings College of Engineering.

Day-2-Session -3 : Dr.P.Narasimman, Assistant Professor, Kings College of Engineering.

Day-2-Session-4 : Mr.T.Jeyaseelan, Assistant Professor, Kings College of Engineering.



OBJECTIVE:

The main objective of this workshop is to train the students to do simple projects by interfacing LED's, Switches, Stepper motor and various sensors with arduino kit and programming to do various functionalities.

DAY 1 - Session 1: The resource person Mr.P.Raja Pirian, Assistant Professor/ECE presented a brief technical note on the fundamentals of embedded system, features of Microprocessors, Microcontrollers and interfacing devices. He also explained how to develop applications in the industry based on embedded system. During the session, he demonstrated how arduino development platform is used for a typical embedded application. From the session the students have learned how to implement their ideas into projects in a simplest way of using arduino.

3



DAY 1 - Session 2: The resource person Mr.T.Pasupatthi, Assistant Professor/ ECE, delivered a complete description about the arduino pin configuration, architecture and interfacing methods. He explained various blocks in the arduino development kit, he also trained the students about embedded C Programming using arduino IDE, which is freely available for the students. The session continues with hands on mode, the students are formed with small groups and were trained to do simple projects like LED interfacing, buzzer interfacing and switch interfacing. The participants actively performed their assigned work in an enthusiastic manner.



Resource Person Mr.T.Pasupathi, AP/ECE, KCE delivering the lecture to the Participants

DAY 2 - Session 3: Mr.T.Jeyaseelan, Assistant Professor/ECE, demonstrate the students with LCD interfacing. He takes 2 x 16 LCD and explains the pin details and interfacing methodology and also trained the students, how to read temperature and humidity data from DHT11 sensor and display the sensor data's in the LCD display. In this session students had shown their interest to get the data from the sensor given to them and displayed the values in the LCD display. Finally he demonstrated how analog to digital data conversion is used in temperature and humidity monitoring applications.



DAY 2 - Session 4: Dr.P.Narasasimman, Assistant Professor /EEE, delivered about the wireless connectivity interface for arduino. He explained the pin details of ESP8266 and the specifications of wifi module. During this session he created a small android based application and demonstrated the on and off control of LED and motor. Finally he outlined typical project ideas and explained the methods for implementing these ideas. The students were interactive during the sessions and asked their queries.



Finally the session ends with valedictory. Mrs.U.Jeyamalar, Assistant Professor / ECE, delivered the Vote of Thanks. The certificates were distributed by Mrs.N.Mangaiyarkarasi, HoD/ECE. Thus the workshop was successfully ended.



Outcomes:

At the end of this workshop the students can able to

- Gained more knowledge on Arduino components and IDE.
- Do the small projects based on Embedded C Programming.
- Interfacing their projects using Analog and digital converter.
- Interfacing with sensor and wireless connectivity to arduino.
- Design the Mini projects using arduino.

Coordinator(s

1732023 HOD/ECE

PRINCIPAL

Annexure: I (Brochure)

Chief Patron

• :

1.1

Dr. R.Rajendren, Secretary

Mr.T.R.S.Muthukumaar, CEO.

Patron Dr.J.Arputha Vijaya Selvi, Principal

Convener Mrs.N.Mangalyarkarasi, HOD/ECE

Coordinators 1. Mr.P.Raja Pirlan, AP/ECE 2. Mrs.U.Joyamalar, AP/ECE

For Queries: 9994009225



REGISTRATION:

Participants are requested to apply via online using the link or QR code given below. Registration fee includes workshop kit, lunch and refreshment.

REGISTRATION LINK: https://shorturl.ac/kingsarduino



IMPORTANT DATE : Last date for Registration : 21-02-2023

FEE DETAILS : Registration Fee : Rs. 600/-(GPay No : 9994009225)

ADDRESS FOR COMMUNICATION :

Kings College of Engineering, Department of ECE, Punalkulam, Gandarvakkottal Taluk, Pudukkottal Dist, Pin-613 S03, TamilNadu,





Organised by Department of Electronics & Communication Engineering Kings College of Engineering , Punalkulam, Near Thanjavur, Tamilnadu,

RESOURCE PERSONS

ABOUT OUR INSTITUTION:

kings College of Engineering (KCE) was born out of a dream and vision to provide education with unpartallel quality to the young and entrustratic students of our nation. The College is approved by AICTE, New Delhi and attifuited to Anna University, Chennas and accredited by NAAC. The drives from our management and decheation of the faculty have seen KCE to rise to pure status as one of the most presegous institutions in this part of the country.

KCE run by Ray Educational Trust (RE1), Chennal, is a last growing inchinical implution in the state of Tamil Nadu with a great promose to cater the educational demands of engineering aspirans; in and around Thanjavia from 2001. Our institution offers five UG programmes namely CIVIL, CSE, ECE, EEE and Mechanical Engineering and four PG programmes namely CSE, VLSI Design, PED and Thermal Engineering Department of ECE and Mechanical Engineering are have approved research centers for pursuing research (Ph.O) under Arma Griversity.

ABOUT THE DEPARTMENT:

The Department was established in the year 2001. The academic activities of the department encompass practically all major sub-disciplines of Electronics and Communication Engineering. The department offers 8 E degree in Electronics and Communication Engineering with an insist of 120 dudring per year and M E in VLSI Design. Department is an approved research centre for passing Ph.D. under Anna University Chennal.

The department is being driven jointly by dedicated staff and interested statemts towards achieving center of excellence on VLSI and Communication Funder, the department has been sanctioned with severith inebaction projects item government and not-government hunding sectors namely, NC & IT-New Dethi, DRDD- New Dethi, ACCE- New Dehi, Texas instruments USA, TNSCST-Chenne and etc.

International conference, Faculty Development Programmes, Value Added Courses, seminars, veining facury talks and etc., are organized periodically towards knowledge exchange and skiled human resource development under ECE community pervises. Department also conducts workshops and sympassa regularly for exproving the teaching and learning process. Students are exposed to best learning environment and provided with in depth knowledge to make them completieve and industry ready.

ABOUT THE WORKSHOP

Arduino is an open source platform used for building electronic projects. Arduino consists of both a physical programmable circuit board or microcontroller and a software, IDE (Integrated Development Environment) that runs on the computor. It is used to write and upload computer code to the physical board.

Day 1:

Forenoon Session :

- · Introduction to Arduino
- · Arduino components and IDE

Afternoon Session :

- Introduction to Arduino Program
- · Arduino with Tricolor LED and Push button
- · Display & counter using Arduino
- Seven Segment Display
- · Pulse Width Modulation

Day 2 : Forenoon Session :

Arduing with LCD
Analog Digital Converter

Sensor Interfacing

Afternoon Session :

- Wireless connectivity to Arduino
- . Mini Project Dasign Using Arduino





3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

S.No	Date	Details	Beneficiaries	Page No
1.	01.08.22 - 06.08.22, 17.09.22 & 08.10.22	Certification Course on "Simulation Tools for Electrical Engineering"	41	1
2.	23.09.22	National Level Technical Symposium	40	6
3.	04.11.22	Workshop on "Microgrid Technology for Renewable Energy Systems	79	10
4.	17.11.22	Internal Seminar on "Types of Fuel Cells Based on Materials as the Power Sources"	50	18
5.	19.11.22	Workshop on Spoken Tutorial	78	21
6.	25.11.22	Internal Seminar on " Multilevel Inverters for Electric Vehicle Applications"	80	25
7.	26.11.22	Guest Lecture on "Economic Dispatch of Power System With Renewable Energy Sources"	50	30
8.	30.11.22	Internal Seminar on "Arc Flash Hazards & Electrical Safety"	07	35
9.	10.01.2023 - 14.01.2023	Workshop on "Exploring Electrical Engineering Trends: Connecting Minds and Machines for the Future"	09	38
10.	11.01.2023	Workshop on "Renewable Energy Systems"	41	47
11.	01.04.2023	Internal Seminar on "System Design Using Microcontroller"	26	53







DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING ACADEMIC YEAR 2022-2023 (ODD SEMESTER)

Certification Course on "Simulation Tools for Electrical Engineering" - Report

The Department of Electrical and Electronics Engineering has organized a certification course on the topic "Simulation Tools for Electrical Engineering" on the following dates for third-year EEE students. The third-year EEE certificate course session dates are 01.08.2022, 02.08.2022, 03.08.2022, 04.08.2022, 05.08.2022, 06.08.2022, 17.09.2022 and 08.10.2022.

OBJECTIVES:

The main objective of this course is to help students:

- To know about the fundamentals of MATLAB tool.
- To provide an overview of elementary mathematics and graphics in MATLAB and solve Linear and Nonlinear Equations.
- To understand different branching statements and program design in MATLAB.
- To gain knowledge about MATLAB Simulink & solve Electrical engineering problems.

COURSE DETAILS:

The certification course on "Simulation Tools for Electrical Engineering" was allotted for III-year EEE Students, and a total of 30 hours was planned to conduct the entire course. This certification course provides a basic introduction to MATLAB programming and the Simulink model, and the applications of MATLAB in solving electrical engineering problems. MATLAB, an abbreviation of MATrix LABoratory, is a high-level technical computing environment suitable for solving scientific and engineering problems. The MATLAB family of programs includes the base program plus a variety of applicationspecific solutions called toolboxes. Toolboxes are comprehensive collections of MATLAB functions that extend the MATLAB environment to solve particular class problems. The certification course contents are divided into five separate sections. Before the start of the course contents, a detailed explanation of various MATLAB windows was given to the students. In the first section, the students learned various concepts, such as an introduction to array programming, creating vectors and special matrices, different array functions, and solving linear equations using MATLAB. Also, exercises in matrices using MATLAB were given to the students in hands-on sessions.

The students learned how to perform elementary mathematics in MATLAB in the second section. In the second section, the students learned arithmetic operations, order of precedence, Trigonometry rounding functions, polynomials, complex numbers, exponents, logarithms, and Cartesian coordinate system conversion in MATLAB. At the end of the second section, exercises in elementary mathematics using MATLAB were given to the students through hands-on sessions. In the third section, various important concepts related to MATLAB graphics, such as 2D graph plotting, 2D bar graphs, pie charts, logarithmic plots, subplots, 3D graph plotting, editing in the plot window, and finally, animation in MATLAB were discussed. Also, exercises in graphics using MATLAB were given to the students in a separate hands-on session.

In the fourth section, the students learned important concepts and syntax related to MATLAB programming, such as creating M-Files, Input and Output Commands, fprintf function, built-in and basic user-defined functions, Logical Operators, branching statements, loops, and vectorization in MATLAB. At the end of the fourth section, exercises in MATLAB programming were given to the students through hands-on sessions. In the fifth section, a detailed introduction to MATLAB Simulink was given to the students. MATLAB Simulink software is used to simulate systems. It uses a GUI to interact with blocks that represent subsystems. The user can position the blocks, resize the blocks, label the blocks, specify block parameters, and interconnect blocks to form complete systems from which simulations can be run. The students learned how to develop half-wave controlled rectifiers, full-wave controlled rectifiers, Bridge controlled rectifiers, Buck regulators, and boost regulators models using MATLAB Simulink environment. The ability to design the different power electronics circuits through hands-on sessions helps the students better understand the operation of respective circuits. The students actively participated throughout the entire course sessions. They raised interesting questions, and
the faculty clarified their queries in the sessions. After completing the course contents, an assessment test was carried out to analyze the student performance, and certificates were awarded to the students who completed the course. Finally, the overall feedback of the students about the course was collected for future enhancements.

OUTCOME:

At the end of the course, the students should be able to,

- Understand the fundamentals of MATLAB tools.
- Program numerical differentiation and integration, solution of linear equations in MATLAB and solve electrical engineering problems.
- Analyze any given dataset with the help of MATLAB graphics.
- Implement loops, branching, control instruction, and functions in MATLAB programming environment.
- Simulate and solve electrical engineering problems using MATLAB Simulink models.



FEEDBACK ANALYSIS:









P4. - - Ou 28/11/22 **FACULTY INCHARGE**

2022 5.00 23/11

PRINCIPAL

A Almm 23/11/22 HOD/EEE







Post Symposium Report for

ENIGMA-2K22

A National Level Technical Symposium

Held on 23rd September 2022

Organized by

Department of Electrical & Electronics Engineering

ENIGMA'22 REPORT

The brochure of ENIGMA-2K22 was sent to 50 colleges before one month. The last date for submission of papers was 19.09.2022. The registration form circulated through whatsapp, website and other social media platform. We received 24 papers and 40 members registered for various technical and non technical events from various colleges. 20 teams have been participated in the paper presentation. A one day national level technical symposium ENIGMA-2K22 organized by Department of EEE started with inaugural session on 23.09.2022. The session started with the prayer song Tamizhthai vazhthu. Then the session continued with the welcoming address by Dr.A.Albert Martin Ruban HOD of EEE. Lighting the holy lamp is considered as an important ceremony. The Chief Guest, Secretary, Principal, Vice Principal and a Participant from the student are invited to light the lamp. The session is followed by honoring the chief guest. Here our Secretary sir Dr.R.Rajendran honored the chief guest Dr.M.Vijayakumar, Associate Professor, EGS Pillay Engineering College, Nagapattinam with a shawl. After this Dr.R.Rajendran, Secretary of Kings College of Engineering delivered his presidential address. Dr.J.ArputhaVijaya Selvi, Principal of Kings College of Engineering delivered her Inaugural address. Dr.S.Sivakumar, Vice Principal of Kings College of Engineering delivered his Special address. The symposium souvenir has been released by Principal and received by the chief guest and other dignitaries. It is followed by the introduction of the chief guest by Mr.M.Mukesh of III Year EEE. Then cheifguest address given by Dr.M.Vijayakumar, Associate Professor, EGS Pillay Engineering College, Nagapattinam. After the refreshment, presentation started at 11:15 am. The paper presentation sessions segregated in to three halls and proceeded under the judgment of juries. This session is extended up to 12:30pm. After that, Circuit debugging & Technical Quiz conducted and Extended up to 1.30pm. The lunch was arranged and served. The valedictory session started with feedback from the participants. The winners for the paper presentation were selected by the juries and awarded with the cash prize. Other technical and Non Technical events such as Technical Quiz, Circuit debugging, Robotics (Line follower), Paper Wings, Dumb Charades, Short Film was also conducted and winners were awarded with certificates. Finally, Vote of thanks was delivered by Mr.A.Sarath Kumar of final year EEE. The symposium ENIGMA-2K22 was successfully ended with the valediction during 4:00pm-4:20pm followed by National Anthem.

ENIGMA'22 WINNER'S

PAPER PRESENTATION WINNERS:

First place - S.Akshya & E.Arundhadhi (Rs.1000)

Second place - B.Abdul Ajees (Rs.750)

Third place - M.Manoj kumar & V.K.Ranjiith kumar (Rs.500)

TECHNICAL QUIZ WINNERS:

First place - A.Vikram

Second place - T.Aravindh

Third place - B.Anisha

CIRCUIT DEBUGGING WINNERS: -

First place - R.Murali

Second place- K.Subramaniyam

Third place - B.Abdul Ajees

ROBOTICS (Line Follower) WINNERS: -

First place - T.Mohamed Musharaf & Vinoth Krishna S.

PAPER WINGS WINNERS:

First place - K.Avinash

Second place - K.Naveen kumar

Third place - T.Mohamed Musharaf

DUMB CHARADES WINNERS:

First place - M.Agalya & S.Sneha

Second place - M.Veerasekaran & T.Aravindh

Third place - A. Shakthivel

SHORT FILM WINNERS: -

First place - B.Abdul Ajees

Second place- R.Gokula Rajan , T.Sanjai Kumar, K.Avinash & R.Rahul

OUTCOME:

- •Expertise and showcased the talents of the students in various technical and non technical events and improving the practical knowledge apart from the theoretical concepts in the course of their study.
- •Provides a platform for the students to think independently cum leadership quality and come up with recent technology cum innovations.

SNAPSHOTS:















WORKSHOP REPORT

In the title of

"MICROGRID TECHNOLOGY FOR RENEWABLE ENERGY

SYSTEMS" ON

04th NOVEMBER 2022





Non-Renewable Energy

Organized by

Department of Electrical and Electronics Engineering

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING ACADEMIC YEAR (2022-2023) ODD SEM <u>REPORT ON ONE DAY WORKSHOP</u>

Title of the Workshop	: "Microgrid Technology for Renewable Energy Systems"
Date	: 04.11.2022
Resource Person	: 1. Dr.S.Sivakumar, Vice Principal & Head T&P, KCE
	2. Mr.J.Arokiaraj, AP/EEE, KCE
	3. Ms.A.Prabha, AP/EEE, KCE
	4. Dr.R.Arulraj, AP/EEE, KCE
No of students participate	: Internal participants : 18
	External participants : 61
	Total No. of Participants: 79
Objectives of Workshop	: To provide knowledge and exposure to students about:

- > Maximize the amount of renewable energy consumed
- > Minimize greenhouse gas emissions
- > Minimize fuel consumption to reduce dependency on fuel imports
- > Maximize overall economic benefit
- > Operate at the highest possible level of reliability



Welcome address by Mr. S.R.Karthikeyan,AP\EEE



Felicitation Address by Dr.S.Sivakumar, Vice Principal

Dr.S.Sivakumar, Vice Principal delivered the Presidential Address. He emphasized that; this workshop will provide more knowledge about the various technical skills and the future scope for electrical engineers. He insisted the students to ask more doubts and have a clear idea about the microgrid and renewable energy systems.



Session Introduction by Dr.Albert Martin Ruban, HOD/EEE

Dr.Albert Martin Ruban, HOD/EEE gave a brief introduction about our Resource persons and over view of sessions.

Session: 1

Title: Power Grid Structure in India

Resource Person: Dr.S.Sivakumar, Vice Principal

The following points were discussed during the session 1:

- The Indian Power system for planning and operational purposes is divided into five regional grids.
- > The largest power producer in India.
- The Grid has four major components: electricity generators, transmission lines, distribution networks, and consumer use.
- > The list of the top companies in Indian Electricity & Power Sector.



Snapshot of Session: 1

Session: 2

Title: The Combined Economic Emission Dispatch in Microgrid Using Renewable Energy Systems

Resource Person: Ms.A.Prabha,AP\EEE

The following points were discussed during the session 2:

- Microgrid is one of the advanced small-scale centralized electricity systems and it usually contains energy storage resources, Distributed Generation (DG) units, and loads
- Generating energy that produces no greenhouse gas emissions from fossil fuels and reduces some types of air pollution
- > Eliminating fuel costs lowers the cost of the electricity produced
- > Microgrid can improve customer reliability and resilience to grid disturbances



Snapshot of Session: 2

Session: 3

Title: Optimal Distributed Generation Planning in Distribution Network

Resource Person: Dr.R.Arulraj, AP\EEE

The following points were discussed during the session 2:

- The most basic power system components are generators, transformers, transmission lines, busses, and loads.
- The optimal size of DG is calculated at each bus using the exact loss formula and the optimal location of DG is found by using the loss sensitivity factor.
- The proposed technique is tested on standard 33-bus test system and the obtained results are compared with the exhaustive load flows.



Snapshot of Session: 3

Session: 4

Title: Hands on session at Renewable Energy Lab

Resource Person: Mr.J.Arokiaraj, AP\EEE

The following points were discussed during the session 2:

- Renewable Energy Lab focuses on designing, testing, and disseminating renewable and efficient energy system.
- The mission of REL is to help these technologies to realize their full potential to contribute to environmentally sustainable development in industrial and developing countries.



Snapshot of Session: 4

After the sessions was completed, Feedbacks were collected from the students to

know their opinion about the Workshop.



Feedback from student

FEEDBACK ANALYSIS REPORT

		EXCELLENT	VERY	GOOD	SATISFIED
S.NO	CONTENTS		GOOD		
1.	The content was interesting	35	15	10	09
2.	I can share my knowledge from this session with others	30	30	15	04
3.	The speaker provided clear answers and comments	35	15	10	09





Students receiving the workshop completion certificate from the Principal.

Finally, Event coordinator Mrs.P.Thirumagal, AP/EEE delivered the vote of thanks. Thus the Workshop ended with National Anthem successfully.

OUTCOME:

- > At the end of the Workshop, students gathered more knowledge about the availability of job opportunities in Power grid Systems and in our core field.
- Students gained various technical skill sets needed regarding placement. Thus we created the way to get into the MNC through the technical skills in our core field.
- Students get more knowledge and exposure on microgrid technologies and renewable energy areas.

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Coordinators

HOD/EEE

PRINCIPAL



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEMESTER)

Internal Seminar – Report

Title of the seminar	: "Types of Fuel Cells Based on Materials as the Power Sources"
Date	: 17.11.2022
Resource Person	: Dr.R.Arulraj, AP/EEE, KCE
Beneficiaries	: IV-EEE & III-EEE - 50
Venue	: III-EEE – Classroom

The Department of EEE organized an Internal Seminar on "Types of Fuel Cells Based on Materials as the Power Sources" for third and final year EEE students on 17.11.2022. The main objective of the internal seminar is:

- To impart knowledge to students on the basics of different types of Fuel Cells
- To provide adequate knowledge on methodologies involved in Fuel Cell technology and its applications in different domains of Engineering.
- To facilitate the use of Fuel Cell in their final year projects and seminar presentations.

The following points were discussed during the session:

- > The introduction and need for Fuel Cells.
- > The currently available fuels and the scope for future fuels are discussed.
- > The history of Fuel Cells.
- > The key drivers influencing Fuel Cell based power generation.
- > The various sources of Hydrogen.
- > The construction and operation of Fuel Cells.
- > The various advantages of Fuel Cells.
- > The different generations of Fuel Cells and their operation.
- > The block diagram and working principle of future generation Fuel Cells.
- > Application of different Fuel Cell types as the power sources includes:
 - ✓ Phosphoric Acid Fuel Cells (PAFCs)
 - ✓ Polymer Electrolyte Membrane Fuel Cells (PEMFCs)
 - ✓ Direct Methanol Fuel Cells (DMFCs)
 - ✓ Alkaline Fuel Cells (AFCs)
 - ✓ Solid Oxide Fuel Cells (SOFCs) and Molten Carbonate Fuel Cells (MCFCs)
- > The future applications of Fuel Cells.

Outcome:

- Students can realize the impact of different fuel types on the environment.
- Students can understand the concepts and operation of Fuel Cell technologies, their applications, and their advantages over conventional power generation technologies.
- Students can select Fuel Cells for their project work, paper publication, conference presentation, and PCE activities.





Snapshot from Seminar

Feedback Analysis:



References:

[1] Lixin Fan, Zhengkai Tu, Siew Hwa Chan, Recent development of hydrogen and fuel cell technologies: A review, Energy Reports, Volume 7, Pages 8421-8446, 2021.

[2] S. Mekhilef, R. Saidur, A. Safari, Comparative study of different fuel cell technologies, Renewable and Sustainable Energy Reviews, Volume 16, Issue 1, Pages 981-989, 2012.

[3] M. L. Perry and T. F. Fuller, A Historical Perspective of Fuel Cell Technology in the 20th Century, Journal of The Electrochemical Society, Vol.149, No.7, 2002.

[4] G.J.K. Acres, Recent advances in fuel cell technology and its applications, Journal of Power Sources, Volume 100, Issues 1–2, Pages 60-66, 2001.

[5] Steele, B., Heinzel, A. Materials for fuel-cell technologies. Nature 414, 345–352 (2001).

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING ACADEMIC YEAR 2022-23 (ODD) WORKSHOP-SPOKEN TUTORIAL

OBJECTIVE OF SPOKEN TUTORIAL:

The main objective of this spoken tutorial is to promote IT literacy for education and improve the employment potential of learners in India, using FOSS (free and open source software). ICT is an important area that provides jobs to a large number of our students. Software creation, electronic design automation (IC design), numerical computing, and modeling and simulation are some of the ICT areas. This aim to pass on the knowledge of technology and free and open source software (FOSS) through the website to the millions in our country, who lack opportunities and/or access to learn any software.

Spoken tutorial is well known that seeing and hearing someone explain a process greatly improves understanding and help to learn and use open source software.

The Spoken Tutorial project is the initiative of the 'Talk to a Teacher' activity of the National Mission on Education through Information and Communication Technology (ICT), launched by the Ministry of Human Resources and Development, Government of India. The use of spoken tutorials to popularize software development and its use will be coordinated

through website http: //spoken-tutorial.org/. (The Spoken Tutorial project is being developed by IIT Bombay for MHRD, Government of India). The project conducts software training workshops using spoken tutorials and give certificates to those who pass an online test.

One can access the website (http://spoken-tutorial.org/) to know the various facets of this program. It has been established as an effective instructional methodology. Resource Centers and Nodal Centers help sustain and spread this activity across India.

PROGRAMME CONDUCTED:

Department of Electrical & Electronics Engineering conducted spoken tutorial workshop for the academic year 2022-23 odd in physical mode.

COURSE DETAILS:

CLASS	COURSE NAME	DATE	BENEFICIARY
II-EEE	Scilab	19.11.2022	30
III-EEE	Inkscape	19.11.2022	40
IV-EEE	LaTex	19.11.2022	8

COURSE DESCRIPTION:

Scilab:

Scilab is free and open source software for numerical computation providing a powerful computing environment for engineering and scientific applications. Scilab is released as open source under the GPL License, and is available for download free of charge.

Inkscape:

Graphics art and design software application for the editing and creation of original images, icons, graphical elements of web pages and art for user interface elements. Useful for all graphical related work. Open source equivalent of CorelDraw and Illustrator.

LaTex:

LaTex is a type setting software for preparing reports, letters and presentations - Especially useful for persons engaged in writing / publishing documents from science / arts / commerce fields.



Snapshot from II-EEE- Scilab on 19.11.2022



Snapshot from III-EEE - Inkscape on 19.11.2022



Snapshot from IV-EEE - Latex on 19.11.2022

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING ACADEMIC YEAR 2022-23 ODD

Internal Seminar - Report

Title of the seminar	: Multilevel Inverters for Electric Vehicle Applications
Date	: 25.11.2022
Resource Person	: Dr.P.Narasimman, AP/EEE, KCE
Beneficiaries	: IV-EEE, III-EEE & II-EEE – 80 Students
Venue	: EEE- Smart Classroom

The Department of EEE organized an Internal Seminar on "Multilevel Inverters for Electric Vehicle Applications" for second, third and final year EEE students on 25.11.2022. The main objective of the internal seminar is:

- To impart knowledge to students on recent developments and technological advancements in the field of Electrical and Electronics Engineering.
- To facilitate the use of multilevel inverter in their projects and seminar presentations.

The following points were discussed during the session:

- > Introduction and need for Electric Vehicle
- > Types of electric vehicles
- > Comparison of BEV, HEV, and FCEV
- > Major Components of Electric Vehicle
- Introduction about DC-link voltage
- Advantages and drawbacks of high DC-link voltage
- Introduction about Multilevel Inverter and its types

Outcome:

- Students can realize the impact of different types on the electric vehicle.
- Students are able to understand the concepts and operation of multilevel inverter, their applications and their advantages over conventional inverter.
- Students can select multilevel inverter for their project work, research publication, conference presentation and PCE activities.

Snapshot from Seminar







Feedback Analysis:



Excellent Very Good Good Fair

References:

- 1. P. Omer, J. Kumar, and B. S. Surjan, ``A review on reduced switch count multilevel inverter topologies,'' IEEE Access, vol. 8, pp. 22281_22302, 2020.
- C. Dhanamjayulu, S. R. Khasim, S. Padmanaban, G. Arunkumar, J. B. Holm-Nielsen, and F. Blaabjerg, "Design and implementation of multilevel inverters for fuel cell energy conversion system," IEEE Access, vol. 8, pp. 183690_183707, 2020, doi: 10.1109/ACCESS.2020.3029153.
- 3. C. Dhanamjayulu and S. Meikandasivam, ``Implementation and comparison of symmetric and asymmetric multilevel inverters for dynamic loads,''IEEE Access, vol. 6, pp. 738_746, 2018.
- 4. C. Dhanamjayulu and S. Meikandasivam, "Performance verification of symmetric hybridized cascaded multilevel inverter with reduced number of switches," in Proc. Innov. Power Adv. Comput. Technol. (i-PACT), Vellore, India, Apr. 2017, pp. 1_5.
- 5. M. D. Siddique, S. Mekhilef, N. M. Shah, A. Sarwar, A. Iqbal, and M. A. Memon, ``A new multilevel inverter topology with reduce switch count,'' IEEE Access, vol. 7, pp. 58584_58594, 2019.
- M. Khenar, A. Taghvaie, J. Adabi, and M. Rezanejad, "Multi-level inverter with combined T-type and cross-connected modules," IET Power Electron., vol. 11, no. 8, pp. 1407_1415, 2018.

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Slides

MULTILEVEL INVERTERS FOR ELECTRIC VEHICLE APPLICATIONS



Dr.P.NARASIMMAN, M.E., Ph.D, AP/EEE, Kings College of Engineering, Punalkulam.

Why we need electric vehicles?



Types of Electric Vehicles









Comparison of BEV, HEV, and FCEV

Types of EVs	BEV		FCEV
Propulsion	Electric motor drives	Electric motor drives ICE	Electric motor drives
Energy System	Battery Ultracapacitor	Battery Ultracapacitor ICE generating unit	Fuel cells
Energy Source and Infrastructure	 Electric grid charging facilities 	 Gasoline stations Electric grid charging facilities (optional for plug-in hybrid) 	Hydrogen Methanol or gasoline ethanol
Characteristics	Zero emission Independence on fossil oil Commercially available	Low emission Higher fuel economy Commercially available	 Zero emission independence on fossil oil High energy efficiency Under development (future trend)
Major Issues	Limitation of battery Short range(100-200km) Charging facilities	Dependence on fossil fuel complex	High fuel cell cost Lack of infrastructure

Disadvantages of Electric Vehicle



Major Components of Electric Vehicle



Higher DC-Link Voltage





Multilevel Inverter



two-level, three-level NPC and three-level CHB inverters Output THD dr/dt der Chal Pault-To and Reliability - Two-Level Inverter L-Level NPC Inverter - Level CIB Inverter

Comparison of Output Voltage Waveform



Comparison of various MLI topologies









DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Guest Lecture on

"ECONOMIC DISPATCH OF POWER SYSTEM WITH RENEWABLE ENERGY SOURCES"

REPORT

The department of Electrical and Electronics Engineering has organized a Guest Lecture

on "Economic Dispatch of Power system with Renewable Energy

Sources" on 26th November, 2022.

Beneficiaries	:	III Year Students (41) & IV Year Students (9)
Date	:	26-11-2022
Session Time	:	07.00 P.M to 8.00 P.M
Venue	:	Online (Meet Link: <u>https://meet.google.com/nbk-ppke-ixz</u>)
Resource Person	:	Mr. K. Manikandan, M.E., (Ph.D.),
		Assistant Professor, Department of EEE
		School of Engineering & Technology
		Mohan Babu University
		Sree Sainath Nagar, Tirupati, Andhra Pradesh

The main objective of this Guest Lecture is to impart knowledge on the economic dispatch of power system with renewable energy sources.

The Guest Lecture session started with the welcome address delivered by Dr.R.Arulraj AP/EEE. After the welcome address, Dr.R.Arulraj AP/EEE introduced the resource person, Mr.K.Manikandan, to the participants and also mentioned the various academic and research contributions of the resource person in the field of power system engineering.

