K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TEACHING AND LEARNING

Details of Content beyond syllabus Activities-2024-25 (EVEN)

6th Semester

Semester/ Section	Course Name	Content beyond syllabus activity conducted	POs Covered	Faculty	Number of Activity
VI/A	EMBEDDED SYSTEM DESIGN/BEC601	Mini project	1,2,3,4,5,6, 7,9,10,11,1 2	Dr. Dinesh Kumar D S	17
VI/B	EMBEDDED SYSTEM DESIGN/BEC601	Mini project	1,2,3,4,5,6, 7,9,10,11,1 2	Satish Kumar B	17
VI/A	VLSI Design and testing |BEC602	Poster presentation	9,10,12	Dr. Anita P	18
VI/B	VLSI Design and testing |BEC602	Poster presentation	9,10,12	Divya.D	18
VI/A	DATA SECURITY/ BEC6I3B	Mini Project	5,9,10,12	Dr. P N Sudha	70
VI/B	DATA SECURITY/ BEC6I3B	Mini Project	5,9,10,12	Dr.Saleem S Tevaramani	63
VI/A	Introduction to Artificial Intelligence BAI654D	Online Course and Case Study	5,8,9,10,12	Dr. Electa Alice Jayarani A	18
VI/B	Introduction to Artificial Intelligence BAI654D	Online Course and Case Study	5,8,9,10,12	Dr.Bharathi Gururaj	16

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
TEACHING AND LEARNING

Content beyond Syllabus

Academic Year	2024-25 (Even)
Name of the Faculty	Dr. Dinesh Kumar D S
Course Name /Code	EMBEDDED SYSTEM DESIGN/BEC601
Semester/Section	VI/A
Activity Name	Mini project
Topic Covered	EMBEDDED DESIGN CONCEPTS AND ARM CONTROLLER APPLICATIONS
Date	10/4/2025 to 31/5/2025
No. of Participants	68
Objectives/Goals	• To improve the self-learning and programming skills of students • To improve the communication skills of students. • To improve the ICT usage skills of students
ICT Used	PPTs
Appropriate Method/Instructional materials/Exam Questions • Initially students identified projects based on modules as per syllabus • Later students were asked to pick any application of their interest, program the application, prepare PPT, present the PPT and give demo. • Finally all Students prepared reports and submitted as activity based learning.	
Relevant PO's	1,2,3,4, 5,6,7,9,10,11,12
Significance of Results/Outcomes	• Students tried to explore the applications of programming languages, modern tools, improve their self-learning, communication, and project management skills as an individual and team member. • Around 68 Students formed 17 teams with different projects , delivered their presentation
Reflective Critique	• The activity improved the self-learning of students. • The activity provided a platform for students to interact with peers, improve their communication skills and work as individuals.