The resource person started the session by interacting with the students about their basic knowledge in the power system engineering field. He also asked a few questions regarding the economic scheduling of power to the end consumers. Then, the resource person started the presentation by introducing the importance of economic load scheduling and various methods available for economic load dispatch problems by minimizing the fuel cost of the generators. For a better understanding, the resource explained the economic load dispatch problem solved using the basic and conventional Lagrange method. During the problem description, he explained the minimization of the fuel cost objective function in detail with the necessary equations and fuel cost coefficients for different generation units. Later, he pointed out the various constraints taken into account to solve the economic load dispatch problem.

After the basic explanation, he explained the importance of integrating renewable energy sources into the system to minimize the fuel cost and the emissions injected into the atmosphere. Further, he demonstrated the calculation of renewable energy sources (i.e., wind and solar) output using appropriate modeling equations. He then explained the procedure to solve the economic load dispatch problem with renewable energy sources using a neat flow chart. To show the effectiveness of economic dispatch problem with renewable energy sources in power system operation and control, the resource person presented the simulation results attained using the Lagrange method to the students for different cases such as conventional generators without renewable energy sources, conventional generators and PV alone, conventional generators and wind alone and at last conventional generators along with all renewable energy sources. He also pointed out the significant reduction in fuel costs after integrating renewable energy sources into the system.

Finally, he gave a deeper insight into thrust areas of research in the economic load dispatch problem and the scope for future research. He also motivated the students to do their projects in economic load dispatch using evolutionary algorithms. He gave useful inputs regarding higher studies in power system engineering in India and foreign countries. In the end, he invited the queries and doubts from the students for discussion and clarification. Students asked some interesting questions, and the resource person clarified their queries with the help of real-time examples.

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The guest lecture completely motivated and kindled students' interest in the growing technologies in power system engineering and its positive impact on power system operation. The session was very useful to our student community and provided greater input to their final-year projects. Finally, the Guest Lecture ended with the vote of thanks delivered by Dr.R.Arulraj, AP/EEE.

Outcomes:

- Students can realize the importance of economic load dispatch in power system operation.
- Students can understand the basic concepts of solving economic load dispatch problems using the Lagrange method.
- Students can realize the impact of renewable energy sources in minimizing the fuel cost and hazardous pollutants emitted into the atmosphere.
- Students can select economic load dispatch problems for their project work, paper publication, conference presentation, and PCE activities.



Feedback Analysis:

Photographs of Lecture Sessions





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Principal







DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING ACADEMIC YEAR 2022-230DD

Internal IEEE Faculty Seminar- Report

Title of the seminar	: "Arc Flash Hazards & Electrical Safety"
Date	: 30.11.2022
Resource Person	: Mr.S.R.Karthikeyan, AP/EEE, KCE
No. of Participants	: EEE Faculty Members- 7
Venue	:Power Electronics Laboratory

On behalf of the Department of EEE, IEEE Branch organized an Internal Seminar on "Arc Flash Hazards & Electrical Safety" for faculty members of the EEE Department on 30.11.2022. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in arc flash hazards & electrical safety.

The following points were discussed during the session:

- > Arc flash
- > Arc blast
- Laboratory controlled arc blast
- Short circuit and arc fault
- Electrical arc flash
- Circuit protection
- Industry standards for arc flash prevention
- Purpose of safety programme
- Minimum required labeling
- Personal Protective Equipment (PPE)

PPE - safety glasses or safety goggles, hearing protection (ear canal inserts), voltage rated gloves with leather protectors. Clothing - Arc-rated long-sleeve shirt and pants or arc-rated coverall, arc-rated face shield or arc flash suit hood, arc- rated jacket, parka, rainwear, or arc-rated hard hat liner.

- Prohibited clothing
- IEEE 1584 is an accepted industry standard that provides procedures and methods to calculate arc-flash incident energy to which workers may be exposed. The results obtained from the incident energy calculations can be used to determine appropriate arc-flash PPE as specified in NFPA 70E.
- An arc flash is the light and heat produced as part of an arc fault, a type of electrical explosion or discharge that results from a connection through air to ground or another voltage phase in an electrical system.

Human error is the most common cause of arc flash. After a worker has performed the same task over and over without incident, they may bypass a maintenance step or develop a procedural workaround to save time.

Conclusions:

- > Arc flash awareness is an important part of any electrical workers training.
- > The Standards used are to protect qualified electrical workers and the unqualified.
- > Proper PPE should always be used for the Hazard category established.





Snapshot from Seminar

Feedback Analysis:



References:

[1] Arc flash hazards and electrical safety program implementation, DOI: 10.1109/IAS.2005.1518709

[2] Arc flash hazard mitigation and electrical safety considerations for LV adjustable speed drives DOI: 10.1109/PPIC.2013.6656059

[3] https://elecsafety.co.uk/what-is-arc-flash/

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5 DAY WORKSHOP REPORT

In the title of

"Exploring Electrical Engineering Trends: Connecting Minds and Machines for the Future" (Virtual Mode)

10th to 14th Jan 2023



Jointly Organized by

Project Club &

Department of Electrical and Electronics Engineering

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING ACADEMIC YEAR (2022-2023) ODD SEM <u>REPORT ON FIVE DAY WORKSHOP PROGRAMME</u>

Title of the FDP

Date

: 5-Day workshop on "Exploring Electrical Engineering Trends: Connecting Minds and Machines for the Future"

: 10.01.2023 to 14.01.2023

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Resource Persons

- 1. Dr.C.Balasundar, Thiagarajar College of Engineering, Madurai.
- 2. Dr. M. Bharathidasan, Senior Engineer, Axiscades Technologies, Bangalore.
- 3. Dr. N. Muthukumar, System Analyst, Ramco Systems Pvt Ltd, Chennai.
- 4. Dr. M. Vijayakumar, Director, Interlogic Technologies, Thanjavur.
- 5. Dr. P. Krishnamoorthy, Assistant Professor/ HOD, EEE, GCE, Thanjavur.

No of students participate : 9

Objectives of workshop:

- Understand current electrical engineering trends, including Industry 4.0, sustainable energy, IoT, automation, and AI.
- Develop practical skills in simulation software, design renewable energy systems, and build IoT devices.
- Apply theoretical concepts by designing renewable energy systems and implementing AI algorithms.
- Gain career insights through a panel discussion with industry experts, preparing for future opportunities.

DAY: 1 (10.01.2023)

Resource Person: Dr.C.Balasundar, Thiagarajar College of Engineering, Madurai. Title: Foundations of Electrical Engineering Trends

Session (FN):

Emerging Trends and Basics of Industry 4.0

- > Investigated the then-current landscape and recent innovations in electrical engineering.
- Discussed emerging trends, including smart grids, renewable energy integration, and applications of artificial intelligence.
- Introduced the fundamentals of Industry 4.0 and its transformative impact on traditional manufacturing and electrical systems.
- Examined technologies associated with Industry 4.0, such as the Internet of Things (IoT), cyber-physical systems, and data analytics, highlighting their relevance to electrical engineering.

Session (AN):

Hands-On Session: Simulation Software Introduction

Students utilized industry-standard tools like MATLAB/Simulink, LTspice, and PSpice. They simulated circuits, gaining practical insights and applying theory. Activities included designing circuits, testing responses, and troubleshooting. An overview emphasized key software features, showcasing its relevance in real-world engineering applications. The hands-on experience allowed students to explore the software's practical applications in analyzing and designing circuits within a controlled virtual environment.





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DAY: 2 (11.01.2023)

Resource Person: **Dr. M. Bharathidasan**, **Senior Engineer**, **Axiscades Technologies**, **Bangalore**. Title: **Sustainable Energy Solutions**

Session (FN):

Renewable Energy Technologies

- > Explored solar, wind, and various renewable energy sources.
- > Discussed the key characteristics and applications of different renewable technologies.
- > Highlighted the importance of sustainable energy in the context of modern electrical systems.

Smart Grids and Energy Storage

- > Examined smart grid technologies and their role in enhancing electrical infrastructure.
- > Explored advancements in energy storage, including batteries and other innovative solutions.
- Discussed the impact of smart grids and energy storage on the efficiency and reliability of power systems.

Case Studies and Best Practices

- Presented real-world examples showcasing successful implementations of sustainable energy solutions.
- Analyzed case studies to understand the challenges and solutions in renewable energy projects.
- Discussed best practices for achieving optimal performance and sustainability in energy initiatives.

Session (AN):

Hands-On Session: Designing a Miniature Renewable Energy System

During this interactive session, students leveraged specialized simulation software such as HOMER Pro and RETScreen to practically apply their knowledge in designing a miniature renewable energy system. Using these tools, students gained hands-on experience in the virtual creation of sustainable energy solutions. The exercise involved selecting appropriate renewable sources, sizing components, and optimizing the system for efficiency and reliability. This practical application provided students with valuable insights into the complexities of designing real-world renewable energy systems, bridging the gap between theory and practical implementation. Through the use of simulation software, students honed their skills in making informed decisions and gained a deeper understanding of the intricacies involved in sustainable energy design.



DAY: 3 (12.01.2023)

Resource Person: Dr. N. Muthukumar, System Analyst, Ramco Systems Pvt Ltd, Chennai. Title: IoT and Automation in Electrical Systems

Session (FN):

Internet of Things (IoT) in Electrical Engineering

- > Explored the pivotal role of IoT in electrical systems.
- > Discussed applications and implications of IoT in modern electrical engineering practices.
- > Examined how IoT contributes to the evolution of interconnected electrical networks.

Automation and Control Systems

- > Provided an overview of automation technologies relevant to electrical engineering.
- > Explored applications of automation and control systems in diverse electrical scenarios.
- > Discussed the integration of automated processes to enhance efficiency and reliability.

Virtual Lab Demonstration

- > Facilitated a virtual hands-on experience, allowing students to interact with simulated IoT devices.
- > Explored practical applications of IoT in a controlled and interactive virtual environment.
- > Gave students a tangible understanding of IoT device functionalities.

Session (AN):

Hands-On Session: Building and Programming IoT Devices

In this interactive workshop, students delved into the realm of Internet of Things (IoT) by engaging in the hands-on creation and programming of Arduino-based IoT devices. Using Arduino microcontrollers and sensors, students had the opportunity to construct practical IoT solutions. The session covered the fundamental aspects of building and programming, including connecting sensors, implementing data

acquisition, and programming device functionalities. Through this practical exercise, students gained firsthand experience in the design and implementation of IoT devices, fostering a comprehensive understanding of the hardware and software aspects of IoT technology. The use of Arduino offered a user-friendly platform, enabling students to explore the endless possibilities of IoT applications and enhancing their skills in hardware integration and programming within the context of electrical engineering.



DAY: 4 (13.01.2023)

Resource Person: Dr. M. Vijayakumar, Director, Interlogic Technologies, Thanjavur.

Title: Artificial Intelligence in Electrical Engineering

Session (FN):

Introduction to AI in EEE

- Covered the basics of artificial intelligence and machine learning within the context of electrical engineering.
- Introduced fundamental concepts, algorithms, and applications of AI in various electrical systems.

AI Applications in Power Systems

- > Explored real-world case studies showcasing how AI is revolutionizing power systems.
- Analyzed the impact of AI on improving efficiency, reliability, and sustainability in power distribution and management.

Interactive Workshop on AI Integration

- Facilitated a collaborative workshop where students explored practical applications of AI in electrical engineering.
- > Encouraged hands-on engagement and discussions on potential implementations and challenges.

Session (AN):

Hands-On Session: Implementing AI Algorithms in Electrical Systems

In this practical session, students dived into the integration of artificial intelligence (AI) in electrical systems using Python programming language and popular AI libraries such as TensorFlow. The focus was on implementing basic AI algorithms, such as machine learning classifiers, within simulated electrical systems. Students gained hands-on experience in coding and deploying algorithms, fostering a deeper understanding of how AI can enhance decision-making processes and optimize performance in electrical engineering applications. Through this exercise, the students explored the practical aspects of AI integration in a controlled environment, laying the groundwork for their future applications in real-world electrical systems.



DAY: 5 (14.01.2023)

Resource Person: **Dr. P. Krishnamoorthy, Assistant Professor/ HOD, EEE, GCE, Thanjavur.** Title: **Future Perspectives and Career Guidance**

Session (FN):

Future Trends and Emerging Technologies

- > Engaged in a discussion on anticipated developments in the field of electrical engineering.
- Explored emerging technologies and their potential impact on the future landscape of electrical systems.

Panel Discussion: Navigating Careers in EEE

- > Received valuable insights from industry experts and professionals during a dynamic panel discussion.
- > Students had the opportunity for Q&A, gaining practical advice for navigating and succeeding in electrical engineering careers.



OUTCOME:

- Students acquired a comprehensive understanding of current trends, technologies, and applications in electrical engineering.
- Hands-on sessions using industry-standard tools and software, including MATLAB/Simulink, LTspice, PSpice, HOMER Pro, RETScreen, and Python with TensorFlow, enhanced practical skills in designing, programming, and implementing electrical systems.
- Exposure to real-world applications through case studies and interactive workshops allowed students to connect theoretical concepts to practical scenarios.
- Collaborative learning environments, interactive workshops, and panel discussions provided opportunities for students to engage, share ideas, and learn from industry experts and peers.
- The workshop's focus on future trends, emerging technologies, and a panel discussion on navigating careers in electrical engineering offered valuable insights, contributing to students' professional development.
- > Overall, the workshop successfully bridged the gap between theoretical knowledge and practical application, equipping students with both knowledge and skills for the dynamic and evolving landscape of electrical engineering.



FEEDBACK:

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5 Days workshop on "Exploring Electrical Engineering Trends: Connecting Questions	Responses	Settings							
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Feedback - 5 Days worksho	p on "Expl	oring Electrical Eng	ineering	s	Ð				
Trends: Connecting Minds	and Machi	nes for the Future			Тт				
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PRINCIPAL



WORKSHOP REPORT

In the title of **"RENEWABLE ENERGY SYSTEMS"** From 11th to 13th, JANUARY 2023 Beneficiaries: III year EEE Students



Jointly Organized by

Energy Club

&

Department of Electrical and Electronics Engineering

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING ACADEMIC YEAR (2022-2023) ODD SEM <u>REPORT ON THREE DAYS WORKSHOP</u>

Title of the Workshop	: "Renewable Energy Systems"	
Date	: 11.01.2023 to 13.01.2023	
Resource Person	: 1. Mr.S.R.Karthikeyan, AP/EEE, KCE	
	2. Mr.R.Sundaramoorthi, AP/EEE, KCE	
	3. Mr.J.Arokiaraj, AP/EE	
No of students participat	ted : 41	
Objectives of Workshop	: To provide knowledge and exposure to students about:	
~	Maximize the amount of renewable energy consumed	
 Minimize greenhouse gas emissions 		
*	Minimize fuel consumption to reduce dependency on fuel imports	
\blacktriangleright	Maximize overall economic benefit	

> Operate at the highest possible level of reliability

Welcome address was given by Mrs. A.Prabha, AP\EEE. The presidential address was given by **vice principal Dr. S. Sivakumar**. He underlined that attendees will gain additional knowledge about the range of technical competencies and opportunities that await electrical engineers in the future. He emphasised that the students should have a thorough understanding of the microgrid and renewable energy systems and encouraged them to ask more questions.

A brief overview of the sessions and introduction to our resource persons was given by Dr. A.Albert Martin Ruban, HOD/EEE.

Day:1

Title: India's Power Grid Organisation

Resource Person: Mr.S.R.Karthikeyan, AP/EEE, KCE

The following points were discussed during the session 1:

- The Indian Power system comprises four main components: electricity generators, distribution networks, transmission lines, and consumer use.
- ✤ It is divided into five regional grids for planning and operational purposes.
- ✤ The largest power producer in India is included in this grid.
- ◆ The ranking of the leading companies in the Indian power and electricity sector.



Session Snapshot: 1

Day: 2

Title: CEED Using Renewable Energy Systems

Resource Person: Mr.R.Sundaramoorthi, AP/EEE, KCE

The subsequent topics were deliberated upon in the second session:

One of the most sophisticated small-scale centralised electricity systems is Microgrid, which typically includes loads, Distributed Generation (DG) units, and energy storage resources.

Generating energy from fossil fuels with no greenhouse gas emissions and reducing some forms of air pollution; lowering the cost of electricity produced by eliminating fuel; and using Microgrid to increase customer dependability and resilience to grid disruptions.



Session Snapshot: 2

Day: 3

Title: Importance of Renewable Energy and REL

Resource Person: Mr.J.Arokiaraj, AP\EEE

During the third session, the following topics were covered:

- The goal of the Renewable Energy Lab is to develop, test, and distribute efficient and renewable energy systems.
- REL's goal is to support the full development of these technologies so that they can support environmentally sustainable development in both industrialized and developing nations.



Session Snapshot: 3

Following the sessions, the students' opinions about the Workshop were gathered through the collection of their feedback.

Feedback from student

FEEDBACK ANALYSIS REPORT

		EXCELLENT	VERY	GOOD	SATISFIED
S.NO	CONTENTS		GOOD		
1.	The content was interesting	20	11	10	-
2.	I can share my knowledge from this session with others	22	09	10	-
3.	The speaker provided clear answers and comments	35	05	01	-



Lastly, the vote of gratitude was given by Mrs. P. Thurumagal, AP/EEE, the event coordinator.

OUTCOME:

- Upon completion of the Workshop, students gained additional knowledge regarding career prospects in Power grid systems and within our primary field.
- ✤ The students acquired diverse technical skill sets that are essential for their placement.
- As a result, we developed a route into the MNC using our technical expertise in our primary field. Students gain additional understanding and exposure to renewable energy and microgrid technologies.

COORDINATORS



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING ACADEMIC YEAR 2022-23 EVEN

Internal Seminar– Report

Title of the seminar	: "System Design Using Microcontroller"
Date	: 01.04.2023
Resource Person	: Mr.S.R.Karthikeyan, AP/EEE, KCE
Beneficiaries	: II-EEE - 26
Venue	:135 - EEE Smart Classroom

The Department of EEE organized an Internal Seminar on "System Design Using Microcontroller" for second year EEE students on 01.04.2023. The main objective of the internal seminar is:

- To impart knowledge to students on the basics of microcontroller.
- To provide adequate knowledge on various processors and its applications in different domains of Engineering.
- To facilitate the use of system design in their final year projects and seminar presentations.

The following points were discussed during the session:

- > Different types of Microcontroller Programming used in Embedded Systems
 - PIC Microcontroller
 - ARM Microcontroller
 - 8051 Microcontroller
 - AVR Microcontroller
 - MSP Microcontroller
- The microcontroller must also satisfy the five basic elements of input, calculation, storage, output, and control. These are called five elements of microcontrollers.
- > Comparison of PIC and 8051 microcontrollers.
- > Various series and version of PIC microcontroller.
- System development life cycle.
- > Comparison of harvard and von neumann architecture.

- Examples of Microcontroller
 - Altera.
 - Analog Devices.
 - Atmel.
 - Espressif Systems.
 - Freescale Semiconductor.
 - Cypress Semiconductor.
 - ELAN Microelectronics Corp.
 - EPSON Semiconductor
- > Designing a Microcontroller Development Board
 - Step 1: Think About Component Packaging
 - Step 2: Choose Your Microcontroller
 - Step 3: Choose Your USB to Serial Converter
 - Step 4: Choose Your Regulator
 - Step 5: Choose Your Power OR-ing Scheme
 - Step 6: Choose Your Peripheral Chips (if Any)
 - Step 7: Circuit Design

Outcome:

- Students can realize the impact of different processors in our real life.
- Students can understand the importance of microcontrollers in recent technologies.
- Students can select controller for their project work.



Snapshot from Seminar



References:

[1] <u>https://www.tutorialspoint.com/system-design-using-microcontroller</u>

[2] https://www.intel.in/content/www/in/en/products/details/embedded-processors.html

[3] Introduction to Embedded Systems a Cyber-Physical Systems Approach, Second Edition, Version 2.2 ISBN: 978-0-262-53381-2, MIT Press, 2017

[4] https://www.tescaglobal.com/blog/what-is-a-microcontrollers-and-how-does-it-work/

Faculty In-Charge

Wirms 6423

5. 1000/2023

(Mr.S.R.Karthikeyan, AP/EEE)

HOD/EEE

Principal



Department of Mechanical Engineering

3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

S. No.	Date	Details	Beneficiaries	Page No.
_	1	MECH		
1	01.08.2022	Bridge Course on "HVAC" for III Year	78	02
2	30.08.2022	Webinar on " Applications of Theory of Machines"	182	04
3	15.09.2022	Intra Department Paper Presentation - II,III and IV Year	16	09
4	16.09.2022	National Level Technical Symposium "MECH STORM"	52	13
5	21.09.2022	Career Guidance Programme on " Competitive Exams Preparatory Things"	62	19
6	28.09.2022	Internal Staff Seminar on "Advances in Automobiles"	15	21
7	19.10.2022	Seminar on " E-Drives With Sustainable Energy"	146	25
8	23.10.2022	Career Guidance Programme on "Goal Setting"	65	31
9	11.8.2022 to 15.11.2022	VAC on " Smart Materials and Structures" for III year	78	33
10	25.11.2022	Bridge Course on "Advanced Engineering materials and its Applications" for II Year	49	36
11	07.03.2023	Webinar on "Refrigeration and Air Conditioning"	126	38
12	14.03.2023	Internal Staff Seminar on "Magnetic Properties of Polymers"	14	45
13	16.03.2023	Internal Staff Seminar on "Polymer Matrix Composites"	10	48
14	29.03.2023	Internal Staff Seminar on "Intelligent Variable Valve Timing"	12	52
15	31.03.2023	Workshop on "Recent Trends in Mechanical Engineering"	103	55
16	10.04.2023	Career Guidance Programme on "Career Guidance and Competitive Exams Preparatory Things"	33	59
17	12.04.2023	Internal Staff Seminar on "Hybrid and Electrical Vehicle Design"	14	63
18	20.04.2023	Guest Lecture on " Six Sigma Concept"	45	67
19	21.04.2023	Internal Staff Seminar on "Applications and Properties of Ceramic Matrix Composites"	14	69
20	27.04.2023	International Conference on "Recent Advances in Civil and Mechanical Engineering (RACME)	61 Papers	72
21	28.04.2023	Career Guidance Programme on "Goal Setting"	31	76

HoD/Mech + 2414/23

J. Borut 27/2023 Principal



DEPARTMENT OF MECHANICAL ENGINEERING ACADEMIC YEAR 2022 – 2023 ODD SEMESTER BRIDGE COURSE ON "HVAC SYSTEMS"

The Department of Mechanical Engineering conducted the bridge course on Heating Ventilation and Air Conditioning (HVAC) system for III Year students on 01.08.2022. (2020 - 2024 Batch)

OBJECTIVE

The objective of the course is to bridge the gap between students understanding and their knowledge. To equip the students knowledge, Basic HVAC systems taken as bridge course for the Third year students.

COURSE MAPPING

In regulation 2017 syllabus, Design of machine elements and Thermal Engineering-II subject and Thermal Engineering-II lab are found in 3rd year(fifth semester). Thermal Engineering-II lab deals with basics of heat flow concepts which will be implemented in HVAC systems. To understand the working environment of HVAC systems should be known to the students. Thus the "Basic HVAC systems" was taken as bridge course for III year students.

SESSION DETAILS

Mr.V.Aravind, AP/Mech and Mr.S.Balaganesh, AP/Mech , handled the session for III year students. Mr.V.Aravind discussed about the HVAC systems& Design details for Air Handling Unit(AHU) &Fan Coil Unit(FCU). He described the process of installing an HVAC systems.

Mr.S.Balaganesh AP/Mech explained the functions of Air Handling Unit (AHU)& Fan Coil Unit(FCU). He demonstrated the usage of Air Handling Unit(AHU)& Fan Coil Unit(FCU) and the output was shown to students also explained the difference between commercial Air Conditioning system and Industrial Air Conditioning system. Nearly 65 students attended the session, intracted to the staff and clarify their doubts.

- OUTCOME OF THE EVENT

At the end of session, the students would be able to,

- Understand the functions of AHU system ٠
- understand the functions of FCU systems
- understand the concepts of HVAC



Mr.V.Aravind AP/Mech explained the HVAC systems Mr.S.Balaganesh AP/Mech explained the functions of and design details for AHU& FCU units



AHU& FCU units

Hands on Session: Students executed the commands and doubts were clarified.

Bridge/Cour se Coordinator (Mr.V.Aravind AP/MECII)

T. Pmhysmy HOD/MECH 22/ 9/22

J. 12219/202

PRINCIPAL

3







DEPARTMENT OF MECHANICAL ENGINEERING ACADEMIC YEAR 2022-23 / ODD SEMESTER

WEBINAR REPORT

The Department of Mechanical Engineering organized a national level webinar through online mode on "Applications of Theory of Machines" on 30.08.2022 at 10.00 a.m. to 11.00 a.m. Welcome address was given by Mr. M. Vivekananthan, Assistant Professor / Mechanical, Kings College of Engineering.

Resource person **Dr. S. Renold Elsen, Associate Professor, Department of Mechanical Engineering**, VIT, Vellore was introduced by **Dr. T. Pushparaj**, Professor & Head/Mechanical, Kings College of Engineering. The resource person had given the lecture on "**Applications of Theory of Machines**". In his lecture, he explained about the various concepts of machine theories and applications of Kinematics and Dynamics mechanisms such as mini hydro-turbines, odorless toilets and self-balancing motors.

In this webinar, **182** participants in **13** colleges have been registered from various institutions. Among these, **163** participants from various Engineering College, polytechnic college and Arts College have attended the webinar. Vote of thanks was given by **Mr. S. Sabanayagam**, AP/Mechanical. Kings College of Engineering.

All the attended participants gave their feedback after the session and E-certificate have been sent to them through email.

Webinar Brochure



<u>Participation Certificate – Sample Copy</u>

VEARS OF ACADEMIC EXCELLENCE	College of Engineering to Anna University. Chemin (AAC Accredited Institution mized under 2(f) & 12(B) of UGO proved by AICIT, New Delhi	INSTITUTION'S COUNCIL Wanty of HID Instative
Cer	tificate of Participation	
This is to certify the from <u>Kings College of E</u> National Level Webinar on organized by Department Engineering, Punalkulam, Ne	Nat V. Durairaj Angineering has act <i>"Applications of the complications of the complete and the complete actions of the complete action of the complete action</i>	of <u>III Mech A</u> , tively participated in the Theory of Machines ", neering, Kings College of ugust 2022.
Mr.S.Sabanayagam, AP/Mech		
Mr.M.Vivekananthan, AP/Mech Coordinators	Dr.T.Pushparaj HoD/Mech	Dr.J.Arputha Vijaya Selvi Principal
	2	

5

Glimpses of the Event



Objective

The main objectives for organizing this Webinar are,

- To introduce the approaches and mathematical models used in kinematic and dynamic analysis of machinery.
- ◆ To give basic knowledge on kinematic and dynamic design of machinery.
- ✤ To give basic knowledge on mechanical vibrations.

Outcomes

Students who pass the course will be able to;

- Determine the kinematic chain and mobility, and perform the kinematic analysis of a given mechanism,
- ✤ Apply the fundamental principles of statics and dynamics to machinery,
- Understand and avoid/suppress certain common dynamical problems a machine may undergo,
- Understand the fundamentals of machine design for desired kinematic or dynamic performance.
- Understand the fundamentals of mechanical vibrations.

List of Attended Participants

S. No	No Name of Institute/Organization	
1	A.V.C. COLLEGE OF ENGINEERING	3
2	Anjalai Ammal Mahalingam Engineering College	2
3	ARASU ENGINEERING COLLEGE	3
4	Arifa Institute of Technology	1
5	EGS PILLAY ENGINEERING COLLEGE	6
6	Kings College of Engineering	127
7	K Ramakrishnan College of Engineering & Technology	3
8	M.I.E.T. Engineering College in Trichy	4
9	Parisutham institute of technology and science	3
10	Prist Engineering College, Thanjavur	2
11	Starlion Engineering College, Manongorai	2
12	St. Joseph College of Engineering & Technology, Elupatti	2
13	University College of Engineering Pattukkottai, Rajamadam	2
	Feedback questions and responses	

1. Content of the Program?

Excellent	Good	Fair
136	24	0



4

7

2. Quality of Audio/Video Streaming?

Excellent	Good	Fair
116	44	0



3. Way of Presentation?

Excellent	Good	Fair
142	18	0



4. Are you interested in future webinars in Kings?

Yes	No
160	0



Coordinator (Mr.S. Sabanayagam) (Mr.M. Vivekananthan)

HOD/Mechanical (Dr.T. Pushparaj)

T. B. Muny 28/9/22 J. 1000 28/9/2021

Principal (Dr, J, Arputha Vijaya Selvi)

8







DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2022-23 (ODD)

Date :12.09.2022

CIRCULAR

As a part of Engineers Day celebration, the Department of Mechanical Engineering has planned to conduct an "Intra Department Paper Presentation" on 15.09.2022 at Mechanical Smart Class Room. Interested students are requested to register their name to Mr.S.Nelson Raja AP/MECH and Mr.S.Desikan AP/MECH on or before 14.09.2022.

5/12/1/22

Coordinators (Mr.S.Nelson Raja, AP/MECH & Mr. S. Desikan, AP/MECH)

T. Ruhumy 1219/22

HOD/MECH

12/9/2022 J.M

Principal



DEPARTMENT OF MECHANICAL ENGINEERING ACADEMIC YEAR 2022-23 (ODD SEMESTER) <u>INTRA DEPARTMENT PAPER PRESENTAION REPORT</u> Venue: 205 (MECH Smart Class Room) Date: 17-09-2022

- As a part of an Engineer's Day celebration, the department of Mechanical Engineering had conducted "Intra Department Paper Presentation" on various core topics through offline mode on 15.09.2022.
- Welcome address was given by Mr. S. Nelson Raja Assistant Professor, Department of Mechanical Engineering, Kings College of Engineering. He highlighted the importance of paper presentation and outcome based education. Also he explained the importance of contributing in the paper presentation.
- I6 students (7 Batches) participated in this contest and students were actively explained their topics through power point presentation.
- ✓ Dr. T. Pushparaj, HoD, Department of Mechanical Engineering, acted as jury for the paper presentation.
- Vote of thanks was delivered by Mr. S. Desikan, Assistant Professor, Department of Mechanical Engineering, Kings College of Engineering.

S.No	Register Number	Name of the Students	Year / Department	Presentation Title
1	821121114020	Manikandan. R	II /Machanical	Casting Mathadalagu
1.	821121114029	Nirmal. D	II/ Mechanicai	Casting Methodology
	821121114024	Maniraj. D		Thormodynamic Cyclos &
2.	821121114027	Mukesh Kumar. R	II/ Mechanical	Its Application
	821121114028	Niraivan.M		
3	821121114033	Ragul. S	II / Mochanical	2D Printing Technology
5.	821121114034	Ponnarasan. S	II/ Meenanical	5D T Thinking Teenhology
4	821120114048	Thangapandiyan. S	III / Mochanical	Alternate Fuels for IC
ч.	821120114050	Veeramageswaran. R	III/ Mechanical	Engines
	821120114311	Keerthivasan. R		Stoom Congration
5.	821120114314	Lenin Kumar . S	III/ Mechanical	Technology
	821120114319	Praveen Kumar. R		reennology
6	821119114012	Gunal. P	W/Machanical	Renewable Energy
0.	821119114018	Iyappan . A	IV/ Mechanical	Sources
7	821119114029	Priyadharsan. L	W/Machanical	Ocean Thermal Energy
/.	821119114038	Veeraguru. M 1	0	Sources

List of Participants

Sample Images



Mr.S.Nelson Raja, AP/MECH has delivered the welcome address.









Long 79.048788° 15/09/22 04:12 PM GMT +05:30

Students actively participated in the paper presentation.

Dr.T.Pushparaj, HoD/MECH has judging the students presentations.



Mr.S.Desikan, AP/MECH has delivered the vote of thanks.

Mark Allocation Details

S.No	Register Number	Name of the Students	Presentation Title	Marks out of 100
1.	821121114020	Manikandan. R	Casting Mathadalagy	73
	821121114029	Nirmal. D	Casting Methodology	
2.	821121114024	Maniraj. D	Thormodynamic Cyclos	79
	821121114027	Mukesh Kumar. R	8. Its Application	
	821121114028	Niraivan.M	a its Application	
3.	821121114033	Ragul. S	2D Printing Tochnology	76
	821121114034	Ponnarasan. S	3D I Inting Technology	
4.	821120114048	Thangapandiyan. S	Alternate Fuels for IC	65
	821120114050	Veeramageswaran. R	Engines	
5.	821120114311	Keerthivasan. R	Stoom Congration	70
	821120114314	Lenin Kumar. S	Technology	
	821120114319	Praveen Kumar. R	reennology	
6.	821119114012	Gunal. P	Renewable Energy	83
	821119114018	Iyappan. A	Sources	
7.	821119114029	Priyadharsan. L	Ocean Thermal Energy	
	821119114038	Veeraguru. M	Sources	01

Winner Details

Rank	Register Number	Name of the Students	Year / Department	Marks
I.	821119114012	Gunal. P	IV/ Mechanical	83
	821119114018	Iyappan. A		
II.	821119114029	Priyadharsan. L	IV/	01
	821119114038	Veeraguru. M	Mechanical	81
	821121114024	Maniraj. D	TT /	
III.	821121114027	Mukesh Kumar. R	II/ Mochanical	79
	821121114028	Niraivan.M	Mechalical	

"The winners will be appreciated in the upcoming SCC"

719122 SD=1119/22

Coordinators (S.Nelson Raja, AP/MECH & S.Desikan, AP/MECH)

T. Purtump ragaz

J. mit/9/2022

HoD/MECH

Principal



DEPARTMENT OF MECHANICAL ENGINEERING

National Level Technical Symposium

MECH STORM 2K22

on 16th September 2022

Symposium Report

Organized by Department of Mechanical Engineering, Kings College of Engineering, Punalkulam-613303, Pudukkottai Dt. Website: www.kingsengg.edu.in

REPORT

Department of Mechanical Engineering of our college has organized a NATIONAL LEVEL TECHNICAL SYMPOSIUM **"MECH STORM 2K22"** on 16th September 2022. This Technical Symposium has provided a platform for Engineering and polytechnic students to share and exchange ideas about the Technical & Non-Technical events and the various research topics in the fields such as Manufacturing, Energy and Thermal Engineering.

The Symposium began with the formal prayer song "Tamil Thai Valzthu".Welcome address was given by Dr.T.Pushparaj, HOD/Mechanical, Kings College of Engineering. The symposium was inaugurated with lighting the lamp by the dignitaries. Dr.R .Rajendran, Secretary, KCE, honoured the chief guest by shawl and memento. Presidential address was delivered by Dr.R .Rajendran, Secretary, KCE, symposium proceedings was relished by Dr.S.Mahendran HOD/Mech UCE,Thirukkuvalai and received by Dr.R.Rajendran, Secretary, KCE, Dr.S.Sivakumar, Vice Principal, KCE and Dr.T.Pushparaj. HOD/Mech, KCE.

Mr.V.Aravind,Assistant Professor, Department of Mechanical Engineering, KCE, one of the coordinator of symposium, introduced the chief guest. Inaugural address was delivered by Dr.S.Mahendran HOD/Mech UCE,Thirukkuvalai, in the field of Manufacturing Engineering, and Composite materials. His topic covered the advances manufacturing techniques. Dr.T.Pushparaj. HOD/Mech, KCE felicitated the symposium.



Dr.S.Mahendran,HOD/Mech,UCE,ThirukkuvalaiDr.R.Rajendran, Secretary, KCE lighting the
kuthuvizhakkulighting the kuthuvizhakkukuthuvizhakku





Dr.S.Sivakumar, Vice Principal, KCE lighting the kuthuvizhakku

Dr.T.Pushparaj. HOD/Mech lighting the kuthuvizhakku.





PresidentialAddressbyDr.R.Rajendran,Special Address by Dr.S.Sivakumar, Vice Principal,Secretary, KCEKCE



Chiefguest introduction by Mr.V.Aravind AP/Mech Inagural address by Dr.S.Mahendran HOD/Mech 15UCE,Thirukkuvalai



Out of 25 technical papers 14papers were selected and presented in the paper presentation session. The session was chaired by Dr.T.Pushparaj, HOD/Mech and Dr.P.P.Shantharaman Asso.Prof/Mech. They reviewed and selected 3 best papers.

Three non-technical events namely, photo fest, Connection and meme creation were conducted by students. All students actively participated in all the events.

Finally the valedictory function was started with a video presentation by final Mech students that showed the latest innovations in Automobile field. Mr.V.Aravind,AP/Mech gave the summary of symposium. Dr.T.Pushparaj HOD/Mech distributed the prizes for the winners and also issued participation certificates to all the participants. Mr.N.Magesh,AP/Mech, Mr.M.Melwin J Sridhar AP/Mech and Mr.V.Aravind AP/Mech coordinated the entire symposium. Mr.V.Aravind AP/Mech delivered vote of thanks. The symposium was successfully finished with national anthem.

LIST OF RESEARCH ARTICLES

National Level Technical Symposium

"MECH STORM 2K22"

TECHICAL SESSION				
MECH STORM 01	Mitigation of NOx and noise in CRDI Diesel engine using multiple injection technique fuelled by Biodiesel with suitable additives.			
	C.Manikandan, Syed Aalam C, Dr.S.G.Shelvaraju			
MECH STORM 02	Experimental investigation on Petung Bamboo and Bagasee fibre with reinforced concrete			
	B.Sriram prasad ,A.Balaji,M.Srilasri, N.Priyanka			
MECH STORM 03	Performance Studies of Composite Materials			
	N.Priyanka ,M.Srilasri, B.Sriram prasad			
MECH	Solar energy and its improvement of efficiency by solar panel using different methods			
STORM 04	M.Srilasri, Dr.N.Stalin			
MECH	Alkaline treated paddy straw fiber reinforced polyester composites and die design for tube light frame			
510KM 05	Aananth R, Logesh S, Dhinesh kumar M, Boobalan NP, Prabhakaran J			
MECH	Performance enhancement of solar photovoltaic/thermal(pv/t) collector using Cuo Nano fluid			
STORM 06	Gokul M, Harish A, Sathya Narayanan S.S,Ragul A, Prabhakaran JS			
MECH	Comparative investigation of mechanical properties al -metal matrix spur gear with various reinforcements			
510KM 07	Deepan Raj S, Ragul G, Manikandan P, Krishna Kumar G, Radhika T			
MECH	Investigation on Mechanical Behaviour of mild steel welded joints and effect of welding variables			
210KM 08	J .Danielakash, M.Deepakraj, V.Ssarabeshwaran, S.Naveenraj, D.Nachimuthuraja			
MECH	Post welding heat treatment strength evaluation and Optimization of OHNS Steel with Taguchi Design			
STORM 09	S. Selva, S. Naveen, A. Deepak			

MECH STORM 10	Fabrication and Properties of Magnesium Hybrid Nano Metal matrix composites using powder metallurgy
	Shantharaman.P.P, Alagesan.K, Bharath.M, Infantraja.S, Karan.K
MECH STORM 11	Composite Material of bullet proof jackets using STF without using ballistic plates
	Prasath C, Rahulkumar K, Ragavan R, Pugazhendhi K,Vetrivel S
MECH STORM 12	Reinforcement of Aluminium Matrix Composite With E-Glass Fiber
	Abinash S, Sankarganesh V,Vasanth V,Vasanthakumar K,Veerapandian K
MECH STORM 13	Conventional heat transfer design of a steam condenser for once through Super Critical Boiler, by two shell pass and multiple tube pass
	Dr.S.Kamatchi Sankaran , K.Gunaseelan,P.Iniyan, T.Ferose Khan, R.Lakshmanan
MECH STORM 14	Influence of a Non-Patterned and patterned insert on Characterization of 410 Stainless Steel in a hard turning process
	T.Prabakaran

gener

-T. P. Mump 1719/22

J. mital222

HOD

PRINCIPAL

Coordinator



DEPARTMENT OF MECHANICAL ENGINEERING Academic Year 2022 –2023 (ODD) <u>Career Guidance Programme Report</u>

Date: 21/09/2022 Time: 11.00AM to 12.30PM Venue: Mechanical Smart Classroom

Career Guidance has been given to the third year students through a seminar. Totally, 62 students participated in the program and gained knowledge about the opportunities available in and around the world and how to obtain placements, Entrepreneurship and Higher studies initiatives.

The following points are discussed in the program.

After getting a mechanical engineering degree,

- Graduates can explore different industries including defense, transport, healthcare, manufacturing, machinery, IT, finance, etc.
- Graduates can pursue a career as Aerospace Engineer, Automotive Engineer, CNC Programmer, CAD Technician, Control and Instrumentation Engineer, Maintenance Engineer, and Nuclear Engineers., etc.
- Graduates can do research and development to lead the projects and products in the design and development stages,
- Graduates can get opportunities in public and private sectors and industries.
- Graduates can work in a wide variety of specific jobs, like Tooling, Process, Production, Quality, Sales, Marketing, Maintenance, Programming, Coding, Purchase, Vendor Development, and many more.
- Graduates can further extend their career by continuing higher education either in the core field or in the interdisciplinary field.
- Graduates can be entrepreneurs and can find solutions to social problems.
- Graduates can write a competitive examination and GATE for getting admission into the master's degree program with a stipend. And also getting jobs in national public sector companies.


A career guidance program conducted at a seminar hall by Mr. Balaji for III (A&B) students

Outcome:

Students gain knowledge and decisive capability about what they can do after completion of a degree, either higher studies or a job in a well reputed industry.

Feedback from the Students

Parameter	Excellent	Satisfactory	Good	Yet to beimproved
content of the Session	41	20	01	
Resource person delivery	40	17	05	-
Audio/Video Clarity	42	18	02	
Overall feedback about session	41	21		

Event i/c

T. Contere HoD/Mech 919122







Department of Mechanical Engineering Academic year 2022-23 (ODD) Internal staff seminar Report

Date & time	: 28.09.2022 & 12.30 p.m
-------------	--------------------------

- Venue : Department Smart Classroom
- Topic : Seminar on "Advances in Automobiles"
- Resource person : Dr.T.Pushparaj, HoD/Mechanical



Snapshots of the session

Internal seminar on Advances in Automobiles has been delivered by Dr.T.Pushparaj, Professor, Department of Mechanical Engineering for the staff members of Mechanical Engineering on 28/09/2022 at 12.30 p.m.

Here few points are discussed:

In recent decades tremendous change in automobile industries. A systematic approach is adopted to present all the environmental conscious technologies in vogue in the automotive sector. The seminar focuses on the engine modification, materials used, fuels, recyclability issues and the environmental hazard mitigation during the operation of the automobiles. An overview of the potential of natural fiber reinforced composites in the automotive sector is also included. In this seminar the personal safety devices in automobiles and its working principles also explained. Moreover, recent advances in automobiles, fuel efficient engines, hybrid electric cars and technologies which aid in the treatment of the exhaust gases are also discussed.

Chapters Discussed:

- Cylinder deactivation
- Direct injection
- Variable valve timing and lift
- Turbochargers
- Six stroke engines
- Hybrid engine
- Electric vehicle (EV)
- Awareness of safety devices
- HCCI engine (Homogeneous Charge Combustion Ignition)
- Square engine technology
- Books and articles

Outcomes:

Upon listing of this seminar the participants can able to

- Understand the auxiliary systems in automobiles.
- Understand the concepts of engine modification.
- Able to safeguard himself by productive devices.

References:

- 1. Zaid Ullah Baba, Wani Khalid Shafi, Mir Irfan Ul Haq and Ankush Raina, "Towards sustainable automobiles advancements and challenges", 2019, vol .13, (4), pp. 315-331.
- 2. Yanliang Zhang, "Thermoelectric Advances to Capture Waste Heat in Automobiles", ACS Energy Lett. 2018, vol.3, (7), pp.1523–1524.
- 3. Yun Wango, Andrew Martinez, Patrick Hong HuiXu and Fred R.Bockmiller, "Polymer electrolyte membrane fuel cell and hydrogen station networks for automobiles: Statuse technology, and perpectives", Advances in Applied Energy, 2021, vol.2, pp.1000-1011.

DEPT IQAC CO-ORDINATOR

T. Ruhumy' 110122

Internal staff seminar feedback summary:

S.no	Description	Good	Fair	Poor
1	Content of the speech	10	3	- 2
2	Voice of the speaker	9	3	1
3	Overall feedback	8	5	-

Sample feedback form:



Department of Mechanical Engineering Academic year 2022-23 (ODD) Internal staff seminar feedback

Date & time	:28.09.2022 & 12.30 pm		
Venue	: Department Smart Classroom		
Topic	: Seminar on "Advances in Automobiles		
Resource person	: Dr.T.Pushparaj, HoD/Mechanical		

S.no	Description	Good	Fair	Poor
1	Content of the speech	/		
2	Voice of the speaker	V		
3	Overall feedback		-	

Suggestions:

Name & Sign



Department of Mechanical Engineering Academic year 2022-23 (ODD) Internal staff seminar attendance

Date & time: 28.09.2022& 12.30 pmVenue: Department Smart ClassroomTopic: Seminar on "Advances in Automobiles"Resource person: Dr.T.Pushparaj, HoD/Mechanical

Sno	Staff name	Signature
1	Dr.T.Pushparaj	x
2	Dr.P.P.Shantharaman	CL
3	R.Shankar	192
4	H.Agilan	- AF
5	N.Magesh	m
6	M.Melwin Jagatheesh Sridhar	OD .
7	S. Sabanayagam	M
8	M.Sakthivel	AP and
9	S.Desikan	S.D.
10	S.Nelson Raja	Skint.
11	R.Rajadurai	Openettoned
12	D.Balaji	
13	S.Balaganesh	3. Ralai
14	V.Aravind	V) Arousto
15	Mr.M.Vivekananthan	W. Kit

DEPT IQAC CO-ORDINATOR

- Pullyny HOD/MECH 1110/20

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DEPARTMENT OF MECHANICAL ENGINEERING ACADEMIC YEAR 2022-23 / ODD SEMESTER

SEMINAR REPORT

The Department of Mechanical Engineering and Department of Electrical and Electronics Engineering jointly organized a seminar on "E-Drives with Sustainable Energy" on 19.10.2022 at 11.00 a.m. in Chera hall of our college. In this seminar welcome address was given by Mr. V.Aravind, Assistant Professor / Mechanical Engineering, Kings College of Engineering, Punalkulam and facilitation address was given by Dr.T.Pushparaj Professor & HOD / Mechanical Engineering, Kings College of Engineering, Punalkulam. Mr.M.Vivekananthan Assistant Professor / Mechanical Engineering, Kings College of Engineering, Punalkulam introduced the resource person Er.Karunaraja Natarajan M.E., Placement Coordinator, Learnet Skills Limited, Palladam, Coimbatore. The resource person had given the seminar on "E-Drives with Sustainable Energy". In his lecture, he explained about the various concepts of E-Drives and sustainable energy resources such as solar dryer, solar power production, utilization of solar power and various concepts of E-Drives.

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In this seminar, **125** Mechanical Engineering students and **21** Electrical and Electronics Engineering students totally **146** students were participated. Vote of thanks was given by **Mr. M. Sakthivel**, AP/Mechanical Engineering, Kings College of Engineering, Punalkulam.

All the students were actively participated and asked their doubts. The resource person explained all the doubts with suitable examples. All the attended participants gave their feedback after the session.



Objective

The main objectives for organizing this seminar are,

- To introduce the basic knowledge of E-Drives.
- To give basic ideology of sustainability through E-Drives.
- To give basic knowledge on application of solar energy.

Outcomes

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Students who pass the course will be able to;

- Determine the various types of E-Drive and concept of E-Drive,
- Apply the fundamental principles of E-Drive and Sustainability,
- Understand the application of various E-drive sustainability of machine components...
- Understand the fundamentals of solar dryer.

List of Attended Participants

S.No	Name of Year/Department	Number of participants
1	IV Year Mechanical	31
2	III Year Mechanical	46
3	II Year Mechanical	48
4	IV Year EEE	8
5	III Year EEE	13
	Total	146

Feedback questions and responses

1. Content of the Program?

Excellent	Good	Fair
120	26	0



2. Quality of Content delivered?

Excellent	Good	Fair
116	30	0



3. Way of Presentation?

Excellent	Good	Fair
108	38	0



4. Are you interested in future like this seminar?

Yes	No
146	0



Sample Feedback



A Seminar on "E-Drives with Sustainable Energy"

Feedback Form

Student Name : Kishefre	Kiman R	
Dept/Year : Mach 1.	er	
Reg No : 821. 22 1	CIE •	
1. Content of the Pro	gram?	
Excellent	Good	🗖 Fair
2. Quality of Content	delivered?	
Excellent	🗖 Good	Fair
3. Way of Presentatio	2n?	
Excellent	Good	🗖 Fair
4. Are you interested	in future like this Seminar?	
Yes	No No	



A Seminar on "E-Drives with Sustainable Energy"

Feedback Form

Student Name : R how	in humat	
Dept/Year : Mou	howing / E	
Reg No : ELI	21114015	
1. Content of the Pr	ogram?	
Excellent	Good	C Fair
2. Quality of Conten	t delivered?	
Excellent	Good	🗖 Fai
3. Way of Presentat	ion?	
Excellent	Good	🗖 Fai
4. Are you interested	in future like this Seminar?	
Yes		

Sample Snapshots of seminar on E-Drives with sustainable energy





M. C. 21111/22

Coordinator (Mr.M.Vivekananthan) (Mr.M.Sakthivel)

T. Partrony 21/11/2

HOD/Mechanical (Dr.T.Pushparaj)

.

J. man 22/11/2022

Principal (Dr.J.Arputha Vijaya Selvi)







DEPARTMENT OF MECHANICAL ENGINEERING Academic Year 2022 –2023 (ODD) <u>Career Guidance Programme Report</u>

Date: 23/10/2022 Time: 11.00AM to 12.30PM Venue: Mechanical Smart Classroom

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To provide adequate knowledge about post measures after the graduation, a career guidance event was organized by Department of Mechanical Engineering, Kings College of Engineering, Punalkulam. The main focus of the event was Third Year students of Mechanical Engineering. The event was conducted at 23/10/2022 between 11.00 AM 12.30 PM. Dr.R.Shankar, AP/Mechanical presented the career guidance and the opportunities available in the society along with possible ways that a Mechanical Engineering graduate will have in their hand. Totally 65 students were attended the event. After the session, Feedback was obtained from the beneficiaries and the responses along with event Photographs were provided below for the reference.



A career guidance program conducted at a seminar hall by Dr. R. Shankar for III (A&B) students

Outcome:

Students gain knowledge and start to prepare to meet out the Competitive industrial expectation after completion of a degree.

Parameter Content of the Session	Excellent	Satisfactory	Good	Yet to beimproved
Personance	42	21	02	
Resource person delivery	42	19	04	
Audio/Video Clarity	40	22	04	/-
Overall feedback about	10	23	02	-
session	46	19		

Feedback from the Students

Event i/c

T. Purkny HoD/Mech 20/00/22







DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2022-23 / ODD SEMESTER

VALUE ADDED COURSE REPORT

As per anna university curriculum, a value addition initiative course has been conducted "smart materials and structures" for third year students on every Saturday. Which enhanced the students' knowledge about different unnormal behavior of certain materials (smart materials) and their engineering applications. Two assessment has been conducted for evaluation and finally E- certificate has been issued through mail.

COURSE DETAILS

Course: MVA005 – Smart Materials and Structures Year / Semester: III / V A & B sec Course duration: 27.08.2022 to 22.10.2022 (30 Periods) No of students enrolled: 78 No of students completed the course: 78 Course Instructor: Mr. S. Sabanayagam (A Sec) Mr. H. Agilan (B sec) Course Incharge: Mr. D. Balaji

Credits: 2

COURSE OBJECTIVES

- > To describe the basic principles and mechanisms of smart materials and devices.
- To enhance the knowledge of physical principles underlying the behavior of smart materials.
- To understand the basic principles in smart sensors, actuators and transducer technology and mechanisms of measuring techniques with applications.

COURSE OUTCOMES:

Upon the completion of this course the students will be able to

- 1. Classify various smart materials and devices.
- 2. Formulate analytical approach on vibration absorbers.
- 3. Demonstrate strain measurement using smart materials.

4. Develop control strategies for smart structures, dampers for health monitoring of structures.

COURSE SCREENSHOTS







T. Prahpny 21/11/22

HOD/Mechanical (Dr.T.Pushparaj)

J. mut 11/1022

Principal (Dr.J.Arputha Vijaya Selvi)



DEPARTMENT OF MECHANICAL ENGINEERING ACADEMIC YEAR 2022 – 23 (ODD SEMESTER) BRIDGE COURSE REPORT

Year / Sem : II-MECH / 03

Course Name : Advanced Engineering Materials and its ApplicationsVenue: 207 (MECH ICT Class Room)

Objective of the Bridge Course:

- The main objective of this course is to brush up the fundamental knowledge of the students and prepare them for year engineering courses.
- Interactive and active learning by doing have been weaved into the bridge course.

Methodology:

- Action plan of the bridge course is prepared well in advance by the senior faculty and get it approved by Head of the Department.
- Power point presentation, chalk and talk methods have been adopted for the bridge course.
- Hands on training and interactive sessions are conducted for laboratory sessions.

Session Details:

Dr. T. Pushparaj, HOD, Department of Mechanical Engineering delivered the welcome address for the "Bridge Course on Advanced Engineering Materials and its Applications" for both second students. He highlighted the importance of mechanical knowledge; outcome based education and shared his experience with the students.

Mr. R. Shankar, Assistant Professor / Mr. M. Melwin Jagadeesh Sridhar, Assistant Professor, Department of Mechanical Engineering enlightened second year students about to "Properties and types of Advanced Engineering Materials".

Mr. S. Nelson Raja, Assistant Professor / Mr. R. Rajadurai, Assistant Professor Department of Mechanical Engineering handled an activity based session for second year students on "Industrial Processes and Applications of Advanced Engineering Materials".



Photo Gallery of Bridge Course

Outcome of the Bridge Course:

 It is evident that most of the students who attended the bridge course classes have gained the knowledge and skills of basic concepts of advanced engineering materials and their industrial applications.

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T. Ruhany 25/11/22 HOD/Mech

Principal



DEPARTMENT OF MECHANICAL ENGINEERING ACADEMIC YEAR 2022-23 / EVEN SEMESTER WEBINAR REPORT

The Department of Mechanical Engineering organized a National level webinar on "**Refrigeration and Air-conditioning**" on 07.03.2023 at **11.15 a.m. to 12.30 p.m.** Welcome address was given by **Mr. M.Vivekananthan**, Assistant Professor / Mechanical, Kings College of Engineering.

Resource person **Dr.B.Gobalakrishnan**, **Department of Mechanical Engineering**, CARE College of Engineering, Tiruchirappalli, was introduced by **Mr. R.Rajadurai**, Assistant Professor / Mechanical, Kings College of Engineering. The resource person had given the lecture on "**Refrigeration and Air-conditioning**". In his lecture, he explained about the various concepts of Air conditioning and refrigeration systems and also explained the applications of Air conditioning and refrigeration systems.

In this webinar, about **130** participants from **7** colleges have been registered. Among these, **126** participants from various Engineering College, polytechnic college and Arts College have attended the webinar. Vote of thanks was given by **Mr. S. Desikan**, AP/Mechanical. Kings College of Engineering.

All the attended participants gave their feedback after the session and E-certificate have been sent to them through email.

Webinar Brochure



Glimpses of the Event











Objective

The main objectives for organizing this Webinar are,

- Learning the fundamental principles and different methods of refrigeration and air conditioning.
- Comparative study of different types of refrigerants with respect to properties, applications and environmental issues.
- Study the various equipment-operating principles, operating and safety controls employed in refrigeration air conditioning systems.

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Outcomes

Students who pass the course will be able to;

- Present the properties, applications and environmental issues of different refrigerants.
- Illustrate the fundamental principles and applications of refrigeration and air conditioning system.
- ✤ Able to operate the refrigeration and air conditioning systems.
- Solve the cooling capacity and coefficient of performance calculations by conducting test on vapour compression refrigeration systems.

List of Attended Participants

S.No	Name of Institute/Organisation	Number of participants
1	A.V.C.COLLEGE OF ENGINEERING	4
2	CARE College of Engineering	10
3	Anjalai Ammal Mahalingam Engineering College	3
4	EGS PILLAY ENGINEERING COLLEGE	5
5	Kings College of Engineering	93
6	K Ramakrishanan College of Engineering & Technology	5
7	M.I.E.T. Engineering College in Trichy	6
	Feedback questions and responses	

1. Content of the Program?

Excellent	Good	Fair
110	16	0



2. Quality of Audio/Video Streaming?

Excellent	Good	Fair
116	10	0



3. Way of Presentation?

Excellent	Good	Fair
120	06	0



4. Are you interested in future webinars in Kings?

Yes	No
126	0



M. TJJ23 Princetory Coordinator (Mr.M.Vivekananthan) (Mr.R.Rajadurai)

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HOD/Mechanical (Dr.T.Pushparaj)

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Principal (Dr,J,Arputha Vijaya Selvi)



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar Report

Date & time	: 14.03.2023 & 12.30 p.m
Venue	: Department Smart Classroom
Topic	: Seminar on "Magnetic Properties of Polymers"
Resource person	: Mr.D.Balaji ,AP /Mechanical



Snapshots of the session

Internal seminar on Magnetic Properties of Polymers has been delivered by Mr.D.Balaji, Assistant Professor, and Department of Mechanical Engineering for the staff members of Mechanical Engineering on 14/03/2023 at 12.30 p.m.

Here few properties are discussed:

In magnetic Property 1: Intensity of magnetization

Electrons move around the nucleus, and these electrons possess magnetic properties. The external magnetic field creates an impact on the materials. A material held in an external magnetic field will have its magnetic moments aligned in a specific direction. The result is a non-zero dipole moment. Magnetic flux or intensity per unit volume is defined as net dipole moment per unit volume.

Property 2: Magnetic Field (H) or Magnetic intensity

The intensity in the magnetic field is produced by the electric current flowing through a solenoid.

Magnetic property is caused as a result of the external magnetic field.

Property 3: Magnetic susceptibility

An intensified magnetization of material occurs directly proportional to the magnetic field intensity for a small magnetizing field. A material with a small magnetizing field acquires a greater degree of magnetization as a direct result of the intensity of the magnetic field. The intensity of magnetization is represented as (1), and material directly proportional to the magnetic field is represented as (H) and it can be represent as

I∝H

Property 4: Retentivity

Magnetism can be retained or resisted by materials because of their retentivity. It is known as retentivity when a material can retain or resist magnetization.

Chapters Discussed:

- Carbon Fiber
- Carbon Polymers
- Mechanical Strength
- Mechanical Property
- Epoxy Strength
- Polymer Matrix

Outcomes:

Upon listing of this seminar the participants can able to

- Understand the different polymer composites.
- Understand the different properties polymer materials.

References:

1. Shirakawa, H., Louis, J., Macdiarmid, A.G., Chiang, C.K., Heeger, A.J.: Synthesis of electrically conducting organic polymers: halogen derivatives of polyacetylene, (CH)x. J. Chem. Soc. Chem. Comm. 16, 578–580 (1977) 2016

2. Chiang, C.K., et al.: Electrical conductivity in doped polyacetylene. Phys. Rev. Lett. 39, 1098-1101 (1977)

3. Fukutome, H., Takahashi, A., Ozaki, M.: Design of conjugated polymers with polaronic ferromagnetism. Chem. Phys. Lett. 133(1), 34–38 (1987)

STB12'S DEPT

T. Embrany' HOD/MECH 15/3/23



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar attendance

Date & time: 14.03.2023 & 12.30 pmVenue: Department Smart ClassroomTopic: Seminar on "Magnetic Properties of Polymers"Resource person: Mr.D.Balaji, /Mechanical

Sno	Staff name	Signature
1	Dr.T.Pushparaj	A.
2	Dr.P.P.Shantharaman	NM
3	R.Shankar	A .
4	H.Agilan	CL
5	N.Magesh	ary
6	M.Melwin Jagatheesh Sridhar	W,
7	S. Sabanayagam	A
8	M.Sakthivel	A
9	S.Desikan	CL
10	S.Nelson Raja	Sign.
11	R.Rajadurai	Prusdow
12	D.Balaji	Are
13	S.Balaganesh	Sitist
14	Mr.M.Vivekananthan	Un

Internal staff seminar feedback summary:

S.no	Description	Good	Fair	Poor
1	Content of the speech	9	3	-
2	Voice of the speaker	9	2	1
3	Overall feedback	8	4	

DEPT IQAC CO-ORDINATOR

HOD/MECH HIBLES



Department of Mechanical Engineering Academic year 2022-23 (EVEN)

Circular

13.03.2023

This is to inform you that there will be an internal seminar going to be conducted by our Department on 16.03.23 at 12.30 p.m on the topic "Polymer matrix composites" by Mr.V.Aravind, AP/Mechanical at Department Smart Classroom. Staff members are instructed to utilize the session and communicate your queries.

- , Purlupung 1312/23

HoD/Mech



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar Report

Date & time	: 16.03.2023 & 12.30 p.m
Venue	: Department Smart Classroom
Topic	: Seminar on "Polymer Matrix Composites"
Resource person	: Mr.V.Aravind ,AP /Mechanical



Snapshots of the session

Internal seminar on Polymer Matrix Composites has been delivered by Mr.V.Aravind, Assistant Professor, Department of Mechanical Engineering for the staff members of Mechanical Engineering on 16/03/2023 at 12.30 p.m.

Here few points are discussed:

In materials science, a polymer matrix composite (PMC) is a composite material composed of a variety of short or continuous fibers bound together by a matrix of organic polymers. PMCs are designed to transfer loads between fibers of a matrix. Polymer matrix composites (PMCs) as high performance special engineering materials are the research interest of scientists around the world. PMCs as a combination of polymers and other organic or inorganic materials with high absorption capacity of heavy metal ions, dyes and other water pollutants can be used in water/wastewater treatment applications as adsorbent, effectively. It is generally believed that carbon nanomaterials including carbon nanotubes (CNTs) and graphene oxide (GO) as inorganic nanofillers with unique chemical and physical properties can improve the PMCs performance in terms of adsorption capacity and mechanical, chemical and thermal resistance. In this article, current progresses in the field of PMCs as adsorbent for water/wastewater treatment applications are reviewed. Also, the effects of incorporation of CNTs and GO into polymer matrices on performance and properties of the fabricated PMCs are studied. In addition, the main aspects related to applications of the PMCs in water/wastewater treatment are identified by the bibliometric analysis using VOSviewer software as a popular tool for visualizing scientific landscapes.