Signature of Course In charge

Signature of HOD ECE

Name	USN	Title of Mini Project
Adithya.S	1KS22EC004	UART Communication Between Two ARM Boards
Archana SK	1KS22EC016	
Ashwini P	1KS22EC018	
Anusha MP	1KS22EC013	
Md Taha	1KS22EC065	4 in 1 multipurpose robot// ARM based AI driven Smart Glove
Megharaj CM	1KS22EC064	
Keerthana K	1KS22EC049	
Ashok	1KS22EC017	
Abinay	1KS22EC001	Voice Activated Mobility Chair
C Harika	1KS22EC023	
G Deepa Sree	1KS22EC038	
M Sushmitha	1KS22EC059	
Arun Chowdary	1KS22EC029	
ajith d	1KS22EC005	Smart Dustbin Using ARM CORTEX-M Microcontroller
CHETAN sp	1KS22EC024	
dinesh n	1KS22EC033	
amarendra	1KS22EC046	
purushotham	1KS22EC057	
Anupriya T	1KS22EC012	RF controlled robot for human detection
Deeksha T S	1KS22EC032	
Gehena B S	1KS22EC037	
Inchara C	1KS22EC044	
Ankit P	1KS22EC010	Digital Thermometer Using ARM CORTEX
Ankita P Budni	1KS22EC011	
Darshan gowda mk	1KS22EC030	
Gagan V S	1KS22EC034	
chidambar p m	1KS22EC026	Collision Detection Robotic Vehicle Using ARM
Chinmay s	1KS22EC027	
d n mithun	1KS22EC028	
Karthik d	1KS22EC047	
Adith P	1KS22EC003	IoT based Wireless Controlled Smart Transportation System
Akash S	1KS22EC006	
Harish M V	1KS22EC041	
K Vamshikrishna	1KS22EC045	
Monika	1KS22EC066	Tea coffee vending machine based on FSM model
N.Hema	1KS22EC068	
Nisarga	1KS22EC070	
Lohith Yaadav R	1KS22EC055	Human-Following Robot using LPC2148 ARM7 Microcontroller
Kiran G	1KS22EC050	
Manoj Kumar N	1KS22EC062	
Gowtham M	1KS22EC039	

Gayathridevi B	1KS22EC036	Simple GPIO Control ARM Microcontoller
Kavya G	1KS22EC048	
Lakshmi M	1KS22EC052	
Manasa Chowdary	1KS22EC061	
Amulya M N	1KS22EC008	Smart Dustbin using ultrasonic sensor
Meghana S R	1KS22EC063	
Monisha B N	1KS22EC067	
Archana M	1KS22EC014	Digital thermometer using ARM cortex -M
Bhoomika D	1KS22EC021	
Hitha SM	1KS22EC043	
Lekhana BH	1KS22EC054	
Amrutha P	1KS22EC007	Real time presence detector
Avinash V S	1KS22EC019	
Harshan M J	1KS22EC042	
Neha M	1KS22EC069	
Deeksha S Reddy	1KS22EC031	LED Blinking with Push Button Using ARM Controller
Gagana S	1KS22EC035	
G Deekshitha	1KS22EC040	
Madhu	1KS22EC058	
Ayyaji Madhava HN	1KS22EC020	PATIENT HEALTH MONITORING SYSTEM
C Rahul	1KS22EC022	
Chethan AG	1KS22EC025	
Kishan V	1KS22EC051	

Adeeba	1KS22EC002	IOT based Weather Station
Anagha KS	1KS22EC009	
Archana N	1KS22EC015	

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DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
TEACHING AND LEARNING

Content Beyond Syllabus

Academic Year	2024-25 (Even)
Name of the Faculty	Satish Kumar B
Course Name /Code	EMBEDDED SYSTEM DESIGN/BEC601
Semester/Section	VI/B
Activity Name	Mini project
Topic Covered	EMBEDDED DESIGN CONCEPTS AND ARM CONTROLLER APPLICATIONS
Date	10/4/2025 to 31/5/2025
No. of Participants	68
Objectives/Goals	• To improve the self-learning and programming skills of students • To improve the communication skills of students. • To improve the ICT usage skills of students
ICT Used	PPTs
Appropriate Method/Instructional materials/Exam Questions • Initially students identified projects based on modules as per syllabus • Later students were asked to pick any application of their interest, program the application, prepare PPT, present the PPT and give demo. • Finally all Students prepared reports and submitted as activity based learning.	
Relevant PO's	1,2,3,4, 5,6,7,9,10,11,12
Significance of Results/Outcomes	• Students tried to explore the applications of programming languages, modern tools, improve their self-learning, communication, and project management skills as an individual and team member. • Around 68 Students formed 17 teams with different projects , delivered their presentation
Reflective Critique	• The activity improved the self-learning of students. • The activity provided a platform for students to interact with peers, improve their communication skills and work as individuals.