Chapters Discussed:

- Carbon Fiber
- Carbon Nanotubes
- Mechanical Strength
- Polymer Composite
- Epoxy
- Delamination
- Polymer Matrix
- Reinforced Plastic

Outcomes:

Upon listing of this seminar the participants can able to

- Understand the processing techniques of polymer matrix composites.
- Understand the concepts of Molding methods of composite materials
- Able to understand the recent design and Development new, preparation methods of composites and recent composite technologies

References:

1. Asthana, R., Kumar, A., Dahotre, N.B., (2016). Material processing and manufacturing science, Academic Press, Elseiver. Volume 252, Issue 24, 15 October 2016, Pages 1635-1640

2. Buzea, C.Gh., Agop, M., Gălușcă, D.G., Vizureanu, P., Ioniță, I., (2017). El Naschie's superconductivity in the time dependent Ginzburg-Landau model, Chaos Solitons & Fractals, vol. 34, No. 4, pp. 1060-1074.

3. Carcea, I., (2015). Composite Materials, Interphasis Phenomena, Politehnium Publishing House, Iasi. Volume 66, Issue 13, October 2015, Pages 1941-1952

4. Dang, Z.M., Yuan, J.K., Zha, J.W., Zhov, T., Li, S. T., Hu, G.H., (2011). Fundamentals, processes and applications of high-permittivity polymer-matrix composites, Progess in Mater. Sci. Volume 45, Issue 24, November 2011, Pages 8211-8219

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DEPT IQAC CO-ORDINATOR

T. Sonthungs MISLES

HOD/MECH



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar attendance

Date & time: 16.03.2023 & 12.30 pmVenue: Department Smart ClassroomTopic: Seminar on "Polymer Matrix Composites"Resource person: Mr.V.Aravind , /Mechanical

Sno	Staff name	Signature
1	Dr.T.Pushparaj	10
2	Dr.P.P.Shantharaman	0
3	R.Shankar	8
4	H.Agilan	Dall Hanne
5	N.Magesh	CL
6	M.Melwin Jagatheesh Sridhar	Nehmarker
7	S. Sabanayagam	×
8	M.Sakthivel	Above
9	S.Desikan	SQ -
10	S.Nelson Raja	SBA .
1	R.Rajadurai	Plugdomm.
12	D.Balaji	Dhas
13	S.Balaganesh	CL
14	Mr.M.Vivekananthan	CL

Internal staff seminar feedback summary:

S.no	Description	Good	Fair	Poor
1	Content of the speech	9	3	-
2	Voice of the speaker	9	2	1
3	Overall feedback	8	4	-

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DEPT IQAC CO-ORDINATOR

T. Forhung Misles

HOD/MECH



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar Report

Date & time	: 29.03.2023 & 12.30 p.m
Venue	: Department Smart Classroom
Topic	: Seminar on "Intelligent Variable Valve Timing"
Resource person	: Mr.S.Balaganosh /Mechanical



Snapshots of the session

Internal seminar on Intelligent Variable Valve Timing has been delivered by Mr.S.Balaganesh, Assistant Professor, Department of Mechanical Engineering for the staff members of Mechanical Engineering on 29/03/2023 at 12.30 p.m.

Here few points are discussed:

VVT-IE (Variable Valve Timing - intelligent by Electric motor) is a version of Dual VVT-IE that uses an electrically operated actuator to adjust and maintain the intake camshaft timing. The exhaust camshaft timing is still controlled using a hydraulic actuator. To advance the camshaft timing, the actuator motor will rotate slightly faster than the camshaft speed. To retard camshaft timing, the actuator motor will rotate slightly slower than camshaft speed. The speed difference between the actuator motor and camshaft timing is used to operate a mechanism that varies the camshaft timing. The benefit of the electric actuation is enhanced response and accuracy at low engine speeds and at lower temperatures as well as a greater total range of adjustment. The combination of these factors allows more precise control, resulting in an improvement of both fuel economy, engine output and emissions performance.

Chapters Discussed:

- Direct injection
- Variable valve timing
- Turbochargers
- Electrical VVT
- Variable valve duration (VVD)
- VTT design highlights

Outcomes:

Upon listing of this seminar the participants can able to

- Understand the various injection systems in engines.
- Understand the concepts of Intelligent Variable Valve Timing.
- Able to understand the valve mechanisms in the engines.

References:

- 1. C. N. Grimaldi and F. Millo, "Internal Combustion Engine (ICE) Fundamentals," in Handbook of Clean Energy Systems, 2015.
- Stewart, P., D. Gladwin and P. J. Fleming. "Multiobjective Analysis for the Design and Control of an Electromagnetic Valve Actuator." Proceedings of the Institute of Mechanical Engineers: Vol 221, Part D; p567-577, 2016.
- 3. Moriya, Y., Watanabe, A., Uda, H., Kawamura, H. and Yoshioka, M. (2014). A newly developed intelligent variable valve timing system Continuously controlled cam phasing as applied to an new 3 liter inline 6 engine. SAE Paper No. 960579

D-ORDINATOR DEPT IQAC

T. P.M. HOD/MEG



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar attendance

Date & time	: 29.03.2023 & 12.30 pm		
Venue	: Department Smart Classroom		
Topic	: Seminar on "Intelligent Variable Valve Timing"		
Resource person	: Mr.S.Balaganesh , /Mechanical		

Sno	Staff name	Signature	
1	Dr.T.Pushparaj	18	
2	Dr.P.P.Shantharaman		
3	R.Shankar	Bt as	
4	H.Agilan	(All Julia	
5	N.Magesh	mut	
6	M.Melwin Jagatheesh Sridhar	figures	
7	S. Sabanayagam	state .	
8	M.Sakthivel	Para	
9	S.Desikan	8-R-	
10	S.Nelson Raja	SA	
11	R.Rajadurai	Con .	
12	D.Balaji	CL	
13	V.Aravind	CL	
14	Mr.M.Vivekananthan	Main	

Internal staff seminar feedback summary:

S.no	Description	Good	Fair	Poor
1	Content of the speech	9	3	- /
2	Voice of the speaker	9	2	1
3	Overall feedback	8	4	11 <u>-</u>

DEPT IQ ORDINATOR

HOD/MECH 2913123



DEPARTMENT OF MECHNAICAL ENGINEERING REPORT WORKSHOP ON "RECENT TRENDS IN MECHANICAL ENGINEERING" Venue: Chera Hall, Kings College of Engineering Date: 31.03.2023

OBJECTIVE:

Department of Mechanical Engineering, Kings College of Engineering organised a one day workshop on "RECENT TRENDS IN MECHANICAL ENGINEERING" for Diploma in Mechanical Engineering (DME) students on 31.03.2023. Earlier staff members from Mechanical department visited various polytechnic colleges to meet the students directly and conveyed about our workshop. An overwhelming response was received from the polytechnic colleges and students showed tremendous interest to attend the workshop. The main aim of the workshop was create awareness on engineering education and to disseminate the recent advances in Mechanical Engineering.

INAUGURAL SESSION:

The welcome address was given by Mr.V.Aravind AP/Mech Kings College of Engineering. The workshop was inaugurated by the Principal, Dr.J.Arputha Vijaya Selvi. She graced the occasion as chief guest and delivered the presidential address. In her address, she elucidated the rising technology and various opportunities in Mechanical Engineering field. She also insisted that the possibility is in every hand, the students have to make use of those various opportunities for their career. She also briefed the importance of Mechanical Engineering in various aspects. Finally while concluding, she encouraged the participants to make use of the college infrastructure during the practical sessions. More than 93 participants from various polytechnic colleges participated in the workshop.


Glimpses of inaugural session

WORKSHOP SESSIONS:

The Session I was handled by Vice Principal Dr.S.Sivakumar, he narrated various opportunities in automobile industry and explained solar power and energy concepts. The Session II was handled by Dr.T.Pushparaj, HOD/Mech, he presented about the recent trends in mechanical engineering and latest technological advancements in Mechanical Engineering. Also he explained the importance of technical education in future. In session III, Mr.V.Vivekananthan AP/Mech handled the students with Pro- e drawing software and give lecture. The Pro-e demo and usage of them is made impression among the students.

Then in afternoon session IV, Mr. R.Rajadurai AP/Mech delivered lecture in alternate fuels and pollution control technologies. Then the students were given hands on training in CNC machines in our lab handled by Mr. M.Sakthivel AP/Mech.



Glimpses of workshop session

VALEDICTORY SESSION:

The valedictory session was conducted by Mr.S.Balaganesh AP/Mech. He highlighted the mechanical engineering career opportunities. In the feedback session, the participants gave their valuable feedbacks and the participation certificates were distributed by the HoD/Mech. Mr.S.Desikan AP/Mech delivered vote of thanks. With the National anthem the program was come to an end.



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Glimpses of Valedictory session

OUTCOME:

On successful completion of the workshop, students were able to understand

- Basic and advances in Mechanical Engineering and Automobile Engineering.
- Recent developments in industrial engineering and managements.
- Current scenario in welding and design attributes.
- Employment skills and techniques in latest technologies.

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PRINCIPAL



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2022-23 (Even)

Date: 05.04.2023

CIRCULAR

As a part of Career Guidance of student community, the Department of Mechanical Engineering has planned to conduct a "Carrier Guidance and Competitive Exams Preparatory Things" on 10.04.2023 at Mechanical Smart Class Room. Students are instructed to utilize the session effectively.

50-- 105.04.23 564 51423

Organizers (Mr.S.Desikan, AP/MECH & Mr.S.Nelson Raja, AP/MECH)

T. Protomy HOD/MECH 5/4/23



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Career Guidance Program

Class : III MECH Date : 10.04.2023 Venue: Mechanical Smart Class Room (205) Topic: Carrier Guidance and Competitive Exams Preparatory Things

The Department of Mechanical Engineering, Kings College of Engineering Punalkulam, organized a "Carrier Guidance and Competitive Exams Preparatory Things" for the students of III year Mechanical Engineering students on 10th April 2023 at 2 p.m. There were 33 students actively participated in the event.

This event helps the students to reflect on their ambitions, interests, qualifications and abilities. It helps them to understand the current competitive scenario and education systems, and to relate this to what they know about themselves.

Objectives of the Event:

- To provide awareness about competitive exams.
- To make them aware about various opportunities and trends in the field of engineering after graduation.
- To engage the students in learning and help them to enhance their knowledge and skills.

Outcomes:

Upon listing of this event, the participants can able to

- Know the various opportunities regarding mechanical engineering.
- Become an entrepreneur by engaging themselves in innovative ideas.
- Write the competitive exams and go for higher education.



Glimpses of the event

Participation List:

S.No	Register Number	Student Name	Year
1.	821120114001	Aadhikarunesan M	III
2.	821120114003	Akash M	III
3.	821120114004	Anbarasan V	III
4.	821120114005	Arun E	III
5.	821120114006	Arunkumar M	III
6.	821120114007	Arunkumar P	III
7.	821120114008	Arunkumar S	III
8.	821120114009	Backiyaraj S	III
9.	821120114010	Bharani S	III
10.	821120114012	Dhivakar K	III
11.	821120114013	Durairaj V	III
12.	821120114014	Eraniyan K	III
13.	821120114015	Gnanasekaran S	III
14.	821120114016	Hariharan K	III
15.	821120114017	Hari prasath R	III
16.	821120114018	Hemanathan F	III
17.	821120114020	lavasriram V	III
18.	821120114021	Jayasuma K	III

19.	821120114022		III
20.	821120114022	Jaysrirajan A	III
21.	821120114023	Jegan K	III
22	821120114025	Keerthivasan K	III
22.	021120114026	Lalithkumar E	
23.	821120114027	Manibharathi V	
24.	821120114029	Manojkumar R	
25.	821120114315	Madheshwaran K	m
26.	821120114316	Madhu mithiran S	III
27.	821120114317	Mahendran M	III
28.	821120114318	Prakash K	111
29.	821120114319	Praveenkumar R	111
30.	821120114320	Rakesh A	III
31.	821120114321	Ramprasad K	III
32.	821120114322	Sakthi ganesh G S	III
33.	821120114323	Saniay N	III

Feedback from the Students

Parameter	Excellent	Satisfactory	Good	Yet to be improved
Content of the Session	25	04	04	
Resource person delivery towards the prescribed content within the given time	26	05	04	-
Audio Clarity	28	02	03	-
Overall feedback about the session	29	02	02	-

11.04.23 Event Organizers

(Mr.S.Desikan, AP/MECH & Mr.S.Nelson Raja, AP/MECH)

T. Profilmy HoD/Mech (11415)

J. 100/4/2023

Principal



Department of Mechanical Engineering Academic year 2022-23 (EVEN)

Circular

10.04.2023

This is to inform you that there will be an internal seminar going to be conducted by our Department on 12.4.23 at 12.30 p.m in the topic "Hybrid and Electrical Vehicle Design" by Dr.T.Pushparaj, HoD/Mechanical at Department Smart Classroom. Staff members are instructed to utilize the session and communicate your queries.

T. Purkney w 12123 HoD/Mech



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar Report

Date & time: 12.04.2023 & 12.30 p.mVenue: Department Smart ClassroomTopic: Seminar on "Hybrid and Electrical Vehicle Design"Resource person: Dr.T.Pushparaj, HoD/Mechanical



Snapshots of the session

Internal seminar on Hybrid and Electrical Vehicle Design has been delivered by Dr.T.Pushparaj, Professor, Department of Mechanical Engineering for the staff members of Mechanical Engineering on 12/04/2023 at 12.30 p.m.

Here few points are discussed:

In recent decades there is tremendous change in automobile industries. A systematic approach is adopted to present all the environmental conscious technologies in vogue in the automotive sector. The seminar focuses on the engine modification, materials used and the environmental hazard mitigation during the operation of the automobiles. An overview of the scope of hybrid vehicle usage in our country and the challenges while using this type of vehicles in day today life. In this seminar the personal safety devices in automobiles and its working principles also explained.

Chapters Discussed:

- Hybrid engine principle
- Merits and Demerits

- Electric vehicle (EV)
- Design principle
- Charging Technology
- Awareness of safety devices
- Scopes and challenges
- Books and articles

Outcomes:

Upon listing of this seminar the participants can able to

- Understand the hybrid engine technology and Electrical vehicle design.
- Understand the concepts of engine modification.
- Able to safeguard himself by productive devices.

References:

- Zaid Ullah Baba, Wani Khalid Shafi, Mir Irfan Ul Haq and Ankush Raina, "Towards sustainable automobiles - advancements and challenges", Progress in Industrial Ecology, 2019, vol .13, (4), pp. 315-331.
- 2. Swapnil Namekar, Sneharthi Chattaraj, "Study of Electrical Vehicle", Journal of Innovative Research in Technology, 2020, vol.6, (12), pp.1–12.
- Muhammad Yousaf Iqbal, Tie Wang, Guoxing Li, Dongdong Chen, Mohammad Al -Nehari "A Study of Advanced Efficient Hybrid Electric Vehicles, Electric Propulsion and Energy", Journal of Power and Energy Engineering, 2022, vol.10, pp.1000-1011.

DEPT IQACCO-ORDINATOR

T. Prohony HOD/MECH 1914123

19/4/2023



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar attendance

Date & time : 1

: 12.04.2023& 12.30 pm

Venue : Department Smart Classroom

Topic : Seminar on "Hybrid and Electrical Vehicle Design"

Resource person : Dr.T.Pushparaj, HoD/Mechanical

Sno	Staff name	Signature
1	Dr.T.Pushparaj	T. F. Many 'EXA
2	Dr.P.P.Shantharaman	1 M A
3	R.Shankar	R. Mul
4	H.Agilan	Children
5	N.Magesh	m
6	M.Melwin Jagatheesh Sridhar	PP
7	S. Sabanayagam	Anista.
8	M.Sakthivel	Robert
9	S.Desikan	sa.
10	S.Nelson Raja	Skel
11	R.Rajadurai	aprildon
12	D.Balaji	tright.
13	S.Balaganesh	sipars.
14	V.Aravind	n Drane
15	Mr.M.Vivekananthan	N. Varenny

Internal staff seminar feedback summary:

S.no	Description	Good	Fair	Poor
1	Content of the speech	10	3	-
2	Voice of the speaker	9	3	1
3	Overall feedback	8	5	-

19/9/23 DEPT IQAC CO-ORDINATOR

T. Prohumy



DEPARTMENT OF MECHANICAL ENGINEERING

GUEST LECTURE REPORT

Date: 20.04.2023

In our department, Guest lecture was conducted in the topic of Six Sigma Concept on 20.04.2023 between 1.00 p.m. and 2.00 p.m. at our Seminar Hall. The resource person explained about Six Sigma concept, various Principles followed in Six Sigma concept as well as the various industrial applications. Totally 45 students from second year Mechanical Engineering participated and benefited. More number of students interacted with resource person and clarified their doubts.

Resource Person:

1. Mr.M.Ramanan,

Assitant Professor,

Department of Mechanical Engineering,

Parisutham Institute of Science & Technology.

Objectives of the Event:

- To enlighten the students about the theoretical and practical aspects of Six Sigma.
- To bring conceptual knowledge, corporate experience and help students choose the right career
- 🐔 path, according to their skills and interest.
- To make the students aware about the latest trends in Six Sigma Concept.
- To provide a forum for students to interact with subject experts.





The resource person explained about Six Sigma Concepts

Guest Lecture Outcomes:

- Gained the knowledge about the Six sigma.
- Learned the various Six sigma tools.
- Understood the Six sigma concepts followed in various Industries.
- The students were able to distinguish the 5S concept and Six sigma Concepts.

STAFF INCHARGE

T. P. Mmp 20/21/23 HOD/MECH



PRINCIPAL



Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar Report

Date & time	: 21.04.2023 & 12.30 p.m
Venue	: Department Smart Classroom
Topic	: Seminar on "Applications and properties of ceramic matrix composite
Resource person	: Mr.M.Vivekananthan, AP/Mechanical



Snapshots of the session

Internal seminar on Applications and properties of ceramic matrix composite has been delivered by Mr.M.Vivekananthan, Assistant Professor, Department of Mechanical Engineering for the staff members of Mechanical Engineering on 21/04/2023 at 12.30 p.m in smart class room. Here few points are discussed:

Ceramic composites are very important in the field of medical, automobile and aerospace industries. Ceramic Matrix Composites can have a polycrystalline structure, as in conventional ceramics. They can also be amorphous or have inhomogeneous chemical composition, which develops upon pyrolysis of organic precursors. The high process temperatures required for making CMCs preclude the use of organic, metallic or glass fibers. Only fibers stable at temperatures above 1,000 °C (1,800 °F) can be used, such as fibers of alumina, mullite, SiC, zirconia or carbon. Amorphous SiC fibers have an elongation capability above 2% – much larger than in conventional ceramic materials (0.05 to 0.10%). The reason for this property of SiC fibers is that most of them contain additional elements like oxygen, titanium and/or aluminum yielding a tensile strength above 3 GPa. These enhanced elastic properties are required for various three-dimensional fiber arrangements in textile fabrication, where a small bending radius is essential.

Chapters Discussed:

- Composite Materials
- Types of Composite
- Fiber ceramic composite
- Applications
- Automobile and Aerospace

Outcomes:

Upon listing of this seminar the participants can able to

- Understand the various composite materials.
- Understand the concepts of ceramic composite and fiber ceramic composite.
- Able to understand the applications of ceramic composite.

References:

1. Chang, Yunwei "Review on ceramic-based composite phase change materials: Preparation, characterization and application." Composites Part B: Engineering (2023): 110584..

2. You, Xiao, "Review on 3D-printed graphene-reinforced composites for structural applications." Composites Part A: Applied Science and Manufacturing (2023): 107420.

3. Shvydyuk, Kateryna O., "Review of Ceramic Composites in Aeronautical and Aerospace: A Multifunctional Approach for TPS, TBC and DBD Applications." Ceramics 6.1 (2023): 195-230.

4. Yadav, Ramkumar, Anoj Meena, and Amar Patnaik. "Biomaterials for dental composite applications: A comprehensive review of physical, chemical, mechanical, thermal, tribological, and biological properties." Polymers for Advanced Technologies (2022): 1762-1781.

5. Hannachi, E., "Synthesis, characterization, and performance assessment of new composite ceramics towards radiation shielding applications." Journal of Alloys and Compounds 899 (2022): 163173.

6. Fu, Zeyu, "Research progress of ceramic matrix composites for high temperature stealth technology based on multi-scale collaborative design." Journal of Materials Research and Technology (2022).

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Department of Mechanical Engineering Academic year 2022-23 (EVEN) Internal staff seminar attendance

Date & time: 21.04.2023 & 12.30 p.mVenue: Department Smart ClassroomTopic: Seminar on "Applications and properties of ceramic matrix composite"Resource person: Mr.M.Vivekananthan /Mechanical

Sno	Staff name	Signature
1	Dr.T.Pushparaj	T. Prog
2	Dr.P.P.Shantharaman	M
3	R.Shankar	A
4	H.Agilan	the .
5	N.Magesh	m
6	M.Melwin Jagatheesh Sridhar	:20
7	S. Sabanayagam	2024
8	M.Sakthivel	antale.
9	S.Desikan	5.0.
10	S.Nelson Raja	SRID.
11	R.Rajadurai	-Saluten -
12	D.Balaji	Par.
13	V.Aravind	V. Orus
14	S.Balaganesh	S. Rost.

Internal staff seminar feedback summary:

S.no	Description	Good	Fair	Poor
1	Content of the speech	9	3	-
2	Voice of the speaker	9	2	1
3	Overall feedback	8	4	-

DEPT IQAC CO-ORDINATOR

T. Pmly HOD/ME 414/123



Thanjavur, Tamil Nadu, India

A detailed report on the International Conference on Recent Advances in Civil and Mechanical Engineering (RACME)



RACME was technically sponsored by Indian Society for Technical Education (ISTE), ICT Academy and Kirirom Institute of Technology, Cambodia. A target of 100 papers was set, out of which 61 quality papers were selected for Oral Sessions in 4 tracks. The delegation consisted of nearly 50 personalities from amazingly varied backgrounds and ifa including participants from countries like Ethiopia

from different walks of life including participants from countries like Ethiopia.

Inauguration

RACME commenced with formal registration. Inaugural ceremony was initiated with prayer song. **Dr J. Arputha Vijaya Selvi, Principal and Conference Chair,** welcomed the gathering and narrated the theme of the conference followed by lighting of ceremonial lamp by the dignitaries. **Dr. R. Rajendran,** Secretary of the College, honored the guests.



Dr. J. Arputha Vijaya Selvi, Principal delivering welcome address





Dignitaries lighting the Lamp

Dignitaries on the Dias



Dr. R. Rajendran, honoring Dr. T. Basak

Dr R. Rajendran, Secretary of the College, presided over the function and delivered the Presidential Address. In his presidential he described the usage of plastic waste, recent advances in architecture and mechanical engineering.



Dr. R. Rajendran delivering Presidential Address



A View of the participants

Mr. S. Sabanayagam, Prof. / Dept. of Mechanical Engineering introduced **Dr. T. Basak.** The Inaugural Address was delivered by **Dr. T. Basak**. He enlightened the audience with his mind blowing talks on the Emerging trends in Chemical Engineering. In his inaugural address, he pointed out the importance of undertaking research works and how citations helps the recent research.



Mr. S. Sabanayagam, Prof. / Dept. of Mechanical Engineering introducing the Chief Guest



Dr. T. Basak, Professor, IIT-M delivering Inaugural Address

Hard copy of the Conference Proceedings was released by **Dr.Tanmay Basak**, Chief Guest and received by Dr. **J. Arputha Vijaya Selvi Principal, Kings College of Engineering.** Soft copy of the Proceeding was released by **Dr.R. Rajendran**, Secretary and was received by **Dr. PP. Shantharaman**, Convener – RACME.



Release of Hardcopy of the proceedings



Release of Softcopy of the proceedings

The Conference also featured an invited talk by **Dr. T. Basak** on the title, "**Natural Convection and Distributed Solar Heating Applications**". **Prof. M. Arun**, Asst Professor/ Dept. of Civil Engineering, introduced the resource person. The Conference also featured an invited talk by **Dr.Shankar Karupanan** on the title, "**Environmental Sustainability of Water a Geotechnical Perspective**".



Invited Talk by Dr. T. Bask



Invited Talk by Dr.Shankar Karupanan

On the day, papers were presented in 4 tracks; track 1 was chaired by Dr. T. Pushparaj, Prof. & Head, Department of Mechanical Engineering, KCE, track 2 was chaired by Dr. R. Shankar, Asst. Prof. Department of Mechanical Engineering, KCE, track 3 was chaired by Dr.R.Saravanan, Prof. & Head, Department of Civil Engineering, KCE, track 4 was chaired by Mr. K. Arun, Asst. Prof. & Head, Department of Civil Engineering, KCE.





Participants presenting their papers



Participant sharing their feedback



Dr.S. Sivakumar, Vice Principal, KCE distributing certificates to the participants



Dr. P.P. Shantharaman, Convenor, presenting the Conference Summary



Dr. R. Saravanan, Head / Dept. of Civil Engineering delivering vote of thanks

In the valedictory function, **Dr. P.P. Shantharaman**, Convenor, presented the Conference Summary to the audience. **Dr.S. Sivakumar**, Vice Principal, KCE, distributed the Conference Certificates to the delegates. **Dr. R. Saravanan**, Head / Department of Civil Engineering, proposed the vote of thanks to one and all the participants, all the sponsors and the KCEians.

Publication Chair

J. Mar 02/5/2023

Conference Chair



Department of Mechanical Engineering Academic year 2022-23 (EVEN) <u>Circular</u>

25.04.2023

Career Guidance Programme "Goal Setting" event is going to be conducted on 28.04.2023 for III year Mechanical Engineering students. All the III Year students are asked to attend the programme without fail.

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Event Organizers Mr.S.Nelson Raja, AP/MECH & Mr.S.Desikan, AP/MECH

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HoD/Mech

HO.D JEPARTMENT OF MECHANICAL ENCINGERING KINGS COLLEGE OF ENGINEERING PIJNALKULAM



Department of Mechanical Engineering Academic year 2022-23 (EVEN) <u>Career Guidance Program Report</u>

Topic	: Goal Setting
Resource Person	: Mr. S. Nelson Raja,
	Assistant Professor,
	Department of Mechanical Engineering,
	Kings College of Engineering,
	Punalkulam, Pudukkottai.
Date & Session	: 28.04.2023 & 3.30 P.M. to 4.30 P.M.
Venue	: Mechanical Smart Class Room (205)

Objectives of the Event:

- To help the students to select the proper careers.
- To make them aware about various opportunities and recent trends in the field of engineering after graduation.
- To ensure the proper utilisation of time spent outside the classrooms.

The Career Guidance session on "Goal Setting" was organized by Department of Mechanical Engineering, Kings College of Engineering-Punalkulam for the students from III year Mechanical Engineering held on 28th April 2023 at 3 P.M. in Mechanical Smart Class Room. This program aimed to make students aware about various opportunities and trends in the field of mechanical engineering after graduation. There were 31 students actively participated in the event.

The resource person for the session was Mr. S. Nelson Raja AP/MECH, KCE. He gave a brief introduction about the various opportunities and scope in the field of Mechanical Engineering. He suggested varied ways that how to opt the career in one's life depending on the capabilities and potential. He talked about how to focus on the chosen career and what are the efforts to be put in to make that dream true. He explained by giving examples of various successful people. After the session the participants gave their feedback through feedback link.



Glimpses of the event

Feedback Obtained from Google Form:



1. The resource person explained the topic clearly and used relevant examples.

31 responses



Outcomes of the Event:

- Know the various opportunities in mechanical engineering.
- The students able to know the software courses related to mechanical industrial field.

1. Slag 2. Sp - 105.0523

Event Organizers Mr.S.Nelson Raja, AP/MECH & Mr.S.Desikan, AP/MECH

T. Pullipring

HoD/Mech

HO.D JEPARTMENT OF MECHANICAL ENCINGERNING KINGS COLLEGE OF ENGINEERING PINALKULAM

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Principal

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3.2.2 - Number of workshops/seminars conducted on Research Methodology,

Intellectual Property Rights (IPR) and entrepreneurship during the year

Sl. No.	Date	Details	Beneficiaries	Page Number
		S&H		
1	22-12-2022	Quiz competition on National Mathematics Day	50	1
2	25-05-2023	Mini Project Expo	51	17
3	26.05.2023	Motivational Programme	285	23
4	07-06-2023	Poster presentation on "rain water harvesting	40	26







19.12.2022

CIRCULAR

National Mathematics Day will be celebrated for the 135th birthday of Srinivasa Ramanujan on 22.12.2022. Department of Mathematics of our college is going to organize a **Quiz competition** exclusively for the first year students on **22.12.2022**. Interested students are informed to enroll their name to your corresponding class coordinator on or before **21.12.2022**.

Date:22.12.2022

Venue:Smart Classroom(I Year) Time:03.00pm - 04.00pm

Guidelines

- Team event.
- 2 Participants per team.
- There are three rounds, like Preliminary, First and Second round.

Preliminary Round

- Each team would be asked one question.
- Time limit 10 seconds.
- If a team cannot answer the question, then the question would be forwarded to the next team.
- Only 7 teams would be selected for the first round.

First Round

- Each team would be asked one question.
- Time limit 10 seconds.
- If a team cannot answer the question, then the question would be forwarded to the next team.
- Only 5 teams would be selected for the Second round.

Second Round

- Each team would be asked two questions.
- Time limit 10 seconds.
- In case of the between 2 or more teams, further 1 question would be asked for final selection.
- Only 3 teams would be selected for prize.

19/12/22 19/12/22 1. Dr.S.REVATHI 2. Dr.G.JEYAKRISHNAN EVENT COORDINATORS

I YEAR COOR

HoD/S&H

PRINCIPAL

Circulated to:

> To be read in all first year classes



DEPARTMENT OF MATHEMATICS ACADEMIC YEAR 2022-2023 (ODD SEMESTER) Quiz Competition Report

20.01.2023

In view of 135th Birthday of Srinivasa Ramanujan, National Mathematics Day was celebrated by Department of Mathematics on 22.12.2022. Marking this occasion, a Quiz competition was organized at Smart Classroom between 03.00pm. and 04.00pm. A total number of 21 teams, paired in two, enthusiastically participated in the competition held in three rounds. Earlier, the event, presided by Dr.V.Sureshkumar, HEAD, S&H, was welcomed by Mrs.T.Gnanajeya, First year Coordinator.

The winners of the Quiz are:

POSITION	CLASS	NAME OF THE STUDENT
FIRST	ICSE	E.Karthikeyan T.S.Mohanraj
SECOND	I CSE	S.Aswini S.Nesika
THIRD	I ECE-A	G.Athithyan P.Backiyaregil
	I-ECE-B	G.Srirenganayagi K.Wehaa Varsha

Objective:

- To create enthusiasm and interest among the students.
- To bring the inherent talent of the students.



Quiz competition inagurated for I year Students on Aptitude, Reasoning, Basic Mathematics



Students are enthusiastically participated in the Quiz



Team members are listening to the competition

20.1.23 5.6 dil

EVENT COORDINATORS 1.Dr.S.Revathi 2.Dr.G.Jeyakrishnan

COORINDATOR **%**. .

01.123 HoD / S&H

J. 100201,1023

PRINCIPAL

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DEPARTMENT OF MATHEMATICS

QUIZ COMPETITION

ATTENDANCE SHEET

DATE: 22.12.2022

VENUE:SMART CLASS ROOM

Γ	TEAM NO	STUDENT NAME	CLASS	SIGNATURE	
F	1.	S Ashini	J-CSE .	S. Aswine	T
		S. Nesika	I-CSE	S.Nusitel	1
ł	2.	G. Rasîka	I-CSE	GIBUL	
		J. Poonguzhall	I-CSE	J.p.Ni	
	3.	E. Karthekeyan	I-CSE	F '0	T_
		T.S. Mohantaj	I-CSE	T.S.M-J	
	4.	Pradheesha.R	I - CSE	Kmt- B. Anei	
	1 (Sec. 19)	Bhuvaneshworli . B		0.7.00	1
	5.	2. Joseph clinton	I-CSE I-CSE	S. hermi	
	6.	A. ARULSELVI P. Anitha	I - ECE	d. durilsewi P. Anitha	
0	7.	D. Thiruthike	D-ECE I-ECE	D. Kistaike M. Moyuprebhe.	
	8.	R Akalya si	ј. есе ј. есе	R. AKalg. S. Jost.	
	9.	G. Athithyan D. Backin Jejil	I-ECE-A	P. Barnel	T
	10.	M. Muralitronan. M. Psiablu	I-MECH	M-Poully	

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DEPARTMENT OF MATHEMATICS

QUIZ COMPETITION

ATTENDANCE SHEET

DATE: 22.12.2022

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VENUE:SMART CLASS ROOM

	TEAM NO.	STUDENT NAME	CLASS	SIGNATURE
	11.	c. Machendsown S Mukesh	mechanical	Mahendran. s.nuetch
0	12.	Posanthos priyan 11. Shanmu ga Rojan	Nilechanica l	p.santhas progan 12.86 Rejan
	13.	J. Balan Joffin Ylishore A. Gowdham	Mechanical	J. Balanstefrin Kishore A. Suuttang.
	14.	S. Rasa Gowani R. Rubashi	EE E	R. Rubaza
	15.	Gr. Pusu Pafly R. Sabai nathan	FCE-B	Gebauputti: R. dabainathan.
	16.	K Abînaya sri S. Ananthi	CIVIL	K. High'z So Ananthi
0	17.	R. Swath? Prabha. k Shakth? numbers	ECE-B	RS-The. W. Ballh prab ho
	18.	R. Swathe. S. Una Maheshmari	ECE B ECE B	R. Swathi S. Umanaherhuej
	19.	N. Gurn prasath S. Hutrie Murcuresan	eee Eee	N.G. UNU Prabath S. Huthu Hederdeson
	20.	pr. Manish Tumaz M. Or. Ponnageocolon	EFF EFF	p. Manish kuray M. Cr. Pennogoroun

21 G. Sin Rengameryagi K. wehaa varsha ECEB G. Sin Ronganynig) II ECEB K. Wantha ECEB 2 🗧 🕻 👘 👘 👘 👘 · · A Great wards



A NAAC Accredited Institution





(Recognized under 2(f) &12(B) of UGC) Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai. Punalkulam, Gandarvakottai (Tk), Near Thanjavur - 613 303

CERTIFICATE This is to certify that Mr./Ms. T.S. Mohan Angj of T.Year, Department of C.S.E. has Participated in the Q.Niz. Competition. held on 22.12.2022 at







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EGE OF ENGINEERING



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CERTIFICATE

This is to certify that Mr. Ms. ... P. Backiarejil. Place.





A NAAC Accredited Institution

COLLEGE OF ENGINEERING



PRINCIPA

(Recognized under 2(f) &12(B) of UGC) Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai. Punalkulam, Gandarvakottai (Tk), Near Thanjavur - 613 303

CERTIFICATE

V) Suevela











DEPARTMENT OF MATHEMATICS

QUIZ COMPETITION

SCORING SHEET

DATE: 22.12.2022

VENUE: SMART CLASS ROOM

	TEAM	STUDENT NAME	CLASS	S MARKS			POSITION	
	NU.			ROUND 1	ROUND 2	ROUND 3		
	1.	S. ASwini	TARE	-5	103	10	25	T
		S. Nesika	ILSE					
0	Ζ.	OT. Rasika	ICSE	6 -				
		J. poonguzhali						
	3.	E. Karthikayan.	I CSF	6 –	5+10	10	30	I
		T.S. Mohanzaj						
	4.	R.pr adheesha	CSE	10				
		B. Bhuvaneshwau'						
	5.	S. Joseph clinton	I CSE	-				
		S. Leamadurai	•					
	6.	A. Arulselvi	LECE				_	
0		p. Anitha	`A'					
>	7.	D.Kiruthika	E-ECE	10		-	_	
		M. Manjuprabha	A	3				
Ī	8.	R. Akalya 1	LECE				_	
		S. Icabila	`Α'.		•			
ł	9.	GI. Athithyan	TFE	10	10	_	20	-
		p. Backlasejil	'A'				_	
ł	10.	M. Musalithasan	-MECH	-				
		M. Peabhu		1				



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DEPARTMENT OF MATHEMATICS

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QUIZ COMPETITION

SCORING SHEET

DATE: 22.12.2022

VENUE: SMART CLASS ROOM

ТЕАМ	STUDENT NAME	CLASS		MARKS		POSITION
NO.			ROUND 1	ROUND 2	ROUND 3	
1 <mark>1</mark> .	C. Mahendran	I MECH				
	S. Mukesh					
12.	p. Santhospecyan	J_MECH	10			_
	K.Shanmugazajan					
13.	J. Balan Jetun Kishor	J-MECH	. — .			
	A. Gowtham					
14.	S. Rajabtowi	FFF				
	R. Rubassi	PLL				
15.	G. pasupathi	ELE-B		•		
	R.Sabarinathan	2020				
16.	K. Abinaya sei	CIVIL				_
	S. Ananthi					
17.	R.Surathi	ELE-B	5) -	5 -	-	10
	K. Shakthi prash	27.	4¥			
18.	R. swathi	FIE-R	5 -			
	S. Uma maheshivai					
19.	N. Utwuprasath	EEE	-			_
	S. Muthu Murugesar	1				
20.	S. Manish Krumar	EFE				
	M.br. ponmagarasa					
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Department of Science and Humanities Academic Year 2022-23/ Even Semester

25-05-2023

Mini Project Expo –Innovations in Science & Technology Organized by Department of Chemistry

Participant List

TEAM NO.	NAME OF THE STUDENTS	DEPT.	TITLE OF THE PROJECT
1	KARTHIKAYINI V ANITHA P LOKESHWARI S KEERTHIKA K	1 ECE A	Gas leakage alert system
2	KIRUTHIKA D HARINI G HARIKEERTHANA S DHIVYADHARSHINI T	1 ECE A	Cloud Computing
3	SURIYANARAYANAN R SUTHERSAN A	I ECE B	Smart Home Automation by IOT
4	SWATHI R VINOTHA M SUBHADHARSHINI A SRI RENGANAYAGI G	I ECE B	Earth quake detector Water level detector
5	UMAMAHESHWARI S SARANYA V	I ECE B	Wind mill - Electricity
6	SANIYA NIZHA R WEHAAVARSHA K	I ECE B	Air Cooler cum water chilling
7	ABINAYASRI K ANANTHI S GAYATHRI R	I CIVIL	Hydraulic Bridge
8	ARCHANA A SHRINIDHI M RUBIKA R	I CIVIL	Model for de fluoride in water
9	SELLAMUTHU R	I CIVIL	Fisherman sea - border protection
10	PRIYADHARSHINI L ABINAYA S ABINAYA M	I EEE	Solar Tracker
11	DHIVAKAR S PONNAGARASAN M G MANISHKUMAR S GURU PRASATH N	I EEE	Electrical vehicle Smart Bin Where is my bus

12	ABIRAMI M NANDHINI S SHANMUGAPRIYA L	I EEE	Mobile Jammer
13	RASIKA G NESIKA S DHASLIMA SHAFREEN M POONGUZHALI J	I CSE	Water tank overflow alarm Production of free power using Magnets
14	LEXMADURAI S SABARINATHAN N NITHISHKUMAR V	I CSE	Personal QR code detail entry
15	MOHANRAJ T S MARIMUTHU P HEMANTHBALAJI M KARTHIKEYAN E	1 CSE	Home security Text to Speech Search Bar
16	PRADHEESHA R BHUVANESHWARI B DHANYALAKSHIMI R	I CSE	CD HOLOGRAM Age calculator Alcohol detector

Converter 5/23 I Year Coordinator 29/5/23

HoD/S&H



Department of Science and Humanities

Academic Year 2022-23/ Even Semester

25-05-2023

Mini Project Expo –Innovations in Science & Technology

<u>Report</u>

Venue: Physics Lab

Department of Chemistry, Kings College of Engineering organized a Mini Project Expo for first year B.E students on 25th Thursday 2023 in the area of **"Innovations in Science and Technology**". Dr. J. Arputha Vijayaselvi, Principal, inaugurated the Mini Project Expo and delivered the importance of the Project Expo. About 16 Projects were displayed in this expo. Dr.S.Sivakumar, Vice Principal and Dr. P.P.Santharaman, Convener Research were acted as juries; based on the score given by the juries the winners are short listed and given below.

Winners

S.No	Name of the student	Class	Title of the mini project	RANK	
1	SURIYANARAYANAN R SUTHERSAN A	I ECE B	Smart home automation by IoT	I	
2	PRADHEESHA R BHUVANESHWARI B DHANYALAKSHIMI R ASHWINI S	I CSE	3D Hologram Age Calculator Book Screening Alcohol Detector	11	C

By this Mini Project Expo the students gained knowledge about innovations and advancements in science and technology. Finally the students expressed that, this type of Project expo was useful for improving their practical skills and also useful to do major projects in next level. The winners of this mini project expo were appreciated by certificates and memento.

The Mini Project Expo arrangement was made by the Convener Dr.S.Udayakumar, AP, Department of Chemistry under the guidance of Dr.V.Sureshkumar, HoD / S & H.

Convei

Principal





Department of Science and Humanities

Academic Year 2022-23/ Even Semester

25-05-2023

Mini Project Expo -Innovations in Science & Technology

Organized by Department of Chemistry <u>Score Sheet</u>

Team No.	Name of the Students	Dept.	Theme(10)	Novelty(15)	Presentation(25)	Total(50)
1	KARTHIKAYINI V ANITHA P LOKESHWARI S KEERTHIKA K	I ECE	8	11	21	40
2	HARINI G HARIKEERTHANA S HASIDHIKSHANA.S	A	7	11	21	39
3	SURIYANARAYANAN R SUTHERSAN A		9	13	23	45 FIRST
4	SWATHI R VINOTHA M SUBHADHARSHINI A SRI RENGANAYAGI G	ľ ECE B	9	12	22	43
5	UMAMAHESHWARI S SARANYA V		8	11	22	41
6	SANIYA NIZHA R WEHAAVARSHA K		9	11	22	42
7	ABINAYASRI K ANANTHI S GAYATHRI R	I	8	12	21	41
8	ARCHANA A SHRINIDHI M RUBIKA R	CIVIL	8	11	21	40

9	SELLAMUTHU R		0		24	40	
			8	11	21	40	
10	ABINAYA S		Tas 1				
10	ABINAYA M		8	10 .	21	39	
	DHIVAKARS				¥7		
11	PONNAGARASAN M G						
	MANISHKUMAR S	I EEE	9	12	22	43	
	GURU PRASATH N		4. ×				
-	ABIRAMI M		4	,			
12	NANDHINIS						
	SHANMUGAPRIYA S		9	12	22	43	
	RASIKA G	•					
	NESIKA S				el		
13	DHASLIMA SHAFREEN M		8	11	21	40	
	POONGUZHALI I						
	LEXMADURAI S	4					
	SABARINATHAN N				-		
14	HARISH SRIRAM B		.8	10	21	39	
5	JOSEPHCLINTON S		хi.	1	· 8		
	MOHANRAJ T S	I CSE					
	MARIMUTHU P						
15	HEMANTHBALAJI M	b	8 -	11	21	40	
	KARTHIKEYAN E				2		
	PRADHEESHA R					(
10	BHUVANESHWARI B				1	44	
16	DHANYALAKSHIMI R	л	9	12	23	SECOND	
	ASHWINI S				±.		

1. Dr. S. SIVAICUMAR VICE PRINCIPAL

Dr. P.P. SANTHARAMAN

CONVENER DRL -

2. HOD /Steh Y. Left I Year Coordinator 29/5/23 JURY

2/6/2023 J. 1000 Principal

22

A NAAG Accredited Institution

20.05.2023



Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Dr. J. Arputha Vijaya Selvi, B.E., M.E., Ph. D., PRINCIPAL

Ref: KCE/PRL/invite /22-23

To

Dr. Maní Prahaspathy Sr. Gr. A. P in Physics Anna University BIT Campus Tiruchirapalli.

Dear Sir,

Greetings from Kings College of Engineering.

We organize seminars / workshops each semester to expose our staff members to various industrial and technical skills. In this context, Department of Science and Humanities has scheduled a lecture on "I'm Great! I can! I will!" on 26th May, 2023.

In this regard, we request your consent to be the resource person for the programme.

Expecting a favourable reply in this regard.

Regards,

J. month 2015(2023.

PRINCIPAL Kings College of Engineering, PUNALKULAM - 613 303.





DEPARTMENT OF SCIENCE AND HUMANITIES Academic Year 2022-23 Even Semester

26.05.2023

"I'M GREAT! I CAN! I WILL!" - MOTIVATIONAL PROGRAMME

REPORT

Department of Science and Humanities has organized a Motivational programme, titled **"I'm Great! I can! I will!"** on **26.05.2023** exclusively for First year students, Dr.P.Mani Prahaspathy, Assistant Professor(Sr), Department of Physics, Anna University, Trichy act as a Resource person.

Welcome address was given by Mrs.S.Anuradha, AP/Physics. The Chief guest was honored with shawl and memento by Mrs.T.Gnanajeya I Year Coordinator. The Chief guest was introduced by Mr.S.Ambalatharasu, AP/Physics.

The Chief guest was engaged himself with the students through interaction and motivated the students how to be successful in their life. Finally the Vote of Thanks was given by Ms.T.Abimalaiarasi, AP/ Physics.

By this Motivational program the students were encouraged and motivated how to become a successful human beings and also how to be a successful person in their profession.

Near about 270 students and 15 faculties participated in this program.

"I'M GREAT! I CAN! I WILL!" - MOTIVATIONAL PROGRAMME



De CONVENOR

P, I YEAR CO ORDINATION

HOD/S&H

J. Monut 2023 PRINCIPAL

1.-06-2023

From Mrs.S Anuradha, YRC Coordinator Kings College of Engineering, Punalkulam, Pudukkottai (Dt).

To THE PRINCIPAL Kings College of Engineering, Punalkulam, Pudukkottai (Dt).

Madam,

0

Sub: Awareness Programme on Rain Water Harvesting - Reg.

It is planned to organize An Awareness Programme on" **Poster Presntation In Rain Water Harvesting**" for all the I-year students on 07.06.2023 at physics lab. I request your kind permission and support to conduct the programme successfully.

Thanking you

Acced

Yours Sincerely YRC/RRC Coordinator

J. REINCIPAL





01.06.2023

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It is informed that YRC of Our College has planned to organize **"POSTER PRESNTATION IN RAIN WATER HARVESTING**" on 07.06.2023 at 2.00 pm to 4.00 pm in Physics Lab for all the 1 Year students. All the students are informed to participate and get benefitted.

J. 10016/2023 PRINCIPAL

Interested Students give your name to YRC cooldinated Mrs. S. Anuradha /AP)Physics on or before 6.6.23 4.00 p.m.

5/6/23

Scanned with CamScanner



YOUTH RED CROSS Awareness Programme on Rain Water Harvesting – Report

On 07.06.2023, Youth Red Cross (YRC) of Kings College of Engineering has conducted a poster presentation in the title "RAIN WATER HARVESTING on physics lab at 2.00 pm., under

" Azadi Ka Amrit Mahotsav " which was an initiative of the Government of India to celebrate and commemorate 75 years of independence.

Water scarcity today has become a big issue which if not dealt with in time, will turn out to be a hazard. To make people aware to conserve water, our YRC organized a poster presentation in the title "RAIN WATER HARVESTING at physics lab. All I Year students attended the program which was explained by YRC Volunteers, they were asked to conserve every drop of water and not to waste it unnecessarily. Besides, importance of rain water harvesting and the methods were also explained through poster presentation. Without water there is no life. In case the water is not used wisely by anyone, then heavy fine should be imposed. The students were motivated by the programme, and they took oath to use water properly and promised to make awareness among the people.

Acres Coordinator / YRC (S.Anuradha /Physics)

071612053 Principa





YOUTH RED CROSS Awareness Programme on Rain Water Harvesting – Report





3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year 2023-23

SI. No.	Date	Details	Beneficiaries	Page No.				
	R & D Section							
1	15.09.2022	Engineers Day celebration – Technical Quiz, Artathon & Speech competition	174	02				
2	26.09.2022	Webinar on Robotics – in Research Perspective	158	10				
3	18.10.2022	Online Workshop on Intellectual Property Rights (IPR) & Patents and Design Filing	254	16				
4	19.01.2023	Workshop on Outcome Based Assessment and Evaluation	70	24				
5	04.05.2023	Kings Project Expo'2023	240	30				

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PRINCIPAL Kings College of Engineering. PUNALKULAM - 613 303.



A REPORT ON ENGINEERS' DAY-2022

Every year, the country celebrates September 15 as National Engineer's Day to appreciate the contributions of Shri. Mokshagundam Visvesvaraya. The Bharat Ratna awardee, Visvesvaraya was born on September 15,1861. To remember the birth anniversary of him, one of the great legendaries and engineer himself, Sir Mokshagundam Visvesvaraya, We Kings College of Engineering also join hands together in the merriment.

The objectives of the celebration of Engineer's Day were

a) To take a guarantee to support and cheer the youth to select for engineering education.

b) To produce quality Engineers for the bright future of our country.

	A NAAC Accredited Institu College of Engineer Recognized under 2() & 1200 Approved by AICTE, New Affiliated to Anna University,	RING or UGC beha Deemaal	
	Eng	jineers Da In Mer BHARA [®] Mokshagund	ny Celebration mory of T RATNA am Visvesvaraya
	Jointl	y organize	d by
Dep	artment o	of CSE & R	& D Section
Events	QUIZ	ARTATHON	SPEECH COMPETITON
Dates	29.08.2022	01.09.2022	02.09.2022
All Stu	dents are inv	ited and exhib	it your talents
	Regis	ter Quickly!!!	
Coordinator	C	onveners	Patron
Ms. S. Abikayil Aarthi	Dr. S.M.	Uma, HOD/CSE	Dr. J. Arputha Vijaya Selvi
AP/CSE	Dr PP Shantha	or Principal	

INVITATION

The engineering student community as a whole College devoted entire day and conducted the following activities as competition.

- 1. Speech Competition
- 2. Quiz
- 3. Artathon

We have organized the following events after getting necessary approval.

S.No	Event Name	Date	Faculty Name (Judges)	Location
1.	Quiz	29.08.2022	Er. Senthilnathan AP/ CSE	CSE LAB - 1
2.	Artathon	01.09.2022	Er. Arun AP/ Civil	Drawing Hall
3.	Speech Competition	02.09.2022	Er.Thiyagarajan / System Admin	Seminar Hall

Judges for the Events on Engineers' Day-2021

Event : QUIZ

Students Participation:



Students attending through Kahoot app



No of user at a time Participants list shown in the projector view



After attending question the rating speed of all users shown on projector view for each single question

Students winning on level:

Number of participants for these events is 137 students, in these batch wise selection process has been undertaken.

<u>Ist Batch</u>

1. Akilan - EEE/ III 2. Keerthika - ECE/ III 3. Praveen Kumar – EEE/ III IInd Batch 1. Krishnamoorthy - ECE/ III 2.Blesson - ECE/ III 3. Sajeevan- ECE/ III IIIrd Batch 1. Tamilarasan .T – Civil / II 2.Mukesh.T - ECE/ III 3. Venkatesh.D- ECE/ III IVth Batch 1. Fasila – CSE/ IV 2. Vindhiya - CSE/ III 3.Lavanya - CSE/ III Vth Batch 1. Ruthran - EEE/ II 2. Semili – EEE / III 3.Priya – Civil / III VIth Batch 1. Shashance - CSE/ II 2. Dharani - CSE/ IV 3. Priyadharshini – Civil / III

Final Winning



Final Winners

- 1. Krishnamoorthy ECE/ II
- 2. Fasila CSE/ IV
- 3. Praveen Kumar EEE / III

EVENT : ARTATHON

The event was held on 01.09.2022, there were 28 students from various departments eagerly attended the competition. The theme of the event is "Engineering Concepts through Art ". It takes place in Drawing Hall. Er. Arun AP, from Civil department being the Jury for this event.



5

Place of the Event

Participation of the Students



Usage of Tools in competition

Final Winning

Three students from various departments were chosen as winners.

First Prize - \rightarrow Mohamed Arsath. A / Mech III

Second Prize - \rightarrow Jaishree . A / ECE III

Third Prize - \rightarrow Karkuzhali. N / CSE IV



Ist Prize





IInd Prize

III rd Prize

EVENT : SPEECH COMPETITION

The event was held on 02.09.2022, there were nine students from various department eagerly attended the competition. The theme of the event is "Real Time Successful Engineer". Mr. Thiyagarajan System Admin from Computer Engineering department being the Jury for this event.





Participation of students - I

Participation of the Students - II



Participation of students - III

Final Winning

Three student from various departments were chosen as winners.

First Prize - \rightarrow Avudaiyappan. A.B / CSE IV Second Prize - \rightarrow Aiyappan. S / CSE IV Third Prize - \rightarrow Sultan Abdul / MECH II

DAY EVENT & PRIZE DISTRIBUTION

The Welcome address was addressed by IV Year student M. Gokul in that an engineering song was also composed by our CSE department students and Speech about engineers also took place by students and motivational talk by Dr.S.Sivakumar Vice Principal, Dr.S.M.Uma /CSE - HOD along with that R & D Cell coordinator Dr. P.P. Santharaman, gave a talk in the event and prize distributed. At last vote of thanks by Student M.Gokul, Student President/ CSE has been delivered.



Event Place



Engineering Song Composed by III year Students



Speech by Students of CSE



Inspiration talk by Vice Principal



Prize Distribution Clips-1



Prize Distribution Clips - 2



Team of EVENT

The Program has been ended successfully, the students shown their participation in a tremendous manner. This surprising outcome showed that not only students being entertained, they were also being socially educated. We planned to provide a greater number of such sessions to look forward. Thanks to all our students, and respected faculty members of all departments for making this event extravagant one.

The report prepared by Event Coordinator, Er. S. Abikayil Aarthi, AP/ CSE Kings College of Engineering, Thanjavur.







R&D Section

Report on

Webinar on

Robotics – in Research Perspective

on

26th September, 2022

Report on

Webinar on Robotics – in Research Perspective 26th September, 2022

Research & Development Section and IEEE Student Branch jointly organized a webinar on **Robotics – in Research Perspective** on 26.09.2022. **Mr. Aditya Kameswara Rao Nandula,** Senior Project Officer, Chair - IEEE YPAG Kharagpur Section, IIT Kharagpur delivered lecture. In his lecture, he addressed several researches in the areas of robotics which shows a great attention to physical interface between robotic system and its environment. Also, he presented some of the real-time implementation of humanoid robots in the sector of medicine and waste management. 158 students of our institute participated and got benefitted. The event was coordinated by Mr. T. Pasupathi, AP/ ECE, KCE and Mr. J. Niranjan Samuel, JRF/ECE-R&D.



Programme Flyer



Screen Shots





Geo tagged photos

Google

26/09/22 03:26 PM GMT +05:30

30°C

Short Profile of Speaker

He received B.Tech in Electronics and Communication Engineering and M.Tech in ETE specialization in VLSI Design and Embedded System. He had around 4 years of Industrial experience in Medical electronic devices manufacturing industry and 7+ years of research experience in education technology At present he is working as Senior Project Officer in Virtual labs research project in the Mechanical Engineering Department at IIT Kharagpur and pursuing MS through Research (Robotics) in Advanced Technology Development Centre at IIT Kharagpur.

He is Chair (2022), IEEE Young Professionals Affinity Group Kharagpur Section, IEEE Brand Ambassador, IEEE Day 2022 Ambassador and IEEEXtreme 16.0 Ambassador.

• His Research interests are Robotics, Humanoid bipedal robotics, and Embedded Systems.

Feedback analysis

	Excellent	Very Good	Good
Content of the Program	75.0%	22.5%	2.5%
Rate the speaker	78.80%	14.69%	6.50%
Feedback about the program	77.90%	16.30%	5.80%
Overall Experience	77.50%	18.25%	4.20%











Niranjan Samuel J <niranjansamuel@kingsengg.edu.in>

Request for consent - reg

Niranjan Samuel J <niranjansamuel@kingsengg.edu.in> To: akraonandula@ieee.org

Fri, Sep 9, 2022 at 1:15 PM

Sir.

Greetings from Kings College of Engineering - IEEE STB 16621

Kings College of Engineering (KCE) is an institution which was formed with the single aim of providing quality education to the poor and underprivileged students. KCE is approved by All India Council for Technical Education, New Delhi (AICTE) and is affiliated to Anna University, Chennai. The institution was established in the year 2001 on a sprawling campus of around 60 acres on the Thanjavur-Pudukkottai Highway and run by Raj Educational Trust (RET). The institution offers six U.G and four P.G programmes and is certified with ISO 9001:2008.

R&D Section in association with IEEE Student Branch is organizing a webinar on Robotics - A Research Perspective (tentatively topic) during September, 2022. Topic can be changed accordingly. In connection with this, we would like to invite you to deliver a lecture of one hour duration in the webinar

Expecting a favourable reply in this regard.

Kindly send us your profile.

Thank you,

Regards,

J. Niranjan Samuel JRF/ECE-R&D Coordinator - Social Media & Press Incharge - IEEE STB 16621 Kings College of Engineering Punalkulam, Near Thanjavur

Acceptance letter



Niranjan Samuel J <niranjansamuel@kingsengg.edu.in>

Fri, Sep 9, 2022 at 8.59 PM

Request for consent - reg

ADITYA KAMESWARA RAO NANDULA <a kraonandula@ieee.org> To: Niranjan Samuel J <niranjansamuel@kingsengg.edu.in

Respected Sir,

Thank you for your invitation to deliver a lecture. Find the talk details as follows and picture attached to this mail. Have a look at it and let me know if there are queries in it.

Title: Robotics - In research perspective Date : 18-09-2022 Time : 11:00 am to 12:00 pm Duration : 1 hour (50 mins lecture and 10 mins for QA)

Picture link: https://drive.google.com/file/d/1WZmDimbwCiiY7foDP7YnBrZiSuaEZa1u/view?usp=sharing

Short bio:

He received B.Tech in Electronics and Communication Engineering and M.Tech in ETE specialization in VLSI Design and Embedded System. He had around 4 years of Industrial experience in Medical electronic devices manufacturing industry and 7+ years of research experience in education technology At present he is working as Senior Project Officer in Virtual labs research project in the Mechanical Engineering Department at IIT Kharagpur and pursuing MS through Research (Robotics) in Advanced Technology Development Centre at IIT Kharagpur.

He is Chair (2022), IEEE Young Professionals Affinity Group Kharagpur Section, IEEE Brand Ambassador, IEEE Day 2022 Ambassador, and IEEEXtreme 16.0 Ambassador His Research interests are Robotics, Humanoid bipedal robotics, and Embedded Systems.

With Thanks and Regards, Aditya [Quoted text hidden]

Coordinator(s)

1 RSAL

5. provetence

DRC Convener

Principal







R&D Section

Report on

Online workshop

Intellectual Property Rights (IPR) & Patents and Design filing

on

18th Oct 2022

Time: 12.30 p.m. to 1.30 p.m.

Report on

Online workshop Intellectual Property Rights (IPR) & Patents and Design filing on 18th October, 2022

R&D Section in association with Rajiv Gandhi National Institute of Intellectual Property Management (RGNIIPM), Government of India, Nagpur (Under National Intellectual Property Awareness Mission) and IEEE Student Branch 16621 jointly organized an online workshop on **Intellectual Property Rights (IPR) & Patents and Design Filing** on **18.10.2022** between 12.30 p.m. to 1.30 p.m.

Himanshu Chandrakar, Examiner of Patents & Designs, RGNIIPM, Nagpur was the resource person. In his lecture, he briefed on Intellectual Property, Importance and Significance of IPR, Utilization and Commercialization. Under IP, he briefed on Patents, Designs, Trademarks, Geographical Indications and Copyrights. Before filing a patent, secrecy of the design has to be maintained. While concluding his session, application procedure for filing a patent was briefed. Totally 254 participants from other institutions and from our institute participated in the programme.



Programme Flyer







Screen Shots






Geo tagged photos



Sample Certificate



Short Profile of Speaker

HIMANSHU CHANDRAKAR is working for more than 6 years in Indian Patent Office, Ministry of Commerce & Industry, Govt. of India and presently working as Examiner of Patents & Designs at RGNIIPM Nagpur

- He is examining and dealing with the national and International Patent applications filed at • different Patent offices across India,
- He has done -•
- Bachelor of Engineering in Mechanical Engineering.
- He has delivered many lectures on IPR in various parts of the country .

Feedback analysis

	Excellent	Very Good	Good	Fair
Content of the Program	78.50%	14.30%	2.50%	4.70%
Rate the speaker	75.40%	13.80%	6.20%	4.60%
Feedback about the program	76.30%	14.20%	5.80%	3.70%
Overall Experience	77.80%	10.30%	4.20%	7.70%







77.80%

www.kingsindia.net



Dr. J. Arputha Vijaya Selvi, M.E., Ph.D., PRINCIPAL Ref: KCE / PRL /invite/023/22-23

03.09.2022

To Head of Office

RGNIIPM Nagpur O/o CGPDTM, Ministry of Commerce & Industry - Govt. of India, DPIIT, Civil Lines, Nagpur -440022, Maharashtra

Kind attention: MrPankaj P. Borkar, Dy. Controller of Patents & Designs

Subject: Online Session on IPRs &Patent/ Designs filing jointly with RGNIIPM

Sir,

On behalf of the Kings College of Engineering, we would like to conduct joint program with RGNIIPM Nagpur, we would like to invite any speaker from RGNIIPM to deliver an online session on IPRs &Patent / Designs filing for students and Faculty on either of the following time slots below:

Date: 14.10.2022 / 18.10.2022 / 20.10.2022

Time: from 11:00 a.m. to 12:00 noon (1 hour) followed by Q& A

Venue: Online program

Event Coordinators: I. Dr. PP Shantharaman

Mobile: 99448 76644 Email: ppshantharaman@gmail.com 2. Dr. P. Narasimman

Mobile: 98944 79763 Email: simman837@gmail.com

We will assure that we will try to bring maximum participates for participating said programme and get benefited about IPR knowledge. We look forward to your kind acknowledgement and confirmation for the same.

Date: 02.09.2022. Place:Punalkulam

J. Mar 03/9/2022

Prof. Dr. J. Arputha Vijaya Selvi Principal PRINCIPAL Kings College of Engineering PUNALKULAM - 613 303.



Punalkulam, Gandarvakottai Taluk, Pudukkottai District, Tamil Nadu - 613 303. Ph : 04362 - 282474, Email : contact@kingsindia.net, Thanjavur Information Centre : - 04362-279779





A joint workshop on IPR & Patents, Designs filing - with Kings College of Engg. Punalkulam

Himanshu Chandrakar <himanshu.ipo@gov.in>

Tue, Sep 6, 2022 at 1:37 PM

To: principal@kingseng_edu.in Cc: Pankaj Prabhakar Borkar <pborkar.ipo@nic.in>, Nirmalya Sinha <nirmalyas.ipo@nic.in>

Sir/Madam.

Welcome to RGNIIPM Nagpur, Ministry of Commerce & Industry Government of India, IPR Training Institute. We can conduct the IPR program in association with RGNIIPM with your organisation under National Intellectual Property Awareness Mission (NIPAM). You are requested to send an invitation letter on letterhead to Head, RGNIIPM, Nagpur & scan copy can be sent over the above E-mail. (Please don't send letter again if it was already sent over email on any other coordinator name. No personal invitation in the name of speaker will be required).