Proof:

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
Jnana Sangama, Belagavi-590018, Karnataka

A
Content beyond Syllabus Activity
MINI PROJECT WORK on Embedded System Design(BEC601)
ON
"LPG GAS DETECTOR WITH AUTO CUTOFF REGULATOR USING ARDUINO"
Carried out
by

SHRAVANI G V :1KS22EC091
VISHWAS M K :1KS22EC122
HARSHITH M K :1KS23EC405

Submitted in partial fulfillment for the award of

BACHELOR OF ENGINEERING
IN
ELECTRONICS AND COMMUNICATION ENGINEERING

Under the guidance of

Mr. Satish Kumar B
Assistant Professor, Dept of ECE,KSIT

2024-25

K.S.INSTITUTEOFTECHNOLOGY
#14, Raghuvanahalli, Kanakapura MainRoad,
Bengaluru - 560109

Signature of Course In charge

Signature of HOD ECE

NAME	USN	Title of Mini Project
RACHANA JAGANNATH	1KS22EC077	NEW FACIAL RECOGNITION SMART GLASSES
SOWJANYA RAI	1KS22EC097	
TEJASWINI R	1KS22EC106	
UMME SARA	1KS22EC109	
SULAGNA MONDAL	1KS22EC101	AUTOMATIC DOOR SYSTEM
THANUSHREE M K	1KS22EC107	
V LIKHITH	1KS22EC110	
VARUN RAYAPATI R	1KS22EC115	
HARISH N	1KS23EC404	
SNEHA	1KS22EC095	GREEN EMBEDDED SYSTEM:REDUCING CARBON FOOTPRINTS IN SMART DEVICES
VARSHINI S	1KS22EC113	
VEDASHREE M	1KS22EC116	
NIKHIL MS	1KS23EC408	LPG GAS LEAKAGE DETECTION AND WEIGHT DETECTION USING ARDUINO
SAHANA T	1KS22EC086	
SHALINI S	1KS22EC088	
SUNITHA S S	1KS22EC103	
VIDYASHREE H	1KS22EC117	
SPOORTHY B	1KS22EC098	VIGILANCE 360
SUMANJALI K	1KS22EC102	
SAHANA N R	1KS22EC085	
SIDDARTH SHARMA	1KS22EC093	
ROHITH M	1KS22EC082	
CHETHAN B L	1KS23EC401	FIRE FIGHTING ROBOT
VISHWANATH B S	1KS22EC120	
VIJAY D S	1KS23EC409	
VIKASGOWDA B S	1KS23EC410	
Pranav rajath	1KS22EC075	WATER QUALITY MONITORING USING AI
Raksitha M B	1KS22EC079	
Rohith D yadav	1KS22EC081	
Sinchana S S	1KS22EC094	

Shree harshitha.S	1KS22EC092	ENERGY-EFFICIENT HVAC CONTROL SYSTEM WITH REAL-TIME OPTIMIZATION
Sarika.S	1KS22EC087	
Surya RV	1KS22EC104	
Tirumala ganesh	1KS22EC108	
Deekshith A	1KS23EC403	DIGITAL NOTICE BOARD USING BLUETOOTH AND STM32 CORTE -M MICRONTROLLERS
BHAVAN M	1KS23EC400	SMART SEAT BELT MONITORING AND CONTROL SYSTEM
Varun	1KS22EC114	SURVELIANCE ROBOT USING 32 CAM
Ranjith gowda	1KS22EC080	
vijay kumar	1KS22EC118	
Vivek Raj	1KS22EC124	
Srujan H G	1KS22EC099	COLOR SORTING AND LINE FOLLOWING ROBOT
Vishwanath V	1KS22EC121	
Vivek	1KS22EC123	
Nithyashree V L	1KS22EC071	SOLAR POWERED AUTOMATIC SOIL IRRIGATION
Sahana K R	1KS22EC084	
Shilpa T R	1KS22EC090	
Soumyshree S	1KS22EC096	
Shravani G V	1KS22EC091	LPG GAS LEAKAGE DETECTION AND WEIGHT DETECTION USING ARDUINO
Vishwas M K	1KS22EC122	
Harshith M K	1KS23EC405	
Pooja V	1KS22EC073	NEUROGLOVE -THE AI DRIVEN REVALUTION IN HAND INTERACTION
Prajwal P	1KS22EC074	
Sachin B	1KS22EC083	
Shashank C	1KS22EC089	
Manoj R	1KS23EC406	
Raghu M	1KS22EC078	SMART DUSTBIN USING ULTRASONIC SENSOR
Srujan Karanth	1KS22EC100	
Vardan Gowda	1KS22EC111	
Vikas S	1KS22EC119	
Prekshitha S	1KS22EC112	SMART DUSTBIN USING ULTRASONIC SENSOR
Swathi S	1KS22EC105	
Varsha B C	1KS22EC119	
Yashavantha S	1KS22EC119	