You are requested to fill the form to get various details and after filling form kindly send email to speaker and give copy to sarang.patil@nic.in

https://forms.gle/LDo1MBrmJEyNTF3T9

Topic of programme - Intellectual Property Rights (IPR) & Patent, Designs filing Organizer - RGNIIPM, Govt. of India & your organization can jointly organize (Joint free online program) Duration & Mode of program: - said online program will be around one hour duration

Date & Time of online program:- 18th Oct 2022, Time: 12.20 PM to 02.00 PM or will be as per mutual discussions

Who can attend : Any students of undergraduate, PG, etc., faculty etc. can attend

Speaker & Coordinator from RGNIIPM: Himanshu Chandrakar, Examiner of Patents and Design / you may discuss with the speaker on the office phone. (Speaker name may vary depending on the urgent/unforeseen situations/medical reasons, if any) For further coordination you can contact to above speaker only.

Mobile of Speaker & Coordinator-(contact during 9.30 AM to 6 PM during - Monday- Friday) Himanshu Chandrakar, Examiner of Patents and Design

Mobile- 9165637706, Email- himanshu.ipo@gov.in

(In case above numbers are busy /not working then for any urgent matters you can call others on 09224425777 / 09892605892 or 0712 - 2540920)

Summary of requirements from your end:-

Try to arrange more than 200 participants to join online link,

This Institute can arrange an online CISCO Webex link in which you can nominate 100 to 1000 participants OR as per your convenience you can also arrange the online link . However, if you want a link from our end kindly communicate immediately over above speaker's Email.

- You are requested to provide Minute to minute program, if available
- Prepare final virtual Banner/ flyer & give copy to speaker over email/ WhatsApp (as below in page 3)
- Publicity in newspaper / media after program is over share copy to speakers over email /WhatsApp
- You are requested to share the signed copy of feedback letter from authorised person from your organization on cover letter to the speaker email.
- Ask participants to fill the feedback form to generate certificate with proper email and proper name.
- You are requested to fill the form to get various details and after filling form kindly send email to speaker and give copy to sarang.patil@nic.in

https://forms.gle/LDo1MBrmJEyNTF3T9

****Please see attachment for more requirements of the program.

Thanks and Regards Himanshu Chandrakar Examiner of Patents and Design RGNIIPM, Nagpur Ministry of Commerce and Industry 9165637706, himanshu.ipo@gov.i

1.1. JAL 2010/22

R. Ormator Coordinator(s)

J. martillo

Principal



R&D Section & IQAC

Report on

Workshop on

Outcome Based Assessment and Evaluation

on

19th January 2023

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

Report on

Workshop on Outcome Based Assessment and Evaluation

R&D Section and IQAC jointly organized a workshop on **Outcome Based Assessment and Evaluation** on **19.01.2023** at Pallava Hall.

Mr. PP. Shantharaman, Coordinator (Research), welcomed the dignitaries and participants. **Dr. J. Arputha Vijaya Selvi**, Principal presided over the programme. **Dr. S. Sivakumar**, Vice Principal offered felicitations. **Dr. K. Kannan**, IQAC Coordinator, Anjalai Ammal Engineering College, Kovilvenni was the resource person. In his lecture, he briefed the insights of Blooms Taxonomy, promoting learning experience, assessing methods, evaluation techniques and PO- CO mapping.

He demonstrated the preparation of a question paper as per outcome based evaluation. He also explained the effective use of performance indicators with each PO. Totally 70 faculty members from our institute participated in the programme.



Programme Flyer

Photographs



Short Profile of Speaker
Dr. K. Kannan Professor & Coordinator, IQAC Department of Mechanical Engineering
Email id: k.kannan@aamec.edu.in
Teaching experience 34 Years
BE Degree in Mechanical Engineering , A.C.College of Engg & Tech, Karaikudi 1987
ME Degree in Mechanical Engineering, Regional Engg College, Trichy, 1992
PhD in Internal Combustion Engine, Anna University, 2010
Publications in Journal 5
Conference Papers Presented 4
Books Published: 6
Youtube Video Lectures: 500 lectures

Feedback analysis

Whether	the		Yes	May be
presentations	are	6	8 %	12 %
useful to achieve	the			
objective?				
The rating of the reso	urce	Excellent		Good
person		6	5 %	15%
What did you like in	the	Way of pre	sentation and conte	ent
workshop?		Bloom Tax	onomy content and	d Rubrix
		• CO,PO and	d blooms taxonomy	explanation
		• Content an	d coverage approa	ach
		Excellent explanation		
		Explanation about BT level		
		• Explanatio	n of Selection of PI	S
		How to teach, formative asking questions to the students in		
		every class.		
		• Learn lot.		
		 Indicator 		
		Informative		
		knowledgeable session		
		Overall presentation		
		Po mapping		
		• The zone l	evel where I am cu	rrently standing
		 Understand the importance of first 3 BT Levels 		
		Very intere	sting and informativ	ve program





Request Letter

Thanks Letter



Acceptance Letter



Workshop on Outcome based Assessment and Evaluation

Organized by Research & Development Section and IQAC

Date: 19.01.2023

Venue: Pallava Hall

AGENDA

	10.05 a.m.	Invocation	
	10.07 a.m.	Welcome address	Dr.P P. Shantharaman, ASP/MECH, KCE
	10.10 a.m.	Introducing the Resource persons	Mr. T. Pasupathi, AP/ECE, KCE
	10.20 a.m.	Honouring the Guest	Dignitaries
	10.25 a.m.	Presidential Address	Dr. J. Arputha Vijaya Selvi, Principal, KCE
	10.30 a.m.	Felicitation	Dr. S. Sivakumar, Vice Principal, KCE
	10.35 a.m.	Session -1	Dr. K. Kannan
			IQAC Coordinator,
			AAMEC, Kovilvenni
	11.15 a.m 11.30	a.m.	Break
	11.31 a.m 01.00) p.m.	Session – I Continues
01.01 p.m 01.40 p.m.			Lunch Break
	01.41 p.m 02.40	p.m.	Session – II
	02.41 p.m 02.50	p.m.	Break
	02.51 p.m - 03.50	p.m.	Hands-on-session (CSE Lab-I)
	04.00 p.m 04.05	p.m	Feedback session
	04.06 p.m 04.10	p.m	Vote of Thanks – Ms. K. Abirami, IQAC
			Coordinator
	04.11 p.m.		National Anthem

14/2/23 1.1.5/

J. Maril 1 2023

Principal



RESEARCH & DEVELOPMENT SECTION ACADEMIC YEAR 2022-2023 (EVEN) <u>KINGS PROJECT EXPO'23</u>

About Project Expo'23

Project expo'23 was organized in association with IEEE-STB16621, Chennai & ISTE on 04.05.2023. This project expo aims to encourage the students' creativity and innovations on Engineering & Technology. Dr. P.P.Shantharaman, DRC Convenor, welcomed the gathering.

Dr.J.Arputha Vijaya Selvi, Principal, inaugurated the expo and delivered the inaugural address. In her speech, she emphasized the significance of innovations in projects.

Mr.T.Pasupathi, AP/ECE, introduced the chief guest Mr.Rajkumar Kalaimani, Senior Engineer, Altimetrik, Chennai. Mr.Rajkumar Kalaimani delivered a keynote address on current scenario in IT sector. Dr. S. Sivakumar, Vice Principal, delivered the felicitation address. He insisted the students to enhance their technical knowledge both in software and hardware. The inaugural session ended at 10:50 am. After the inaugural session project expo were conducted individually by respective departments from 11:00 am onwards.

The projects of internal and external students were evaluated by senior faculty members of every department nominated as jury's. Totally 62 batches participated in the project expo. Jury's evaluated the projects and gave feedback & valuable comments to the students. Based on the innovation, presentation, implementation and demomarks was awarded by the jury's. Two projects were selected for rewards from each department. One project was selected for the **Best Project Award** from all disciplinary.

The valedictory ceremony of the project expo was started at 01:30 pm at Pallava Hall. Dr.R.Rajendran, Secretary, distributed the prizes and certificates to the participants. The cash prize was given to the best project award winners. Project Expo came to an end with vote of thanks by Dr.P.Narasimman, AP/EEE.

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Outcomes of the Project Expo'23

Experts evaluated the student's projects and gave their valuable remarks and feedback on the topic of the project and interacted with students about how to improve the quality of the work and project at large scale.

Students were able to

- Efficiently present their ideas.
- > Design the project with all technical aspects.

Participant Details:

S.No.	Department	Internal Batches	External Batches	Total
1.	CIVIL	07	-	07
2.	CSE	20	01	21
3.	ECE	10	01	11
4.	EEE	08	01	09
5.	MECH	12	02	14
	Total	57	05	62

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Details of Prize winners:

S.No	Department	Name of the	Title of the project
	-	Participants/College	
1.	Best Project Award	A.Maria Merlina, A.Maria Vayolina, V.Aravinth, St.Joseph's College of Engg. and Technology. Thanjayur	Design and Implementation of E- Boat using Renewable Energy and Battery Management
2.	Civil Engineering	First Prize S.Anbumani, M.Arunkumar M.Jayaseelan Kings College of Engineering Second Prize R.Kuralarsan, F.Danielnave R.Karthikeyan Kings College of Engineering	Experimental Investigation on Partial Replacement of Fine Aggregate in Concrete Using Ecofriendly Plastic and Concrete Development of Low-Cost Bio- Minaralized Bacterial Baggage Ash Bricks
3.	Computer Science & Engineering	First PrizeK.Varun, A.B.ArudaiyappanK.GovindharajanA.Mohamed YazirKings College of EngineeringSecond PrizeJ.Fasila Afreen, S.SuruthiR.Aarthi	Sign Languaging Interpreter Multiple Discase Predication System using Machine Learning
4.	Electronics Communication Engineering	Kings College of Engineering First Prize S.Gayathri, S.Ramana Bharathi K.Renuka, SM.Swethaa Kings College of Engineering	AI based Border Security System using IoT
		<u>Second Prize</u> K.Gayathri, K.Ishwarya K.Saraswathi Kings College of Engineering	IoT based Intelligent Surveillance System using Raspberry Pi.
5.	Electrical & Electronics Engineering	Second Prize A.Sarathkumar, B.Yugeshwaran Kings College of Engineering	Smart Energy Meter and Power Theft Control using Arduino & GSM Technology
6.	Mechanical Engineering	First PrizeR.Sharon Chisha, H.SarveshwaranT.Robin MathewKings College of EngineeringSecond PrizeS.Praveen KumarR.Veeramani, G.AravindhanK.R.AshokkumarKings College of Engineering	Production & Energy Management Oxidation behavior of SS316 under molten salt environment at elevated temperature

Feedback Analysis:

a) Planning and organization of the project expo



c) The purpose of the project expo was met





d) Over all event



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Sample Feedback Form

Kings	Col	lege	of	Enc	ine	ering
-		9				9

Feedback Form - Project Expo 23

* Indicates required question

Email *

mariamerlina45@gmail.com

Title of the Project *

Design and implementation of e-boat using renewable energy & battery management system

Mobile Number *

7530038678

Name of the Participants (separate comma) *

A.Maria Vayolina, V.Aravinth

Department *

	CIVIL
	CSE
	ECE
\checkmark	EEE
	MECH
	OTHERS

Name of the Institution *

St.joseph college of engineering and technology

Kindly respond to the following questions by using the rating scale below. *

	Excellent	Good	Fair
Planning and organization of the project expo	۲	0	0
The facilities were appropriate	۲	0	0
The purpose of the project expo was met	۲	0	0
Over all event	۲	0	0
Any other suggestions			
Good atmosphere			440

Glimpses of the Project Expo'23



Inaugural Ceremonyof Project Expo'23



Welcome Address by Dr. P.P.Shantharaman, DRC Convenor, KCE



Lighting of Ceremonial Lamp



Honouring the Chief Guest



Inaugural Address by Dr.J.Arputha Vijaya Selvi, Principal,KCE



Chief guest introduction by Mr. T. Pasupathi, AP/ECE, KCE

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Chief Guest Address



Felicitation by Dr. S. Sivakumar, Vice Principal, KCE

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Participants demonstrated their projects in front of the jury's



Valedictory Session of Project Expo'23



Certificate Distribution by Dr.R.Rajendran, Secretary, KCE



Vote of Thanks by Dr.P.Narasimman, AP/EEE, KCE

1. P. Vormanters 2. T. Rasmartialdo

Project Expo Coordinators

1.0. Al 19/5/25

DRC Convener

J. 19/5/201

Principal



INSTITUTIONS INNOVATION COUNCIL (IIC)

ACADEMIC YEAR 2022-2023

S.No	Date	Details	No.of. Beneficiaries
1.	3.8.2022	Workshop on "Intellectual Property Rights (IPRs) and IP management for startup"	85
2.	24.8.2022	Seminar on "Accelerators/Incubation opportunities for students and faculties-Early stage Entrepreneurs	78
3.	11.11.2022	Seminar on "Education to Innovation"	87
4.	21.11.2022	Webinar on "My story –Motivational session by successful Entrepreneur.	56
5.	29.11.2022	Workshop on "Problem solving and Ideation"	84
6.	2.12.2022	Seminar on "Pollution-A threat to future generation"	73
7.	25.2.2023	Workshop on"Design thinking, critical thinking and Innovation Design"	71
8.	27.2.2023	Session on "Innovation and Entrepreneurship outreach programmes in schools"	85
9.	28.2.2023	Session on "Process of Innovation development and technology	
		readiness level(TRL) commercialization of lab technologies and tech transfer.	65
10.	11.4.2023	Workshop on "Prototype/Process Design and Development- Prototyping"	72
11.	29.8.2023	Seminar on "Accelerators/Incubation opportunities for students and faculties-Early stage Entrepreneurs	75
12.	30.8.2023	Workshop on "Innovation/Prototype validation-Converting Innovation to start up"	80









ACADEMIC YEAR 2021-22(EVEN SEMESTER) QUARTER-IV-IIC ACTIVITY REPORT

Fitle of the Session:Workshop on " In startup"	tellectual Property Rights (IPRs) and IP management for
Date : 03.9.2022	Duration : 1 Hour (6.30 P.M to 7.30 P.M)
Activity Category : Internal	Nature of the Session : Online Mode
Facebook link for the event organized	Facebook/Kings College of Engineering
Speaker Details:	
Name: Dr.M.Vasan	Designation: Assistant Professor, Commerce
Organization: National College(Autono	mous), Tíruchirappalli, Tamilnadu.

Objective:

- To provide a brief idea and awareness on intellectual property and its rights to the students.
- To give Innovative ideas to the students to upgrade and know about the Patents and filing.
- To provide a platform for the Teaching Faculties and students to know about the IP Law and product development to Patents.
- To give conceptual ideas on Intellectual property (IP) that nurtures and encourages innovation creativity, thereby contributing towards cultural and economic development
- In addition, this programme will help to improve the student's ability in carrying out simple innovation concepts to patents through professional discussions.

Institution's Innovation Council (IIC) of Kings College of Engineering organized workshop on "Intellectual Property Rights (IPRs) and IP management for startup" on 3.9.2022. The session was started by 6.30 p.m. The event had a whooping number of 85 participants of whom 78 were students and 07 were Faculty. Introduction about the resource person was delivered by M.Mukesh, III EEE, and IIC Member. During the session resource person has started from his research experience on Economics and Commerce and different mechanisms are used in Patents filing. He has broadly given the agenda such as Introduction about Innovation, patents, trademarks, and trade secrets. He pointed out the highlights of intellectual property law is to encourage the creation of a wide variety of intellectual goods and businesses property rights to the information and intellectual goods with economic incentive for their creation .Next, he presented the broad explanation about types of Intellectual property such as (a)Trademark(b)Patent(c)Copyright(d)IndustrialDesign(e)GeographicalIndication(f)TradeSecret.In addition he broadly explained about Enforcement of Trademark rights and copyright in India. Finally he has mentioned that general Instructions and guidelines to solve real world problems to convert prototype to patents. The session was very informative and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to the Undergraduate and Faculty members to spread their skill in the various steps involved in Intellectual Property Rights and Patent filing. The feedbacks from the participants were collected. Mr.R.Shankar, IIC Member delivered the vote of thanks.

Outcome of the activity:

- All the participants have benefitted and gained knowledge about Patents which means that an
 exclusive right to the inventor/creator to fully utilize his invention/creation for a given period of
 time.
- Programme helped to provide knowledge on create and serve the interests of the public by promoting economic growth.
- Portrays the accelerated learning curve for students in involving different technologies associated with different Industries and funding Agencies to promote different patents.

Participants Details:

Total No. of Student Participation: 85 Members

Total No. of Staff (Teaching / Non-Teaching) Participation: 07

Photographs:









ACADEMIC YEAR 2022-23 (ODD SEMESTER)



SEMINAR

On

"ACCELERATORS/INCUBATION OPPPORTUNITIES FOR STUDENTS & FACULTIES - EARLY STAGE ENTREPRENEURS"

24.08.2022

REPORT

Institution's Innovation Council (IIC) of Kings College of Engineering organized seminar on "Accelerators/Incubation opportunities For Students & Faculties - Early Stage Entrepreneurs" on 24.08.2022 at Smart class / Mechanical.

Objective:

The main objective of this seminar is to make the students understand how Incubators play a major role in supporting start-ups.

Resource person:

Mr. E. Kishorekumar Managing Director KAM Motors Thanjavur.

President:

10

Dr.J.Arputha vijaya selvi, Principal, KCE

Vice- President

Mr.R.Sundaramoorthi, Assistant Professor / EEE

Convenor

Mr.R.Balakrishnan, Assistant Professor / ECE

IIC member & Coordinator

Mr.R.Shankar, Assistant Professor / MECH

1

Quarter series - IV

Programme Type: Seminar session

Promotion in social media: Facebook

Seminar summary

This report provides a brief summary of the lecture on "ACCELERATORS/INCUBATION OPPORTUNITIES FOR STUDENTS & FACULTIES - EARLY STAGE ENTREPRENEURS" organized by Institutions Innovation Council on 24.08.2022 at 11.30 am to 12.30 pm through offline mode.

The session was started by 11.30 a.m. Introduction about the resource person was given by IIC Member **Mr.R.Shankar**, Assistant Professor/ Department of Mechanical Engineering, The lecture was delivered by **Mr.E.Kishorekumar**, Managing Director, KAM Motors, Thanjavur.

The speaker graced the occasion with their presence and shared their knowledge and experience with participants.

The Seminar session covered the following topics:

- Govt. Funding Schemes for Accelerators / Incubation.
- Entrepreneurship,
- Start-ups and company formation
- Types of companies and registration process

IIC student and faculty members participated in the seminar. The lecture provided an interactive atmosphere between the resource person and the participants. Vote of thanks was given by IIC Vice president **Mr.R.Sundaramoorthi**, Associate Professor, Department of Electrical and Electronics Engineering, Kings College of Engineering.

Brochure-Sample copy



Event Photographs



Resource person Mr.E.Kishorekumar delivering the seminar session on Accelerators/Incubation opportunities for Students & Faculties - Early Stage Entrepreneurs.

Outcomes:

- · Students got well versed with the concept of Incubation.
- The session helped young entrepreneurs who need necessary mentoring when they have an idea running in their mind.

Report Prepared by:

mber

Vice President-IIC & AP/EEE

President-IIC & Principal

2









ACADEMIC YEAR 2022-23 (ODD SEMESTER) QUARTER-I-IIC ACTIVITY REPORT

Session Details:			
Title of the Session : Seminar on "E	ducation to Innovations "		
Date : 11.11.2022	Duration : 1 Hour (11.30 A.M to 12.30 P.M)		
Activity Category : External	Nature of the Session : Online Mode		
Facebook link for the event organized Facebook/Kings College of Engineering			
Speaker Details:			
Name: Dr.Mohit Hemanth Kumar	Designation: Assistant Professor, Mechanical Department		
Organization: Alliance College of Eng	ineering and Design, Alliance University, Bengaluru		

Programme Report:

Objective:

- The objective of celebrating National Education Day is described as strengthening educational institutions
- To raise the quality of education.
- To evaluate the current performance in the field.

Institution's Innovation Council (IIC) of Kings College of Engineering organized Seminar on "'Education to Innovations'" on 11.11.2022. The session was started by 11.30 a.m. IIC student and faculty members participated in the seminar. Introduction about the resource person was delivered by P. Sneha, III EEE, IIC Member. During the session resource person has started from the curriculum and pedagogy in Engineering colleges. He has broadly given the agenda such as, emerging education systems, the link between primary education and higher education, Reduce curriculum content to enhance essential learning and critical thinking, Empower students through flexibility in course choices and changes in current system, New developments in innovation. The session was very informative and the participants have interacted with the resource person.

Valedictory Function:

This session proposed to enhance the awareness of the students about National Education Day and its purpose and significance. The feedbacks from the participants were collected. Dr.R.Shankar, IIC Member delivered the vote of thanks.

Outcome of the activity:

- · Enhancing the development of student's education and supports nation building.
- The introduction of new and emerging education systems has given rise to new learning opportunities for them.

Participants Details:

Total No. of Student Participation: 70 Members

Total No. of Staff (Teaching / Non-Teaching) Participation: 17











ACADEMIC YEAR 2022-23(ODD SEMESTER) QUARTER-I-IIC ACTIVITY REPORT

Session Details:		
Title of the Session : A Webinar	on "My Story- Motivational Session by Successful Entrepreneur"	
Date : 21.11.2022	Duration : 1 Hour (10.00 A.M to 11.00 A.M)	
Activity Category : External	Nature of the Session : Online Mode	
Google meet link	meet.google.com/gom-yczj-uwz	
Speaker Details:		
Name: Er.K.Sree Balaji.	Designation: Founder & CEO	

Organization: HILIFE.AI Private Limited Company, (Recognized by Startup India), Trichy, Tamilnadu.

Programme Report:

Objective:

- To provide a brief idea and awareness on 'Entrepreneurship' to the students.
- To give motivation to the students to become Entrepreneur.

Institution's Innovation Council (IIC) of Kings College of Engineering organized a webinar on

"My Story- Motivational Session by Successful Entrepreneur" on 21.11.2022. The session was started by 10.00 a.m. The event had a whooping number of 56 participants of whom 50 were students and 06 were Faculty. Introduction about the resource person was delivered by Mr.M.Vivekananthan, Assistant professor/Mechanical Engineering, Kings College of Engineering, punalkulam/IIC Member. During the session resource person has started from his personal experience how he started his company what are the struggles he faced and explained the resource of fund for initiate the company like government and non government funding agencies. Also he explained the various industrial problems and solution for the problems. The session was very informative and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to the Undergraduate and Faculty members to spread their skill. The feedbacks from the participants were collected. Mr.S.Nelsonraja, Assistant professor/Mechanical Engineering, Kings College of Engineering, punalkulam delivered the vote of thanks.

Outcome of the activity:

- All the participants got the new ideas and approaches toward Entrepreneurship.
- All participants can able to fit their business values with the targeted customers. .

Participants Details:

Total No. of Student Participation: 50 Members Total No. of Staff (Teaching / Non-Teaching) Participation: 06







ACADEMIC YEAR 2022-23 (ODD SEMESTER) QUARTER-I-IIC ACTIVITY REPORT

Session Details:		
Title of the Session : Workshop on "Pro	oblem Solving and Ideation "	
Date : 29.11.2022		
Activity Category : Internal	Nature of the Session : Physical Mode	
Facebook link for the event organized	Facebook/Kings College of Engineering	
Speaker Details:		
Name: Mr.S.Saravanan	Designation: Assistant Professor, Management Studies	
Organization: Gnanam School of Busine	ess, Sengipatti – 613 402 Thanjayur	
Programme Report:		
Objective:		
m		00.1

- To provide a brief idea and awareness on 'Problem Solving and Ideation' to the students.
- To convey the problems arise in our surroundings.
- To provide a platform for the students to understand the problems and provide idea to solve the problems.

Institution's Innovation Council (IIC) of Kings College of Engineering organized workshop on "**Problem Solving and Ideation**" on 29.11.2022. The session was started by 11.00A.M. The event had a number of 84 participants of whom 74 were students and 10 were faculty members. Introduction about the resource person was delivered by Mr.R.Sundharam, AP/Civil and IIC member. During the session resource person stated about the various problems occurred in our surroundings. Also he broadly discussed about the problems faced by people in our day to day life and suggested more ideas and solutions to solve the problems in a simple and effective manner. He conducted a group discussion session for students to discuss about the problem and solution finding for the issues. The session was very useful and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to the Undergraduate and Faculty members to create a solution for problems happen in our surroundings. The feedbacks from the participants were collected. Mr.R.Sivabalan, IIC student member delivered the vote of thanks.

Outcome of the activity:

- All the participants have benefitted and gained knowledge on 'Problem Solving and Ideation'
- All participants can able to give a solution for problem arises in their surroundings.

Participants Details:

Total No. of Student Participation: 74 Members Total No. of Staff (Teaching / Non-Teaching) Participation: 10

Photographs:











ACADEMIC YEAR 2022-23 (ODD SEMESTER) QUARTER-I-IIC ACTIVITY REPORT

Session Details:	
Fitle of the Session : Seminar on "Pollut	ion – A threat to future generation
Date: 02.12.2022	Duration : 2 Hours (2.30 P.M to 4.30 P.M)
Activity Category : Internal	Nature of the Session : Physical Mode
Facebook link for the event organized	Facebook/Kings College of Engineering
Speaker Details:	
Name: Ms.D.Sharmila	Designation: Assistant Professor, Department of Civil
	Engineering.
Organization: Kings College of Engineeri	ng, Punalkulam, Pudukkottai.
Brogramme Report:	f:

Objective:

- To convey the serious issues related to human health.
- To spreading awareness of managing and controlling industrial disasters.
- To prevent pollution caused by industrial processes or human negligence.
- Department of Civil Engineering in association with Institution's Innovation Council (IIC) of Kings College of Engineering organized a seminar for the occasion of "National Pollution Control Day" on "Pollution – A threat to future generation" on 02.12.2022. The session was started by 2.30 p.m. The event had a whooping number of 73 participants of whom 63 were students and 10 were Faculty. Introduction about the resource person was delivered by Mr.R.Sundharam, AP / Civil , and IIC Member. During the session resource person has started from the types of pollution and its impact for human beings. She has given the detail explanation about the pollution lead damages to the environment with the case study of Bhopal Gas Tragedy. The concepts making people and industries aware of the importance of pollution control acts and also the Industries can cause harm to humans and the environment. The session was very informative and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to the Undergraduate and Faculty members to spread their skill in the various steps involved in Intellectual Property Rights and Patent filing. The feedbacks from the participants were collected. The student from final year Civil M.Jayaseelan, IIC Member delivered the vote of thanks.

Outcome of the activity:

- All the participants have benefitted and gained knowledge on Pollution.
- All participants can able to know about the number of laws are promulgated by the government worldwide to seriously control and prevent pollution.

Participants Details:

Total No. of Student Participation: 63 Members Total No. of Faculty Members: 10

Photographs:




ACADEMIC YEAR 2022-23 (EVEN SEMESTER)



WORKSHOP

On

"DESIGN THINKING, CRITICAL THINKING AND INNOVATION DESIGN"

25.02.2023

REPORT

Institution's Innovation Council (IIC) of Kings College of Engineering organized workshop on "Design Thinking, Critical Thinking and Innovation Design" on 25.02.2023.

Objective:

- To illustrate the key parts of the design-thinking process.
- How to overcome challenges with critical thinking
- To develop practical and innovative solutions for real world problems.

Resource person:

Er. M. Kumar

Quality Engineer Trigo Quality Production Service Pvt. Ltd. Pune - 411007.

President:

N

Dr.J.Arputha vijaya selvi, Principal, KCE

Vice-President

Mr.R.Sundaramoorthi, Assistant Professor / EEE

Convenor

Dr.R. Shankar, Assistant Professor / MECH.

1

IIC member & Coordinator

Mr.R.Shankar, Assistant Professor / MECH

Quarter series-II

Programme Type: Workshop

Promotion in social media: Facebook

Workshop summary

This report provides a brief summary of the lecture on **"Design Thinking, Critical Thinking and Innovation Design**" organized by Institutions Innovation Cell on **25.02.2023** at pallava hall. **71** participants attended the programme.

The session was started by 2 pm. Introduction about the resource person was delivered by **Dr.R.Shankar**, Assistant Professor/ Mechanical & IIC Member. The lecture was delivered by **Er. M. Kumar**, Quality Engineer, Trigo Quality Production Service Pvt. Ltd., Pune - 411007. He has explained the design thinking process, critical thinking, innovative solutions for real world problems etc., Most of the participants who attended the workshop were students and faculty. The lecture provided an interactive atmosphere between the resource person and the participants. Vote of thanks was given by **Mr.R.Sundaramoorthi**, Associate Professor, Department of Electrical and Electronics Engineering, Kings College of Engineering.

Benefits Interms of Learning/Skills/Knowledge obtained:

- The design-thinking process comprises three main overlapping phases: inspiration, ideation, and implementation.
- Students were inspired by how the lead by design company solves critical problems
- They were motivated and taught how to solve problems and come up with innovative ideas using the thinking process.

2



and Innovation Design

Vice Prosident-IIC & AP/EEE 3

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President-IIC & Principal

ACADEMIC YEAR 2022-23(EVEN SEMESTER) QUARTER-II-IIC ACTIVITY REPORT

Recognised under 2(f) & 12(B) of UGC Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai

Session Details:		
Fitle of the Session : Innovation and Entrepreneurship outreach programme in Schools		
Date : 27.2.2023	Duration : 4 Hour (12.00 P.M to 4.00 P.M)	
Activity Category : External	Nature of the Session : Physical/Offline Mode	
Programme		
Facebook link for the event organized	Facebook/Kings College of Engineering	
Speaker Details:		
Name:Dr.K.Sudhakar,AP/EEE	Designation:Assistant Professor	
T&P Department		
IIC Students Vice presidents		
Organization: Kings College of Engineeri	ng,Punalkulam,Thanjavur.	
Programme Report:		
Objective:		
• To provide concise idea of basics	of Innovation and technology readiness level in all the sectors in	

Engineering to the school students.

- To give Innovative ideas to the school students to upgrade and know about the recent development and Technology.
- To provide a platform for the School Teachers and students to promote Innovation and product development.
- In addition, this programme will help to improve the school level student's ability in carrying out simple innovation and to bring to product through professional discussions.

Institution's Innovation Council (IIC) of Kings College of Engineering organized "Innovation and Entrepreneurship outreach programme" for the school students at Government Higher Secondary school, Regunathapuram, Pudukottai District on 27.2.2023. The session was started by 2.00 p.m. The event had a whooping number of 85 participants of whom 80 were students and 05 were Faculty. Introduction about the resource person was delivered by M.Mukesh, III/EEE and IIC Member. During the session Dr.K.Sudhkar, AP/T&P started about the role and Importance of Innovation in Engineering and Entrepreneurship skills. He broadly gave the ideas of Innovations in different fields and Entrepreneur development skills.

Mr.G.Bharath,III-Civil,IIC Student Vice president delivered talk on Civil Engineering scope, Innovation methods of Planning and Construction.He broadly explained that, Civil engineers develop and improve the services and facilities from supplying energy, clean water to homes, processing and recycling waste, finding solutions to problems like pollution. He mentioned that, Civil Engineers create the world more liveable by building bridges, road, airports, homes, hospitals, parks, tunnels, stadiums. They strive towards building a developed community. Civil engineering fosters cooperation and team spirit among engineers. He has broadly given the different types of applications and current Innovations in Civil Engineering.

Mr.M.Mukesh,III-EEE,IIC Student Vice president talked about Importance and simple Innovations in Electrical and Communication field. He pointed out, Electrical and Electronics Engineers work at the forefront of practical technology, solar-energy systems to mobile phones, communication, technology and energy needs.

Mr.K.Sultan,III/Mech, IIC Student Vice president explained about Mechanical Engineering importance and its applications. He mentioned that, Virtually every product or service in modern life has most likely been touched in some way by a mechanical engineer to help humankind. This includes solving today's problems and creating future solutions in health care, energy, transportation, world hunger, space exploration, climate change, and more.

The session was very informative and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to the Undergraduate, and Faculty members to spread their skill in various steps involved in prototype and various processes involved in design & development. The feedbacks from the participants were collected. Mr.R.Shankar, IIC Member delivered the vote of thanks.

Outcome of the activity:

- All the participants have benefitted and gained knowledge about Innovation and Entrepreneur development skills.
- Programme helped to familiarize among the students to make simple innovation in Civil, Electrical
 and Electronics Engineering and Mechanical Engineering.
- Portrays the accelerated learning curve for school students in involving Innovation practice methods in all the domains of Engineering.

Participants Details:

Total No. of Student Participation:85 Members

Total No. of Staff (Teaching / Non-Teaching) Participation: 05

2 Page

Photographs:





ACADEMIC YEAR 2022-23(EVEN SEMESTER) QUARTER-II-IIC ACTIVITY REPORT

IIC ID: IC201810951

Session Details:	
Title of the Session :"Process of I	nnovation development &technology readiness level(TRL)
Commercialization of lab technologi	es &tech transfer"
Date : 28.2.2023	Duration : 2 Hour (2.00 P.M to 4.00 P.M)
Activity Category : Internal	Nature of the Session : Offline Mode
Facebook link for the event organized	Facebook/Kings College of Engineering
Speaker Details:	
Name:Mr.R.Viswanath	Designation:Technical trainer
Organization:Armada Industrial Autom	ation,Thanjavur

Programme Report:

Objective:

- To provide a brief idea of process of Innovation and technology readiness level in the manufacturing industry and other sectors.
- To give Innovative ideas to the students to upgrade and know about the development and Technology.
- To provide a platform for the Teaching Faculties and students to upgrade and know about the Innovation and product development.
- In addition, this programme will help to improve the student's ability in carrying out simple innovation and to bring to product through professional discussions.

Institution's Innovation Council (IIC) of Kings College of Engineering organized Expert talk on "Process of Innovation development &technology readiness level(TRL) Commercialization of lab technologies &tech transfer" on 28.2.2023.The session was started by 2.00 p.m. The event had a whooping number of 65 participants of whom 60 were students and 05 were Faculty. Introduction about the resource person was delivered by M.Mukesh,III/EEE, and IIC Member. During the session, He shared knowledge about how development and technology associated with Industry needs.In Industry 1.0, Machines, steam and water power involved under manual which means that no automation involved. In Industry 2.0, Mass Production and Electricity developed. Here mechanically automated process also done by using simple components. In the next revolution Industry 3.0 which involves Automation, Electronics and Information technology developed. In addition, software such as CNC& PLC and mechanical drives control used. Industry 4.0 deals with Cyber Physical systems and Digital twin technology. In Industry 4.0,all machineries controlled through Internet of Things (IoT) and Gateway. He gave plenty of examples such as mechanical automation and manufacturing technology associated with Industry 3.0 and Industry 4.0. He pointed out various role of Industry 4.0. He also shared the scope of current job requirement and future development in Industry.

He mentioned about Innovation in Industry through different practical examples that how Industry 4.0 which helpful in the development of Innovation. He has shared knowledge about the importance of Industry requirements such as sales, Product development, Production, quality prototype, basic circuit designing, latest software and applications etc. He clearly explained from basics of prototype through some practical examples such as LED TV and Refrigerator. In addition with, other practical examples were also given such as agriculture field and real world problem COVID-19 .He has given Plenty of problems and solutions in order to get product through flowchart. Finally he has mentioned that general Instructions and guidelines to solve real world problems to convert prototype product. The session was very informative and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to the Undergraduate, and Faculty members to spread their skill in the various steps involved in prototype and various processes involved in design & development. The feedbacks from the participants were collected. Mr.R.Shankar, IIC Member delivered the vote of thanks.

Outcome of the activity:

- All the participants have benefitted and gained knowledge about importance of Industry Requirements and Process of Innovation.
- Programme helped to adapt new technologies in IoT and Sales Marketing.
- Portrays the accelerated learning curve for students in involving different technologies associated with Industry 3.0 and Industry 4.0

Participants Details:

Total No. of Student Participation: 60 Members

Total No. of Staff (Teaching / Non-Teaching) Participation: 05

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Photographs:

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ACADEMIC YEAR 2022-23(EVEN SEMESTER) QUARTER-III-IIC ACTIVITY REPORT

Session Details:	
Title of the Session : Workshop on "Proto	type/Process Design and Development-Prototyping "
Date : 11.4.2023	Duration : 7 Hour (9.15 A.M TO 4.15 P.M)
Activity Category :External and Internal	Nature of the Session : Physical Mode
Facebook link for the event organized	Facebook/Kings College of Engineering
Instagram link for the event organized	Kings_iic 4.0
Speaker Details:	
Name:Dr.M.Vijayakumar	Designation:Founder&CEO
Organization:IndiGuard Systems Private L	imited,Thanjavur
Programme Report:	
Objective:	
To provide a brief idea of prototype	design and about it's important in the manufacturing

- To give Innovative ideas to the students to upgrade and know about the development and Technology.
- To provide a platform for the Teaching faculties and students to upgrade and know about the Innovation and product development.
- In addition, this programme will help to improve the student's ability in carrying out simple innovation and to bring to product through professional discussions.

Institution's Innovation Council (IIC) of Kings College of Engineering organized workshop on

"Prototype/Process Design and Development" on 11.4.2023. The session was started by 10.00 A.M. Dr.J.ArputhaVijayaSelvi, Principal&IIC President delivered presidential address. The event had a whooping number of 72 participants of whom 65 were students and 07 were Faculty. Introduction about the resource person was delivered by M.Mukesh, UG Student IIC Member.

The following points were discussed during session-I:

Prototype Design:

Industry and other sectors.

Prototyping is the process of designing and building an early model of a product to test it. Any
system or device that will be sold to consumers, government agencies, or businesses will begin as
a prototype that typically does not have all of the components or functions that will be used in the
final product that is brought to market.

 A prototype can serve as a proof of concept showing that the system or device can be built and will perform correctly.

Breadboards:

- Breadboards are small boards that are commonly used for circuit prototyping. They allow the circuit's components to be connected without making permanent connections.
- The red and blue strips on the sides of the board (sections A and D) are called power rails and are connected down the board, usually used for powering and grounding.
- The non-colored rows between the power and ground strips (sections B and C) are connected across and are usually used for making the connections between components. Sections B and C are not connected to each other across the bridge in the middle of the board

Microcontrollers:

- A microcontroller is an inexpensive, programmable computer without any peripherals, such as a mouse, keyboard, or screen.
- Microcontroller boards have direct access to the input and output pins of their processing chips so
 that the user can directly read from sensors and perform actions.
- Microcontrollers perform specific functions in household appliances, medical devices, cars, and other systems and devices.
- Arduino boards which use a microcontroller were designed to be easily programmed and assembled into larger projects. These boards come in many shapes and sizes, and some contain additional features, such as WiFi or Bluetooth connectivity. Different boards can also have different features, such as a higher processing speed and more memory.

The Arduino IDE (Integrated Development Environment):

- Arduino IDE is a program that can be used to edit, compile, and upload code to a supporte microcontroller.
- Verify: Checks code for errors and points those errors
- Upload: Verifies code and uploads it to the Arduino board
- Console: Shows errors found in the hardware
- Serial Monitor: Sends and receives messages to and from the board

Arduino Programming:

- The Arduino programming language is based on C/C++, but it is designed to be simpler and easier to learn. The intuitive way to think about programming is like building with LEGO blocks: certain rules must be followed and different building blocks can be used to build bigger parts.
- Every line must end with a semicolon (;) unless it is a conditional, loop, or function. Comments start with two backslashes (//). Comments are text that the program ignores and are used to label and explain code.

Arduino Programs:

- Programs written in Arduino are called sketches. A basic sketch can be broken up into three different areas: global, setup, and loop. These areas are pictured in Figure 14.
- Global: Contains constants and imported libraries
- Setup: Functions that run once at the start of the program. Setup function often used to activate pins and sensors in the program
- Loop: Function runs continuously after Setup function. Code in a loop function will continue to run until Arduino loses power. Function often in most of the program to read sensors and switch pins HIGH or LOW

Schematic Circuit Design:

- There are dozens of PCB tools available. The first step in designing a schematic is to place all of the key components. For this initial design this includes the microcontroller chip, a voltage regulator, a microUSB connector, and a programming connector.
- For more complex designs it usually makes more sense to completely design each sub-circuit first, and then merge them all together. Rechargeable batteries that hold electrical charge and help to stabilize the voltage on a supply line.By placing a 4.7uF capacitor on the input pin of the linear regulator. This is the 5VDC input voltage supplied by an external USB charger.
- This voltage is fed into a TLV70233 linear regulator which steps the voltage down to 3.3V since the microcontroller can only be supplied by a maximum of 3.6V.Another 4.7uF capacitor is placed on the output of the regulator as close to the pin as possible.

SessionII:

- During the session-II resource person has started from his research experience and different mechanisms are used in Prototype design and process designing order to develop the prototype. He has broadly given the agenda such as Introduction about prototype, basic circuit designing, latest software and applications etc. He clearly explained from basics of prototype through some practical examples such as LED TV and Refrigerator.
- In addition with, other practical examples were also given such as agriculture field and real world problem COVID-19 .He has given plenty of problems and solutions in order to get product through flowchart.
- Finally he has mentioned that general Instructions and guidelines to solve real world problems to convert prototype to product. The session was very informative and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to the Undergraduate and Faculty members to spread their skill in the various steps involved in prototype and various processes involved in design & development. The feedbacks from the participants were collected. Mr.G.Bharath, IIC Member delivered the vote of thanks.

Outcome of the activity:

- All the participants have benefitted and gained knowledge about Prototype/Process Design and ٠ Development.
- Programme helped to adapt new technologies in all the sectors.
- Portrays the accelerated learning curve for students in involving different technologies associated with different Industries and funding Agencies.

Farticipants Details:

Total No. of Student Participation: 65 Members

Total No. of Staff (Teaching / Non-Teaching) Participation: 07 Members

SNAPSHOTS:





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FEEDBACK:

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ACADEMIC YEAR 2022-23(EVEN SEMESTER) QUARTER-IV-IIC ACTIVITY REPORT

Title of the Session : Seminar on "Acce	elerators/Incubation - Opportunities for Students &
Faculties - Early Stage Entrepreneu	irs "
Date : 29.8.2023	Duration : 3 Hour (10 A.M TO 1.00 P.M)
Activity Category :Internal	Nature of the Session : Physical Mode
Facebook link for the event organized	Facebook/Kings College of Engineering
Instagram link for the event organized	Kings College of Engineering
Speaker Details:	
Name:Prof.A.Manikandan	Designation:Head-DOMS

Organization: St.Joesph's College of Engineering and Technology, Thanjavur

Programme Report:

Objective:

- To provide a brief idea of Incubation opportunities and about it's important in the Industry and other sectors.
- To give Innovative ideas to the students to upgrade and know about the development and Technology.
- To provide a platform for the Teaching faculties and students to upgrade and know about the Innovation and Incubation opportunities.
- In addition, this programme will help to improve the student's ability in carrying out simple innovation and to bring to product through professional discussions.

Institution's Innovation Council (IIC) of Kings College of Engineering organized seminar on

"Accelerators/Incubation - Opportunities for Students & Faculties - Early Stage Entrepreneurs"on29.8.2023.The session was started by 10.00 A.M. Vice Principal, Dr.S.Sivakumar delivered presidential address. The event had a whooping number of 75 participants of whom 70 were students and 05 were Faculty. Introduction about the resource person was delivered by Dr.K.Sudhkar,ED Cell Coordinator, Kings College of Engineering. The following points were discussed during session:

During the session, he started to explain about the role of importance and incubation process and Entrepreneurship skills to be implemented in the Institution levels. Students allow entrepreneurs to preserve capital and gain external support to accelerate their businesses growth. Through business incubation, the Enterprise Center captures each entrepreneur's uniqueness and offers support and customized services to maximize businesses potential. The ultimate goal of incubation is to launch profitable, sustainable entrepreneurial companies. Student entrepreneurship is an important but not well-studied field of research. Student venturing activity is characterized by the lack of experience and expertise among founders, which is a critical barrier in technology-based venturing. Importance of Entrepreneurship:

Entrepreneurship drives the growth and diversification of the economy and contributes to the creation of wealth. Before we get into the specifics of the role of entrepreneurship in economic development, let's briefly encapsulate its significance. Entrepreneurship's importance lies in the following:

- Drives economic growth and creates new job
- Encourages innovation by bringing new ideas, products, and services to the market
- Contributes to social change by developing products or services that reduce people's dependence on outdated technologies
- Addresses social and economic problems by creating solutions that meet the needs of society

• Enables competition which improves business efficiency and lowers prices for consumers Economic Independence:

Entrepreneurship can be a path to economic independence for both the country and the entrepreneur. It reduces the nation's dependence on imported goods and services and promotes self-reliance. The manufactured goods and services can also be exported to foreign markets, leading to expansion, sevente reliance, currency inflow, and economic independence. Similarly, entrepreneurs get complete control over their financial future. Through their hard work and innovation, they generate income and create wealth, allowing them to achieve economic independence and financial security.

Entrepreneurship promotes economic growth, provides access to goods and services, and improves the overall standard of living. Many entrepreneurs also make a positive impact on their communities and improve their well-being by catering to underserved areas and developing environment-friendly products.

Increases Gross National Product and Per Capita Income:

Entrepreneurship can play a significant role in increasing economic growth and prosperity by increasing Gross National Product (GNP) and Per Capita Income (PCI). GNP measures the total economic output of a country while PCI calculates the average income per person. The increase in GNP can lead to a rise in PCI. Entrepreneurship can contribute to GNP by creating new businesses and industries, which can lead to job creation, increased consumer spending, and higher tax revenue. The entrepreneurship education programs in which students create their own ventures are commonly referred to as "action-based" entrepreneurship education. Entrepreneurship education has therefore become increasingly popular in technology-focused education such as engineering education and now involve several different designs and methods to achieve problem-based learning and real-life projects in education. Valedictory Function:

This session proposed a chance to the Undergraduate and Faculty members to spread their skill in the various steps involved in incubation and various processes involved in design & development. The feedbacks from the participants were collected. Mr.G.Bharath, IIC Member delivered the vote of thanks.

Outcome of the activity:

- All the participants have benefitted and gained knowledge about Incubation Process Design and Development.
- Programme helped to adapt new technologies in all the sectors.
- Portrays the accelerated learning curve for students in involving different technologies associated with different Industries and funding Agencies.

Participants Details:

Total No. of Student Participation: 70 Members Total No. of Staff (Teaching / Non-Teaching) Participation: 05 Members

SNAPSHOTS:







ACADEMIC YEAR 2022-23(EVEN SEMESTER) QUARTER-IV-IIC ACTIVITY REPORT

startup "	ovation /Prototype Validation -Converting Innovation to
Date :30.8.2023	Duration : 3 Hour (10.00 A.M TO 1.00 P.M)
Activity Category :Internal	Nature of the Session : Physical Mode
Facebook link for the event organized	Facebook/Kings College of Engineering
Instagram link for the event organized	Kings College of Engineering
Speaker Details:	
lame:Dr.S.Srinath	Designation:Founder
	a de la companya de la compan

Organization: The Director, Ziwwit Educational and Research center, Thanjavur

Programme Report:

Objective:

- To provide a brief idea of Innovation and Prototype validation and about it's important in the Industry and other sectors.
- To give Innovative ideas to the students to upgrade and know about the development and Technology.
- To provide a platform for the Teaching faculties and students to upgrade and know about the Innovation and product development.
- In addition, this programme will help to improve the student's ability in carrying out simple innovation to start up and to bring to product through professional discussions.

Institution's Innovation Council (IIC) of Kings College of Engineering organized seminar on

"Innovation /Prototype Validation – Converting Innovation to startup "on 30.8.2023. The session was started by 11.00 A.M. VicePrincipal, Dr.S. Sivakumar delivered presidential address. The event had a whooping number of 80 participants of whom 75 were students and 05 were Faculty. Introduction about the resource person was delivered by S. Sneha, UG Student IIC Member.

The following points were discussed during session-I: Innovation and Importance:

- Innovation is often necessary for Organizations to adapt and overcome the challenges of change. Achieving organizational and economic growth through innovation is key to staying afloat in today's highly competitive world. Innovation refers to introducing novelty in a product, service, strategy, or business model. Moreover, innovation also increases the usability and durability of the entity above. It is a concept that helps stay ahead of the competition and induces creativity and efficiency in businesses. Innovation is important to the advancement of society as it solves these kinds of social problems and enhances society's capacity to act.
- It's responsible for resolving collective problems in a sustainable and efficient way, usually with new technology. These new technologies, products and services simultaneously meet a social need and lead to improved capabilities and better use of assets and resources. In order to be able to solve these kinds of societal problems, private, public and non-profit sectors are involved.
- He explained about the following research areas: Experimental and theoretical research is carried out on the development and application of aero space Engineering, space propulsion system, electric propulsion systems, including electro thermal propulsion systems, electromagnetic propulsion systems and electrostatic propulsion systems.

Innovation/Prototype Design:

- Innovation/Prototyping is the process of designing and building an early model of a product to test it. Any system or device that will be sold to consumers, government agencies, or businesses will begin as a prototype that typically does not have all of the components or functions that will be used in the final product that is brought to market.
- A prototype can serve as a proof of concept showing that the system or device can be built and will
 perform correctly.

SessionII:

- During the session-II resource person has started from his research experience in the field of Aerospace Engineering and satellite communications are used in Prototype design and process designing order to develop the prototype. He has broadly given the agenda such as Introduction about prototype, basic circuit designing, latest software and applications etc. He clearly explained from basics of prototype through some practical examples such as LED TV and Refrigerator.
- Finally he has mentioned that general Instructions and guidelines to solve real world problems to convert prototype to product. The session was very informative and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to the Undergraduate and Faculty members to spread their skill in the various steps involved in prototype and various processes involved in design & development. The feedbacks from the participants were collected. Mr.G.Bharath, IIC Member delivered the vote of thanks.

Outcome of the activity:

- All the participants have benefitted and gained knowledge about Innovation/Prototype validation design and Development.
- Programme helped to adapt new technologies in all the sectors.
- Portrays the accelerated learning curve for students in involving different technologies associated with different Industries and funding Agencies.

Participants Details:

Total No. of Student Participation: 75Members

Total No. of Staff (Teaching / Non-Teaching) Participation: 05 Members

SNAPSHOTS:





09/9/2023 J. 1001 Principal/President, IIC



3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year 2022-23

IEEE Student Branch - STB 16621

S. No	Name of the Activity	Page No.
1	Industrial Training on Industry 4.0 and IoT	03
2	Awareness Session on Outcome Based Education	04
3	Installation of Office Bearers	04
4	Orientation session on Curriculum Orientation and Career Opportunities	04
5	Student Activity Committee meet	05
6	webinar on Advanced Applications of IoT and LTE Beyond	05
7	Seminar on Sources of Renewable Energy	06
8	Workshop on Web Designing	07
9	Seminar on Recent Trends in Biomedical Instrumentation- Overview	07
10	Seminar on Comparison of Alternative Architecture for fog computing	08
11	Engineers Day Celebration	08
12	Technical Symposium eBlasť 22	09
13	Mini Project Expo	10
14	Technical Symposium CISABZ'22	10
15	Technical Symposium ENIGMA'22	11
16	Webinar on Robotics – in Research Perspective	12
17	Test your Mettle	13
18	IEEE Day Celebrations	14
19	Three Days Workshop on CCTV Installation and Servicing	14
20	Seminar on Multi-Objective Based Optimal Planning of DG in Distribution Network	15
21	Workshop on Intellectual Property Rights (IPR)& Patents and Design filing	16
22	Workshop on Python with Data Science	17

23	Renewable Energy Sources	18
24	Electronic Art 2.0	18
25	VLOG Competition	19
26	Workshop on Microgrid Technology for Renewable Energy Systems	20
27	FDP on Problem Solving and Python Programming	20
28	Technical Activity	21
29	Internal Staff Seminar	22
30	3 days winter crash course on C, C++ programming for Placements	23
31	Awareness Programme on Engineering Ethics	24
32	Workshop on Real Time Project Design Using Arduino	25
33	Internal Staff Seminar	26
34	Guest lecture on Innovation and Technology for gender equality	26
35	Internal Staff Seminar	27
36	Internal Staff Seminar	27
37	One day field visit	28
38	Seminar on IoT based Smart Agriculture	29
39	One day field visit	29
40	Internal Staff Seminar	29
41	International Conference on Computing, Communication and Control	29
42	Workshop on Machine Learning with Google Colab	30
43	KINGS PROJECT EXPO' 2023	31
44	Workshop on POWER-BI	31

Druf 27/05/2023 COordinator-JEEESTB

J. martino23 Principal

PRINCIPAL Kings College of Engineering PUNALKULAM - 613 303

<u>July, 2022</u>

1. Industrial Training on Industry 4.0 and IoT

Department of Computer Science & Engineering and IEEE Student Branch of jointly organized **Industrial Training on Industry 4.0 and IoT** during 12.07.2022 and 30.07.2022. The sessions were handled by Mr. S. Kannadasan, Trainer, Kits N Comps Pvt. Ltd., Thanjavur and Mr. P. Rajasekar, Proprietor, Kits N Comps Pvt. Ltd., Thanjavur. During the training, Industrial IoT and its applications were demonstrated with case studies.



1. Outcome based Education

Awareness session on **"Outcome Based Education"** was organized on 08.08.2022 at Pallava Hall by 2.30pm. Session was handled by K.Abhirami, IQAC Coordinator. During the session, members were briefed about the significance of OBE, mapping of Course outcome with Programme Outcome, Identification of Correlation matrix for courses, mapping of CO with Programme specific outcome with suitable illustration. Stating the importance of planning for appropriate Teaching-Learning-Assessment approaches to facilitate OBE, members were guided for raising the standard in the process. Also, Bloom Taxonomy based assessment process was also elaborated with assessment sample paper.



2. Installation of Office Bearers

Office bearers for the year 2022 took charge on 01st August, 2022. Ms. FasilaAfreen J, of IV CSE as IEEE SB Chairman, Ms. Gayathri K of IV ECE as IEEE SB Vice-Chairman, Ms. Maheswari V of IV ECE as Treasurer, Ms. Suruthi S of IV CSE as Secretary and Mr. Suriyaprakash M of IV CSE as webmaster.

3. Orientation Programme

Department of Computer Science & Engineering & IEEE STB 16621 jointly organized an orientation session on **"Curriculum Orientation and Career Opportunities"** for II year students on 11.08.2022. Dr.S.M.Uma, Head of the Department elaborated the academic aspects of department of CSE. She also explained the importance of registration and completion of online certification courses. Ms.S.Puvaneswari AP / CSE, discussed about the importance of being a

member in professional society. Mr.M.Arun AP/CSE described the various career opportunities available in IT industry and explained the roles and responsibilities of a software engineer. Totally 58 students actively participated.



4. Student Activity Committee meet

Inauguration of IEEE SB for the year 2022 was conducted on 11th August 2022. The welcome address was given by Ms. FasilaAfreen J, IEEE SB Chairman (IV /CSE). The presidential address was given by Dr.J.Arputha Vijaya Selvi, Principal, KCE and she had encouraged the office bearers and coordinators to conduct more events to improve the student's technical skills. Newly elected members are introduced and the annual activity plan of IEEE SB for the year 2022 – 2023 was presented by Mr.T.Pasupathi (Asst.Prof/ECE). Finally the vote of thanks was given by Ms. Gayathri K, IEEE Vice-Chairman (IV ECE).

5. Webinar on Advanced Applications of IoT and LTE Beyond

Department of Electronics and Communication Engineering in association with R&D Section and IEEE STB 16621 organized a webinar on Advanced Applications of IoT and LTE Beyond on 29.08.2022. Dr. Vaddi Naga Padma Prasunna, Associate Professor, IEEE WIE AG Advisor, Atria Institute of Technology, Bangalore delivered lecture. In her lecture, she has introduced the concept of Internet of Things and its applications on various areas such as farming, health, traffic monitoring and energy savings etc. Also she explained the challenges in providing IoT solutions for various applications. She gave an overview on scenario, requirements and applications of Long Term Evaluation Technology (LTE) technology which offers a faster and better broadband connectivity with speeds upto 300 Mbps. A total of 120 students participated in the programme.



6. Renewable Energy Day 2022

Department of Electrical and Electronics Engineering in association with Energy Club and IEEE STB 16621 organized a seminar on **Sources of Renewable Energy** in view of **Renewable Energy Day 2022** on 30.08.2022. **Mr. J. Arokkiaraj**, AP/EEE delivered lecture. The main objective of the seminar is to provide exposure to various research areas to our faculty members. The following points were discussed during the session, Renewable hybrid power architecture for microgrid Gridinterlinked microgrid, AC microgrid, AC/DC microgrid, Off-grid connected microgrid, Microgrid control schemes for hybrid Renewable energy, Architecture proposed for the photovoltaic- Microgrid hybrid biomass-solar and Summary of the voltage control scheme.



September, 2022

1. Workshop on Web Designing

Department of Computer Science & Engineering and IEEE Student Branch 16621 jointly organized a workshop on "Web Designing" on 02.09.2022. The main objective of this workshop is to provide ideas of fundamental knowledge about web designing. Mr. M. Arun, Asst. Prof/ CSE, handled the session, he explained the basic concepts of web designing and also listed down the free software available to develop websites. He clearly explained the basics of Style sheets. He demonstrated other mark-up languages along with practical examples. Also, he provided plenty of exercises for real time working. Totally 50 participants registered and actively participated in this workshop. The session was very informative and the participants have interacted with the resource person.



2. Seminar on Recent trends in Biomedical Instrumentation-overview

Department of EEE and IEEE Student Branch 16621 jointly organized a seminar on Recent Trends in Biomedical Instrumentation- Overview on 03.09.2022. Mr.R.Sundaramoorthi, Assistant Professor/EEE delivered lecture. In his lecture, he briefed on Introduction about Biomedical Instrumentation, Fundamentals of Medical Instrumentation, Bioelectric Signals and Electrodes, Physiological Transducers and Recent Trends in Biomedical Instrumentation. 68 students from II and III Year participated and got benefitted.



3. Seminar on Comparison of Alternative Architecture for fog computing

Department of Computer Science & Engineering and IEEE Student Branch jointly organized an internal seminar on 09.9.2022 at smart classroom. Ms.P.Nalayini, AP/CSE delivered lecture on the topic "Comparison of Alternative Architecture for fog computing". She explained the basics of fog computing and its different types of architectures such as hierarchical and flat types. Also, she described about algorithms that can be used for creating fog computing systems that follow these architectures.



4. Engineers Day Celebration

Department of Computer Science & Engineering and R&D Section in association with IEEE Student Branch organized various activities such as Speech Competition, Technical Quiz and Artathon in view of National Engineer's Day. In technical quiz, 137 students' participated and final winners are Mr. Krishnamoorthy of II ECE, Ms. Fasila of IV CSE and Mr. Praveen Kumar of III EEE. In ARTATHON, 28 students participated in the competition and the theme of the event is Engineering Concepts through Art. The winners are Mr. A. Mohamed Arsath of III Mech – first prize, Ms. A. Jaishree of III ECE - second prize and Ms. N. Karkuzhali of IV CSE - third prize. In speech competition, nine students participated and the theme of the event is Real Time Successful Engineer. The winners are Mr. A.B. Avudaiyappan of IV CSE - First Prize, Mr. S. Aiyappan of IV CSE - Second Prize and Mr. Sultan Abdul of II MECH - Third Prize. Winners of various activities were felicitated on 15.09.2022. Mr. M. Gokul, IV CSE student delivered welcome address. Dr.S.Sivakumar, Vice Principal and Advisor / IEEE STB delivered motivational talk. Dr.S.M.Uma, HOD/ CSE and Dr. P.P. Santharaman, DRC Convener felicitated. The event was coordinated by Ms. S. Abikayil Aarthi, AP/ CSE, KCE.



5. Technical Symposium eBlast'22

Department of Electronics and Communication Engineering and IEEE Student Branch jointly organized a National Level Technical Symposium eblast'22 on 15.10.2022. Ms.V.Maheswari of IV ECE and Treasurer – IEEE STB welcomed the gathering. Dr.R. Rajendran, Secretary, KCE delivered presidential address, in his address he stressed the importance of organizing technical events and motivated the students to utmost utilization of the library. Dr.J.Arputha Vijaya Selvi, Principal and IEEE SBC delivered special address. In her address, she briefed the skill development schemes such as "Nalaiya Thiran" and "Naan Mudhalvan" introduced by the Government of Tamil Nadu. Also she stressed the students to upgrade their skills with latest technologies. Dr.S.Sivakumar, Vice Principal delivered the felicitation address. **Mr.J.Alexandar**, Assistant Engineer, Public Works Department, Thanjavur delivered Inaugural address. In his inaugural address he motivated the students and highlighted the challenges and opportunities available in the Electronics and Communication Engineering. Mrs.N.Mangaiyarkarasi HOD/ECE distributed the cash award and prizes to the winners and participants. Mr. S. Abimaneu, IV ECE student delivered vote of thanks.



6. Mini Project Expo

Department of Electronics and Communication Engineering and IEEE Student Branch jointly organized a Mini Project Expo on 15.10.2022. 13 batches of students actively exhibited their prototype and were evaluated by Dr.P.Narasimman, AP/EEE and Mr.Arockiaraj, AP/ECE. Best two projects were awarded with a cash prize.



7. Technical Symposium CISABZ'22

Department of Computer Science & Engineering and IEEE Student Branch jointly organized a National Level Technical Symposium CISABZ'22 on 22.09.2022. Dr.S.M.Uma, HoD/CSE, KCE delivered welcome address. Dr. J.Arputha Vijaya Selvi, Principal, KCE delivered Inaugural Address. Dr.R.Rajendran, Secretary, KCE delivered presidential address. Dr.S.Sivakumar, Vice Principal, KCE offered felicitation. Dr.M.Brindha, AP, NIT, Trichy delivered special address. 48 papers were presented and other events such as Tech Wizard (Technical Quiz), Code Storm (Debugging), UI Design, Delineation (Pencil Sketching), Go-Between (Connection), Boot-Hill (Hand cricket) and Just – a – Min were conducted.