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DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

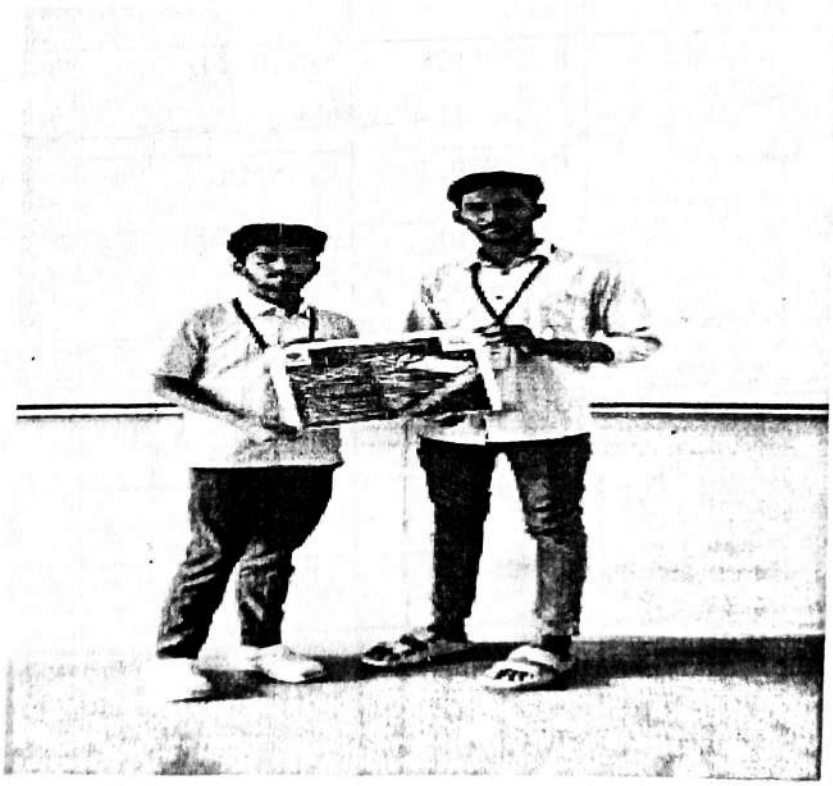
Academic Year	2024-25(even)
Name of the Faculty	Dr. Anita P
Course Name /Code	VLSI Design and testing /BEC602
Semester/Section	VI/A
Activity Name	POSTER MAKING
Topic Covered	All Modules
Date	9/02/2024 to 30/5/2025
No. of Participants	68
Objectives/Goals	• To improve the self-learning and presentation skills of students • To improve the concept behind fabrication and integration.
ICT Used	-

Appropriate Method/Instructional materials/Exam Questions

- Initially delivered lectures on VLSI Design and testing.
- Later students were formed individually assigned topic, asked to prepare soft file.
- Students are given with additional information/sources from which they can prepare.

Relevant PO's	9,10,12
Significance of Results/Outcomes	• Students tried to explore the importance of VLSI DESIGN, Scaling used for fabrication and testing, improved their self-learning, communication as an individual. • Around 68 Students submitted s the circuit writing.
Reflective Critique	• The activity improved the self-learning of students.

Proofs (Photographs/Videos/Reports/Charts/Models)



Signature of CourseIncharge

Signature of HOD EC

		1KS22EC012	ANUPRIYA T	
7	TEAM 7	1KS22EC066	MONIKA H N	SILICON WAFER MOSFET
		1KS22EC070	NISARGA M	
		1KS22EC068	NALLANI HEMA	
		1KS22EC061	MANASA CHOWDARY	
8	TEAM 8	1KS22EC011	ANKITA BUDNI	P WELL PROCESS
		1KS22EC030	DARSHAN GOWDA	
		1KS22EC010	ANKIT P	
		1KS22EC034	GAGAN VS	
9	TEAM 9	1KS22EC001	ABINAY	PSEUDO NMOS LOG
		1KS22EC023	HARIKA	
		1KS22EC038	DEEPA SREE	
		1KS22EC059	SUSHMITHA	
10	TEAM 10	1KS22EC039	GOWTHAM M	CZOCHRALASKI METHOD
		1KS22EC062	MANOJKUMAR	
		1KS22EC055	LOHITH YAADAV	
		1KS22EC050	KIRAN G	
11	TEAM 11	1KS22EC005	AJITH D	NOISE MARGIN
		1KS22EC024	CHETAN SP	
		1KS22EC046	AMARENDRA K	
		1KS22EC057	PUROSHOTHAM M	
12	TEAM 12	1KS22EC015	ARCHANA N	VLSI IN BIOMEDICAL APPLICATIONS
		1KS22EC002	ADEEBA ISMATH	
		1KS22EC009	ANAGHA K S	
		1KS22EC049	KEERTHANA K	

13	TEAM 13	1KS22EC020	Ayyaji Madhava H N	VLSI in Space Electronics
		1KS22EC022	C Rahul	
		1KS22EC025	Chethan A G	
		1KS22EC051	Kishan V	
14	TEAM 14	1KS22EC021	Bhoomika D	pass transistor
		1KS22EC014	Archana M	
		1KS22EC043	Hitha SM	
		1KS22EC054	Lekhana BH	
15	TEAM 15	1KS22EC033	Dinesh N	Latches and flipflop
		1KS22EC029	Arun Chowdary	
16	TEAM 16	1KS22EC065	Mohammed Taha	Charge sharing in CMOS circuits
		1KS22EC064	Megharaj CM	
		1KS22EC060	Mallikarjun	
17	TEAM 17	1KS22EC017	Ashok	N well process
		1KS22EC036	Gayathridevi B	
		1KS22EC048	Kavya G	
		1KS22EC052	Lakshmi M	
18	TEAM 18	1KS22EC031	Deeksha S Reddy	Threshold voltage equations
		1KS22EC035	GAGAN V S	
		1KS22EC058	Madhu Haromuchadi	

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109

DEARTMENT OF ELECTRONICS AND COMMUNICATION

TEACHING AND LEARNING
CONTENT BEYOND SYALLBUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	DIVYA.D
Course Name /Code	VLSI design and Testing/BEC602
Semester/Section	VI/B
Activity Name	Poster presentation
Topic Covered	All Modules
No. of Participants	62
Objectives/Goals	To improve the skills and team work of students To improve the communication skills of students.
ICT Used	-
Appropriate Method/Instructional materials/Exam Questions • Topics given to students were covered earlier in class • Later groups of minimum 4 students were formed and assigned with a topic, and were informed to prepare Poster and Present.	
Relevant PO's	9,10,12
Significance of Results/Outcomes	• Students tried to explore the concepts related to VLSI, improved their self-learning and team management skills as an individual and team member. • Around 135 Students formed 22 teams and delivered the demo of project
Reflective Critique	• The activity improved the self-learning of students. • The activity provided a platform for students to interact with peers, improve their communication skills, and work as individuals and as team.