8. Technical Symposium ENIGMA'22

Department of Electrical & Electronics Engineering and IEEE Student Branch jointly organized a National Level Technical Symposium ENIGMA'22 on 23.09.2022. Dr.A.Albert Martin Ruban, HOD/ EEE delivered welcome address. Dr.R.Rajendran, Secretary of Kings College of Engineering delivered his presidential address. Dr.I.ArputhaVijava Selvi, Principal of Kings College of Engineering delivered her Inaugural address. Dr.S.Sivakumar, Vice Principal of Kings College of Engineering delivered his Special address. The symposium souvenir has been released by Principal and received by the chief guest and other dignitaries. Mr.M.Mukesh of III Year EEE, introduced the chief guest. Dr.M.Vijayakumar, Associate Professor, EGS Pillay Engineering College, Nagapattinam delivered cheif guest address. The paper presentation sessions segregated into three parallel sessions. Circuit debugging & Technical Quiz were conducted. The valedictory session started with feedback from the participants. The winners for the paper presentation were awarded with cash prize. Other technical and Non Technical events such as Technical Quiz, Circuit debugging, Robotics (Line follower), Paper Wings, Dumb Charades, Short Film was conducted and winners were awarded with certificates. Finally, Vote of Thanks was delivered by Mr.A.Sarath Kumar of final year EEE.



9. Webinar on Robotics - in Research Perspective

Research & Development Section and IEEE Student Branch jointly organized a webinar on **Robotics – in Research Perspective** on 26.09.2022. **Mr. Aditya Kameswara Rao Nandula,** Senior Project Officer, Chair - IEEE YPAG Kharagpur Section, IIT Kharagpur delivered lecture. In his lecture, he addressed several researches in the areas of robotics which shows a great attention to physical interface between robotic system and its environment. Also, he presented some of the real-time implementation of humanoid robots in the sector of medicine and waste management. 158 students of our institute participated and got benefitted. The event was coordinated by Mr. T. Pasupathi, AP/ ECE, KCE and Mr. J. Niranjan Samuel, JRF/ECE-R&D.



10. Test your Mettle

To enrich the minds of budding Engineers, CSE department in association with IEEE student branch organized **"Test your Mettle"** on 30.9.2022. The event was organized with an aim to improve the student's reaction times with timed challenges, quick-fire rounds aimed to test their speed, attention, and ability to react quickly and accurately. Totally 56 students from II, III and IV year CSE participated in the event. The competition was conducted in two rounds; out of 56 students 18 students shortlisted to final round and Ms.P.Deepika, Ms. N.Karkuzhali, Mr. T.Sathish bagged first, second and third prize respectively. The activity helped in improving the student's memory attention, processing speed, mental flexibility, reaction time and problem solving in turn with increased productivity.



1. IEEE Day celebrations

IEEE student branch of KCE organized IEEE day celebration and awareness of MyIEEE Program on 13th October 2022, 12 IEEE student members actively participated in the event. Ms.J. Fasila Afreen, IEEE student Branch Chairperson gave a talk on IEEE Membership and its Benefits. Group photos was taken and submitted to the IEEE Day Photo contest.



2. Three Days Workshop on CCTV Installation and Servicing

Department of Electronics and Communication Engineering in association with IEEE STB 16621 organized Three days workshop titled "CCTV Installation and Servicing" from 12th October 2022 to 15th October 2022. Mr.P.Raja Pirian, AP/ECE, KCE in his lecture explained about the need for Closed Circuit Television System, Basics of CCTV and its assembly. He also explained about the Digital Video Recorder system and IP address concepts. Mr.T.Jeyaseelan, AP/ECE in his lecture, briefed about DVR, how to install the hard disk and its accessories. He also explained the types of hard disks used for DVR and the recording formats. Finally, he explains the real-time functionalities of CCTV in a detailed manner. Mr. George Nelson, George Tech Solutions, Kumbakonam demonstrated about various cameras and its accessories, how to install camera with DVR. Then they demonstrated how to setup the DVR for real-time capturing. Mrs.D.Vennila, AP/ECE, Mr.R.Thandayuthapani, AP/ECE & Mr.W.Newton David Raj, AP/ECE were the coordinators. 84 students participated and got benefitted.



3. Seminar on Multi-Objective Based Optimal Planning of DG in Distribution Network

Seminar on Multi-Objective Based Optimal Planning of DG in Distribution Network was organized on 13.10.2022. During the session the resource person discussed the importance of multi-objective evolutionary algorithms in the field of Power System Engineering. He explained the importance of Multi-Objective Hybrid WIPSO – GSA algorithm which is a hybrid version of WIPSO algorithm and GSA. He explained how hybridization is done in Multi-Objective Hybrid WIPSO-GSA Algorithm, by merging the strength of social thinking in WIPSO with the strength of local search capability in GSA, so that fine balance between exploration and exploitation abilities is achieved. He pointed out the drawbacks and weakness in weighted sum method of multi-objective optimization and how it is eliminated in the pareto based Multi-Objective Hybrid WIPSO-GSA Algorithm while solving large scale optimization problems. In order to provide deeper insight on the multi-objective optimization technique, he explained the application of Multi-Objective Hybrid WIPSO-GSA Algorithm in solving optimal Distributed Generation (DG) allocation problem considering different objectives. At the end of the session faculties asked questions regarding implementation of multi-objective optimization techniques in different areas of Power Engineering and also expressed their willingness to publish research papers using multiobjective optimization algorithms in near future.


4. Workshop on Intellectual Property Rights (IPR)& Patents and Design filing R&D Section in association with Rajiv Gandhi National Institute of Intellectual Property Management (RGNIIPM), Government of India, Nagpur (Under National Intellectual Property Awareness Mission) and IEEE Student Branch 16621 jointly organized an online workshop on Intellectual Property Rights (IPR) & Patents and Design Filing on 18.10.2022 between 12.30 p.m. to 1.30 p.m. Himanshu Chandrakar, Examiner of Patents & Designs, RGNIIPM, Nagpur was the resource person. In his lecture, he briefed on Intellectual Property, Importance and Significance of IPR, Utilization and Commercialization. Under IP, he briefed on Patents, Designs, Trademarks, Geographical Indications and Copyrights. Before filing a patent, secrecy of the design has to be maintained. While concluding his session, application procedure for filing a patent was briefed. Totally 254 participants from other institutions and from our institute participated in the programme.



5. Workshop on Python with Data Science

Department of Computer Science & Engineering in association with IEEE STB 16621 organized a workshop on **"Python with Data Science"** on 19.10.2022. The workshop was handled by **Mr. S. Ram Prakash**, Teaching Faculty / CSE, UCE, Thirukkuvalai. He highlighted the importance of Python and basic requirements for that language. In addition to this, he also explained about the concepts of using Python pandas & Data Analysis, which was very well understood by the participants. In the afternoon session practical classes took place and queries from participants were clarified. Finally one Quiz competition was also conducted by coordinators through KAHOOT app, regarding the workshop content to analyze the student understanding about the workshop. Around 104 participants from various educational institutions all over the state eagerly participated in the workshop. Ms. S. Abikayil Aarthi, AP/ CSE, Ms. N. Dhamayandhi, AP/ CSE, Ms. S. Priyadarshini AP/ CSE were the coordinators for this workshop.



6. Renewable Energy Sources

Department of Electronics and Communication Engineering in association with IEEE STB 16621 organized a Guest Lecture on Renewable Energy Sources on 20.10.2022. **Mr.J.Arockia Raj**, Assistant Professor /EEE, Kings College of Engineering, Punalkulam was the resource person. In his lecture, he briefed on the various Renewable Energy Sources namely, Solar Energy, Wind Energy, Tidal Energy, Wave Energy and Bio Mass. Students gathered practical knowledge related to the theoretical concept. 45 students participated and got benefitted. The programme was coordinated by Mrs. N. Mangaiyarkarasi, HOD/ECE.



7. Electronic Art 2.0

IEEE STB 16621 organized an event titled Electronic Art 2.0 during 01.10.2022 and 15.10.2022. For the contest, 20 participants submitted their creativity through Google forms. On evaluation of the received entries three entries were selected. Art by **Mr.B.Sridhar** from Kamaraj College of Engineering and Technology Virudhunagar stood in I position, Art by **Mr.J. Divagar** of Knowledge Institute of Technology, Salem stood in II position and Art by **Ms.S. Sowmiya** from St. Joseph's College of Engineering and Technology, Thanjavur stood in III position. Certificate of Appreciation was given to the outstanding design and participation certificate was given to all participants. The event was coordinated by Mr. T. Pasupathi, AP/ECE and Mr. J. Niranjan Samuel, JRF/R&D.



8. VLOG Competition

Department of Computer Science and Engineering in association with IEEE STB 16621 organized an event titled VLOG Competition during 01.10.2022 and 12.10.2022. 20 Students from various institutions submitted their entries through Google form. Based on evaluation, best three videos were selected and certificate of appreciation was provided. Log by **Mr.Mao Timong** from Kirirom Institute of Technology, Cambodia stood in I position, log by **Mr.M.Vasanth**, **Mr.M.Guhan & Mr.N.Naresh Kumar** of Kings College of Engineering stood in II position and Log by Ms.M. Roohi Shifa & Ms.P.A.Bharathi from Kings College of Engineering stood in III position. The event was coordinated by students J. Fasila Afreen, M. Suriya prakash and M. Siva and staff coordinator Ms. R. Sugantha Lakshmi, AP/CSE.



1. Workshop on Microgrid Technology for Renewable Energy Systems

Department of Electrical and Electronics Engineering in association with IEEE STB 16621 organized a workshop on Microgrid Technology for Renewable **Energy Systems** on 04th November, 2022. Dr.S.Sivakumar, Vice Principal in his lecture discussed on the Indian Power system for planning and operational divided into five four purposes is regional grids, major grid components: electricity generators, transmission lines, distribution networks, and consumer use. Also he listed the top companies in Indian Electricity & Power Sector. Ms.A.Prabha, AP/EEE, in her session discussed that Microgrid is one of the advanced small-scale centralized electricity systems and it usually contains energy storage resources, Distributed Generation (DG) units, and loads. Microgrid can improve customer reliability and resilience to grid disturbances. Dr.R.Arulraj, AP/EEE discussed on basic power system components viz. generators, transformers, transmission lines, busses, and loads. Also he demonstrated the calculation of the optimal size of DG at each bus using the exact loss formula and the optimal location of DG using loss sensitivity factor. Also shared the results obtained from the proposed technique, tested on standard 33-bus test system and compared with the results with exhaustive load flows. Mr.J.Arokiaraj, AP/EEE discussed on designing and testing of efficient renewable energy system.



2. FDP on " Problem Solving and Python Programming"

Department of CSE and IEEE STB 16621 jointly organized a three days faculty development programme on **Problem Solving and Python Programming** was organized from 21.11.2022 to 23.11.2022. Mr. M. Arun, AP/CSE and faculty members from CSE department handled the sessions. The programme covers computational thinking and problem solving, data types, files modules and

packages in Python. Hands-on- session were also conducted. Around 15 participants from KCE participated and got benefitted.



3. Technical Activity

Department of ECE and IEEE STB 16621 jointly organized a session on **Introduction to Electronics Engineering** on 23.11.2022. During the session, the basics of electronics engineering such component familiarization and color coding technique were briefed. At the end of the session a puzzle was conducted to find the value of the resistor. Around 80 students participated in the session.



1. Internal Seminar

Department of Computer Science & Engineering in association with IEEE STB 16621 jointly organized an internal staff seminar on 20.12.2022. The objective of this seminar is to gain insight knowledge about human computer interaction using machine learning techniques. Ms.S.Abikayil Aarthi, AP/CSE delivered the lecture on the topic "**3D Hand Gestures Segmentation and Optimized Classification using Deep Learning**". She compared computer with human and how the era of communication between human with computer created. She explained the hidden markov model's principles which is used to track the human emotions which depends on head gestures. She described about the types of input which is used for analyzing the human gestures which belongs to three inputs. She concluded that the existing inputs may be extended to capture the more emotions from the human.



Internal seminar session snapshot

<u>January, 2023</u>

 Department of Electronics and Communication Engineering in association with IEEE STB 16621 jointly organized three days winter crash course on **"C, C++ programming for Placements"** for final year ECE students from 11th January 2023 to 13th January 2023. The main objective of this course is to train the students in C and C++ programming. Ms.K.Gayathri, Student of IV ECE welcomed the gathering.

Session 1 was handled by Mr.T.Pasupathi, Assistant Professor/ ECE. In his lecture, he briefed on the fundamentals of C- Language, data types, keywords and how the keywords are used in C-Programming. He also explained about operators used in C-Language such as arithmetic operators, relational operators, conditional statements and loop statements. He demonstrated each syntax with simple examples. Session 2 was handled by Mr.P.Raja Pirian, Assistant Professor /ECE. During his session, students are trained on working with Arrays in C, String Handling, Function, Pointers, Structures and Unions, Linked List & File Management. Finally he demonstrated the students on the project - student Information system, which handles the students' personal and academic information.

Session 3 was handled by Mr.T.Jeyaseelan, Assistant Professor /ECE. In his lecture, he briefed on the variables, strings, If-else statement, loops, functions call by value and call by reference, recursion and recursive function in C++, data input and output, classes & objects, constructors and destructors, operator overloading. Session 4, was a hands on session, students practiced with the programs based on the topics learned during session-3. Session 5 was handled by Mrs.U.Jeyamalar, Assistant Professor/ECE. During her session, she delivered lecture on header files, arrays, pointers, memory management basics, classes and objects, operator overloading, vectors, inheritance, polymorphism & exception handling. Session 6, was a hands on session, students practiced with the programs based on the topics learned by Mrs. D.Vennila, AP/ECE and Mr. R. Thandayuthapani, AP/ECE.



2. Women's Cell in association with IEEE Student Branch organized a awareness programme on "Engineering Ethics" on 24th January 2023 to all faculties and first year students. Dr.T.Shanthi, Associate Professor/ECE, KCE acted as resource person. The main objective of this programme is to create awareness among students and realize self discipline which plays a vital role throughout their life. In her address to the students, she explained about self discipline, which gives inner strength and a way to control ourselves. It is one of the most and useful skills to achieve success and everyone should possess this quality. A student who stays in control has the ability to take charge of her actions and reactions.



<u>February, 2023</u>

The two day National Level Workshop on **"Real Time Project Design Using Arduino"** was organized for the benefit of students community those who are interested to implement their innovative ideas using the arduino Kit. The workshop conducted from 23rd February to 24th February. Totally 56 students have enthusiastically participated in this workshop.

Ms.U.Jeyamalar, Assistant Professor / ECE welcomes the gathering. Mrs.N.Mangaiyarkarasi, HOD/ECE delivered the Inaugural address. In her speech, she motivates the students towards innovation and how the workshop helps the students to do their ideas in implementation. Ms. K.Jayashree, III year ECE, introduced the Resource persons. The resource person details were as follows:

- Day-1-Session -1 : Mr.P.Raja Pirian, Assistant Professor, KCE.
- Day-1-Session -2 : Mr.T.Pasupathi , Assistant Professor, KCE.
- Day-2-Session -3 : Dr.P.Narasimman, Assistant Professor, KCE.

Day-2-Session-4

: Mr.T.Jeyaseelan, Assistant Professor, KCE.



1. Department of ECE in association with IEEE STB 16621 organized a seminar on "Electro coagulation of car wash water Using various electrodes" on 06.03.2023 for the Mrs.N.Mangaiyarkarasi, HOD/ECE welcomed the faculties. Mr.S.Ramarajan, Assistant Professor/ECE delivered lecture. In his lecture, he listed out how electrocoagulation process is introduced in order to treat the polluted water from car wash service centres. All the faculties were attended the seminar. This study provides a comparison of the efficiency of two different electrode combinations that is Ai and Fe-steel electrode and also to determine the effectiveness at various voltage ranges that is at 10v, 20V and 30V.



2. Women's cell in association with IEEE STB 16621organized a guest lecture on "Innovation and Technology for gender equality" to all women staff members and all girl students owing to International Women's Day. Mrs. G. Prabavathy, Sub Inspector of Police, Crime and Criminal Tracking Network & Systems, District Police Office, Thanjavur and Ms.Jaishree Kamalanathan, Senior Analyst, HCL Tech, Bangalore (Alumni 2015-2019 Batch) acted as resource persons. The following competitions were conducted for the students, Cook Without fire, Singing, Fashion Walk, Dance, Drawing, and Speech. Resource person Mrs. G. Prabavathy explained gender equality which is very important for a healthy society. She insisted the impact of technology which affects the teenage students. Education to every girl child results in overall development of nation. She pointed out that there is no age limit to succeed in life. Working women have to take care of both family and profession. It is a very big challenge to them. She explained the difficulties faced by her and how she converted them as stepping stones to success. She insisted that women have intuition power and it is our responsibility to utilize it. Ms.Jayashree Kamalanathan, suggested the students to be bold to face the challenges in life. Also she stressed that Parents play the most important role in our life. There is no basis for children to disrespect their parents because respecting them is the only way of showing gratitude. Notably, parents are the valid reasons of our existence, and we should be courteous, loyal and help them in their need.



3. Department of EEE in association with IEEE STB 16621 organized a seminar on "Partial Discharges Classification Methodsin XLPE Cable: A Review" for the faculty members of EEE Department on 31.03.2023. The main objective of the internal seminar is to provide an exposure to our faculty members on partial discharges classification methods in XLPE cable. Eight faculty members participated and got benefitted.



4. On behalf of the Department of EEE and IEEE Branch organized an Internal Seminar on "Energy Storage - Technologies and Applications" for the faculty members of EEE Department on 31.03.2023. The main objective of the internal seminar is to provide an exposure to our faculty members on Energy Storage - Technologies and Applications. Eight faculty members participated and got benefitted.



5. Second and Third year EEE students were taken for a one day field visit for to 230 / 110 kV Sub-Station, Thirukannurpatty, Vallam Road, Thanjavur on 30.03.2023 & 31.03.2023. The Students visited the following places at 230kV Sub-station: Control house, Battery room and Switchyard. 38 students from III EEE accompanied by 04 staff members visited on 30.03.2023 and 30 students from II EEE accompanied by 04 staff members on 31.03.2023.



 Department of ECE in association with IEEE STB 16621 organized a seminar on "IoT based Smart Agriculture" on 13.04.2023. Mrs.N.Mangaiyarkarasi, HOD/ECE welcomed the faculties. Mr.R. Sathayraj, Assistant Professor/ECE delivered lecture.



2. Department of ECE in association with IEEE STB 16621 organized a local visit to Siemens Center of Excellence, National Institute of Technology, Tiruchirappalli on 12.04.2023.



 Department of ECE in association with IEEE STB 16621 organized a seminar on "5G Evolution: A View on 5G Cellular Technology" on 13.04.2023. Mr.A. Herald, Assistant Professor/ECE delivered lecture.



4. The International Conference on Computing, Communication and Control was organized on 26.04.2023. The conference was started with a welcome address by Dr.J.Arputha Vijaya

Selvi, Principal & IEEE STB SBC followed by Presidential address by Dr. R. Rajendran, Secretary, KCE. The inaugural address was given by the Chief Guest of honour Dr. K.Vasudevan, Professor - Emeritus, Cochin University of Science and Technology (CUSAT), Kochi, Kerala. In his inaugural speech, he detailed about the MEMS technology and Microwave antennas. The hard and soft copies of the conference proceedings were released by the chief guest Dr. K.Vasudevan and received by Dr.R.Rajendran, Secretary and Dr.J.Arputha Vijaya Selvi, Principal. The special invitee of the function, Dr. Arun K. Majumder, Adjunct Professor, Colorado State University, USA delivered the invited talk on "Modern Communication Techniques". Dr. K.Vasudevan, delivered invited talk on "Microwave Communication". Dr.S.Albert Alexander, Associate Professor, VIT, Vellore delivered invited talk on "Nuances of Machine Learning". Dr. G. Tamilarasi, Professor, Department of IT, University of Technology & Applied Sciences-AlMusannah, Sultanate of Oman delivered invited talk on "Power of Predictive Analytics- Data Science **Perspective**". All the invited talks were conducted as parallel sessions. Nearly 80 research articles were presented by the students, research scholars and faculty members from various reputed institutions across India and abroad.



 Department of CSE in association with IEEE STB 16621 organized a workshop on "Machine Learning with Google Colab" on 28.04.2023. Sessions were handled by Dr. J. Rajiv Gandhi, Assistant Professor, Department of Computer Science, Government Arts and Science College for Women, Paramakudi.



<u>May, 2023</u>

1. Research & Development Section in association with IEEE STB 16621 organized KINGS PROJECT EXPO' 2023 on 04.05.2023. This project expo aims to encourage the students' creativity and innovations on Engineering & Technology. Dr. P.P.Shantharaman, DRC Convener, welcomed the gathering. Dr.J.Arputha Vijaya Selvi, Principal, inaugurated the expo and delivered the inaugural address. In her speech, she emphasized the significance of innovations in projects. Mr.T.Pasupathi, AP/ECE, introduced the chief guest Mr.Rajkumar Kalaimani, Senior Engineer, Altimetrik, Chennai. Mr.Rajkumar Kalaimani delivered a keynote address on current scenario in IT sector. Dr. S. Sivakumar, Vice Principal, delivered the felicitation address. He insisted the students to enhance their technical knowledge both in software and hardware. The projects of internal and external students were evaluated by senior faculty members of every department nominated as jury's. Totally 62 batches participated in the project expo. Jury's evaluated the projects and gave feedback & valuable comments to the students. Based on the innovation, presentation, implementation and demomarks was awarded by the jury's. Two projects were selected for rewards from each department. One project was selected for the **Best Project Award** from all disciplinary. The valedictory ceremony of the project expo was started at 01:30 pm at Pallava Hall.Dr.R.Rajendran, Secretary, distributed the prizes and certificates to the participants.The cash prize was given to the best project awardwinners. Project Expo came to an end with vote of thanks by Dr.P.Narasimman, AP/EEE.



2. Department of Computer Science & Engineering in association with IEEE STB 16621 organized an internal workshop on "POWER-BI" on 18.05.2023. Er. S. Abikayil Aarthi,

Assistant Professor, Department of Computer Science & Engineering, Kings College of Engineering, Punalkulam, Pudukkottai handled the session. During the session, she explained about the technology-driven business intelligence tool which is an array of software services. Opportunities and scope for engineers also elaborated the key aspects and role of innovation in choosing POWER-BI as career option. Also, she explained with real world examples. She listed the availability of components and features in that tool. The resource person explained about the direct and indirect benefits of business available with the help of tool. The program was eagerly attended by all participants, who gained new knowledge from it. Students from second and third year of CSE discipline totally 120 participants participated in the programme and got benefitted.





3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year 2022-23

Entrepreneurship Development Cell

S. No	Name of the Activity	Page No.
1.	Workshop on Entrepreneurship and Innovation as Career Opportunity.	02
2.	Awareness Programme on Entrepreneurship and Innovation and TNSI – 2022.	05
3.	Programme on Achieving Problem – Solution Fit and Product Market Fit.	07
4.	Workshop on Entrepreneurship Skill, Attitude and Behaviour Development.	09

19/mm3

Coordinator, ED Cell

27/12023. J.m Principal



ACADEMIC YEAR 2022-23 (ODD SEMESTER) 02.11.2022 Workshop

on

"Entrepreneurship and Innovation as Career Opportunity" 30.11.2022

REPORT

Institution Innovation Council and Entrepreneurship Development Cell of Kings College of Engineering organized a workshop on "Entrepreneurship and Innovation as Career Opportunity" on 30.11.2022.

Objective:

The main aim of the workshop is to create awareness and insist the need of self employment through innovation in order to solve the problems faced by the people, by the society by the nations all over the world along with individual prospects in economic conditions.

Resource person:

Dr. B. Barankumar, Assistant Professor, Department of Management Studies (T & P), Kings College of Engineering, Punalkulam, Pudukkottai,

Participants:

1st Year students of all discipline = 285 participants

Inaugural Session:

Inaugural session was started with Welcome address and Introduction about the Resource Persons delivered by Mr. A. Sivabalan, President, IIC and ED Cell.

Session highlights: (Awareness Programme on One Million Idea)

In this session, resource person explained about the opportunities and scope of Entrepreneurship for the engineers also elaborated the key aspects and role of innovation in choosing entrepreneurship as career option. Also, he explained with real world examples about various successful entrepreneurs, Technopreneurs, Sociopreneurs, women entrepreneurs and etc. He listed the availability of funding schemes with subsidies offered by Government of India and Tamil Nadu State Government to promote innovation culture. The resource person explained about the direct and indirect contribution by entrepreneurs to themselves, society,

nation and to the world. The program was eagerly attended by all participants, who gained new knowledge from it.

Benefits in terms of Learning/Skills/Knowledge obtained:

- The students are aware about the concept of entrepreneurship and know about innovation.
- Schemes provided by the State and Central Governments to promote innovation among students.
- To make use of the opportunities available to before them to become successful entrepreneurs.

Valedictory Function:

Finally, vote of thanks was given by Dr. K. Sudhakar, Coordinator, ED Cell.

Event Photographs





Ecent Photograph-3

Event Photograph-4



Event Photograph-5

Coordinator - ED Cell

Vice President-IIC& AP/EEE President-IIC&Principal







ACADEMIC YEAR 2022-23 (ODD SEMESTER) 27.01.2023 An Awareness Programme

on

"Entrepreneurship and Innovation and TNSI – 2022" 23.01.2023

REPORT

Institution Innovation Council and Entrepreneurship Development Cell of Kings College of Engineering organized an Awareness Programme on "Entrepreneurship and Innovation and TNSI 2022" on 23.01.2023.

Objective:

To educate people, society nations across the globe, and individuals about the necessity of selfemployment through innovation to overcome problems faced by people and societies all over the world.

To provide the necessary information about TNSI - 2022 and the registration process

Resource person:

1. Mr. M. Martin, Field Coordinator, EDII - TN, Chennai, Hub - SASTRA University, Thanjavur

2. Mr. Sam Jayakumar, Training Coordinator, EDII - TN, Chennai

Participants:

Ist Year students of all discipline = 258 participants and 67 student members of IIC & ED Cell attended the programme through online mode.

Inaugural Session:

The inaugural session kicked off with a welcome address and introduction of the resource persons delivered by Dr. K. Sudhakar, Coordinator, ED Cell.

After honoring the resource persons with shawl Dr. S. Sivakumar, Vice Prinicpal delivered presidential address.

Session highlights:

Mr. M. Martin began the session by defining entrepreneur and entrepreneurship, as well as their characteristics, challenges, and opportunities. He distinguished between employee and entrepreneur.

In addition, the importance of innovation in the development of an entrepreneur was highlighted. He listed the domains where problems can be found. Finally, he concluded his session by providing a brief overview of EDII - TN and their role in facilitating initiatives among students at various educational levels (engineering, polytechnic, arts, science, and so on).

Mr. Sam Jayakumar began his session by explaining TNSI-2022, the reason for participating in the event, the procedures to be followed in the registration of ideas, and the steps that students must take to present their innovative ideas.

Finally, he spoke briefly about the awards and rewards that had been announced.

Benefits in terms of Learning/Skills/Knowledge obtained:

- Students understand the concepts of entrepreneurship and innovation. .
- Seize the opportunities to become a successful entrepreneur.
- Gain knowledge of TNSI 2022 registration and participation procedures. .

Valedictory Function:

Finally, vote of thanks was given by Mr. M. Jayaseelan, Student Coordinator, Department of Civil Engineering.

Event Photographs



Event Photograph-1

Event Photograph-2



Event Photograph-3

nor3 Coordinator - ED Cell



1013 5- Mm 27/11 President-IIC & Principal



ACADEMIC YEAR 2022-23

16.02.2023

Programme on "ACHIEVING PROBLEM - SOLUTION FIT AND PRODUCT MARKET

FIT" & "TNSI - 2022"

On

13.02.2023

REPORT

Institution Innovation Council and Entrepreneurship Development Cell of Kings College of Engineering organized a programme on "Achieving Problem – Solution Fit and Product Market Fit" on 13/02/2023.

Objective:

To get into the problems of various domains and to come with new solution. To design and create the product which could be fit to the market.

Resource person

1. Mr. G. Krishnakanth, Entrepreneur & Co - Founder, 3D SIRPI, Thanjavur,

Participants:

IIC and ED Cell members and interested students of H^{ad}, HI^{ad}, IVth year students of all disciplines 100 participants attended the programme.

Inaugural Session:

The inaugural session started with a welcome address by Mr. R. Sulthan, Department Student Coordinator (Mechanical) of ED Cell and introduction about the resource persons delivered by Ms. M. Roohi Shifa, Student Member (CSE), ED Cell.

Resource person was honored with Shawl by Dr. R. Shankar, Assistant Professor, and Department of Mechanical Engineering & Coordinator of IIC.

Session highlights:

Mr. G. Krishnakanth delivered a vibrant talk and shared his experience gained as an entrepreneur and Co-Founder of 3D printing technology.

He narrated about the problems pertaining to the various domains like Health Care. Technology, Agriculture and etc., taking up the problems and providing innovative solutions with real world examples.

He gave tips to convert ideas into a successful product. And explained how to reach the market through which the consumers can be approached for selling of products. Lastly, he also recalled his candidature and participation in Tamil Nadu Student Innovators (TNSI), he guided with the

procedures to be followed in the registration of ideas, and the steps that students must take to present their innovative ideas.

He expressed his joy at achieving an award in the TNSL. The student members actively participated with more interactions and the resource person clarified doubts asked by the present TNSI participants. Positive feedback was given by the participants.

Benefits in terms of Learning/Skills/Knowledge obtained:

- · Student members gained hands on experience n problem-solving techniques.
- . To get succeed in creating and manufacturing goods that might work in the market.
- . Acquired understanding of TNSI 2022 participation and registration requirements.

Valedictory Function:

Finally, Mr. Ajav, Student Member (ECE), ED Cell delivered a vote of thanks.

Event Photographs



Event Photograph-1

Event Photograph-2





ACADEMIC YEAR 2022 - 23

03.03.2023

Workshop

011

"Entrepreneurship Skill, Attitude and Behaviour Development"

REPORT

MoEs - Institution Innovation Council and Entrepreneurship Development Cell of Kings College of Engineering organized a workshop on "Entrepreneurship Skill, Attitude and Behaviour Development" on 27.02.2023.

Objective:

To guide and provide necessary skills to the students who are aspiring to be entrepreneurs to turn their creative ideas into successful startups.

To impart skills, attitude and behaviour required by entrepreneurs.

Resource person:

1. Mr. M. Vivekanandan, Coordinator, Start - Up & Assistant Professor, Kings College of

Engineering, Punalkulam, Pudukottai

Participants:

IIC and ED Cell members of II, III and IV year students of all disciplines 75 participants attended the programme.

Inaugural Session:

The inaugural session started with a welcome address by Dr. K. Sudhakar, Coordinator of ED Cell.

Dr. R. Shankar, Convener of the IIC, introduced and honored the resource person before the gathering.

Session highlights:

The speaker highlighted some of the key characteristics that make up an entrepreneur, such as resilience, ambition, risk-taking and resourcefulness. These attributes are what make entrepreneurs stand out from the crowd and give them the edge in business. With these traits, entrepreneurs can create innovative solutions to problems and capitalize on opportunities that others may not see. Nurturing empathy and entrepreneurial values can be achieved through various approaches such as thinking, doing, feeling, perceiving, expressing ideas, structuring tasks, and acquiring knowledge.

Building strategic thinking and scenario planning abilities, as well as having the capacity to make prescient choices with only a bit of information is important.

Benefits in terms of Learning/Skills/Knowledge obtained:

Student members gained

- The ideologies to grow their Innovative Ideas and eventually become prosperous Entrepreneurs.
- To align their attitude, skills to become a successful entrepreneur.
- To stimulate a variety of entrepreneurial behaviors such as seeking and seizing opportunities, networking, taking initiative, convincing others, and making intuitive decisions.

Valedictory Function:

Finally, Ms. Kavi Nila, member of ED Cell delivered a vote of thanks.

Event Photographs



Event Photograph-1



Event Photograph-2



Event Photograph-3





10/3/2023 J.m.

President-IIC & Principal