Proofs (Power point /Videos/Reports / Photographs)

PIC: Fabrication process of Pmos Transistor

PIC: Carbon nanotubes in VLSI

Signature of the Course In-charge

Signature of HOD

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Content beyond syllabus- Poster Presentation

Sub: VLSI design and Testing

Academic Year	2024-2025		
Batch	2022-2026		
Year/Semester/section	III/VI/B		
Subject Code-Title	BEC602-VLSI design and Testing		
Name of the Instructor	DIVYA.D	Dept.	ECE

Sl. No	Team Members	USN	Title Name
1	Shalini S	1KS22EC088	Fabrication and Characterization of CMOS devices and circuits
2	Sahana T Basanagoudra	1KS22EC086	
3	Sunita S S	1KS22EC103	
4	Vidya Shree H	1KS22EC117	
5	Sneha	1KS22EC095	Evolution of VLSI Technology
6	Veda Shree M	1KS22EC116	
7	Vikas KS	1KS22EC119	
8	Vardhan Gowda	1KS22EC111	
9	Sulagna	1KS22EC101	Design and Fabrication of Analog Circuits in VLSI
10	Thanu Shree	1KS22EC107	
11	V Likith	1KS22EC110	
12	Varun Rayapati	1KS22EC115	
13	Rachana Jagannath	1KS22EC077	Carbon Nanotubes in VLSI
14	Sowjanya Rai	1KS22EC097	
15	Umme Sara	1KS22EC106	
16	Tejaswini R	1KS22EC106	
17	Sarika S	1KS22EC087	CMOS Technology and it's Advancement
18	Shree Harshita S	1KS22EC092	
19	Varshini S	1KS22EC113	
20	Raghu HM	1KS22EC078	
21	Harish N	1KS23EC404	VLSI for Wireless Communication
22	Manoj R	1KS23EC406	
23	Varsha BC	1KS22EC112	
24	Prekshitha S	1KS22EC076	
25	Spoorthy B	1KS22EC098	VLSI Design for Image and Video Processing
26	Sahana NR	1KS22EC085	
27	Sumanjali K	1KS22EC102	
28	NithyaShree VL	1KS22EC071	Lambda Based Design Rules
29	Sahana KR	1KS22EC084	
30	Shilpa TR	1KS22EC090	

31	SoumyaShree F Saraf	1KS22EC096	
32	Vishwanath BS	1KS22EC120	Wafer Mask Technology
33	Chethan BL	1KS23EC401	
34	Vijay DS	1KS23EC409	
35	Vikas Gowda BS	1KS23EC410	
36	Pooja V	1KS22EC073	CMOS Fabrication Process: From Silicon to Microchip
37	Harshith MK	1KS23EC405	
38	Shravani	1KS22EC091	
39	Vishwas MK	1KS22EC122	
40	Shashank C	1KS22EC089	VLSI Design Flow and Testing
41	Prajwal P	1KS22EC074	
42	Sachin B	1KS22EC083	
43	Siddhart Sharma	1KS22EC093	Sensor Interface Circuit in VLSI
44	Rohit M	1KS22EC082	
45	Vivek MS	1KS22EC123	CMOS Technology and it's Advancement
46	Bhavan M	1KS23EC400	
47	Srujan HG	1KS22EC099	
48	Vishwanath V	1KS22EC121	
49	Tirumal Ganesh	1KS22EC108	Quantum Computing
50	Surya RV	1KS22EC104	
51	Deekshith	1KS23EC403	
52	Nikhil MS	1KS23EC408	
53	Rohit D Yadav	1KS22EC081	Role of VLSI in 5G Technology
54	Rakshitha MB	1KS22EC079	
55	Pranav Rajath	1KS22EC075	
56	Sinchana SS	1KS22EC094	
57	Varun	1KS22EC114	Fabrication and Characterization of CMOS devices and circuits
58	Vivek Raj	1KS22EC124	
59	Vijay Kumar	1KS22EC118	
60	Ranjith Gowda	1KS22EC080	
61	Swathi S	1KS22EC104	Basic Logic Gates in VLSI Design
62	Yashwanth S	1KS22EC125	

Module Coordinator

HOD ECE

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
TEACHING AND LEARNING
ACTIVITY BASED LEARNING

Academic Year	**2024-25**
Name of the Faculty	**Dr. P N Sudha**
Course Name /Code	**DATA SECURITY/ BEC613B**
Semester/Section	**6th A Section**
Activity Name	**Mini project**
Topic Covered	**Symmetrical & Asymmetrical Encryption algorithms**
Date	**6th May 2025**
No. of Participants	**70**
Objectives/Goals	• **To check the students Design & implementation of concepts learnt in Cryptography**
ICT Used	**Projector, PC & Camera**

Appropriate Method/Instructional materials/Exam Questions

- **Students were made to select any concept in Cryptography and write a program & execute the same**
- **Obtained results are discussed in the report submitted.**

Relevant PO's	• **PO1, PO2, PO3, PO5, PO7(DEPENDING ON THE TOPIC) PO9, PO10, PO11 & PO12**
Significance of Results/Outcomes	**To know understanding level of the students and its was interactive session.**
Reflective Critique	**Good experiential Learning session**

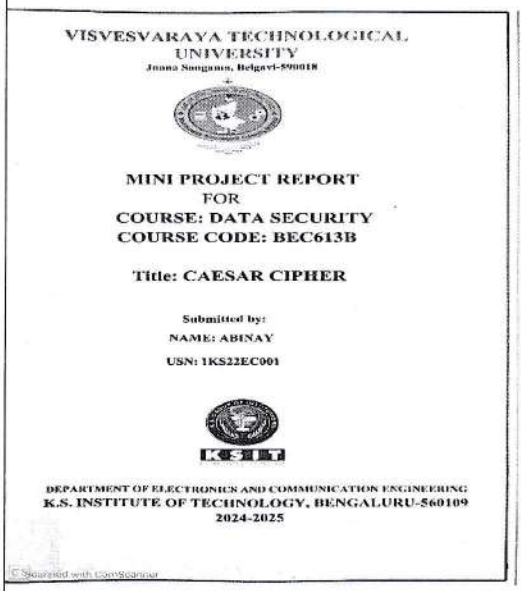
List of Mini Projects by students

SI. NO.	NAME OF THE STUDENT	USN	TITLE OF THE PROJECT	
1	ABINAY	1KS22EC001	CAESER CIPHER	
2	ARCHANA N	1KS22EC015	MONO ALPHABETIC CIPHER	
3	CHETAN SP	1KS22EC024	EUCLIDUAN ALGORITHMS	
4	DEEKSHA S REDDY	1KS22EC031	RAILFENCE TECHNIQUE	
5	ADEEBA ISMATH	1KS22EC002	POLY ALPHABETIC CIPHER	
6	KAVYA G	1KS22EC048	CIRCULAR HASH	

7	AMARENDRA K	1KS22EC046	ADDITIVE ARITHMETIC	
8	LOHITH YAADAV R	1KS22EC055	POLYNOMIAL GCD	
9	GAYATHRI DEVI B	1KS22EC036	PRIMITIVE ROOT	
10	ANAGHA KS	1KS22EC009	OUTPUT FEEDBACK MODE	
11	D ARUN	1KS22EC029	MULTIPLICATIVE INVERSE	
12	GAGAN V S	1KS22EC034	STREAM CIPER AND BLOCK CIPER	
13	AMRUTHA P	1KS22EC007	CIPHER FEEDBACK MODE	
14	CHINMAY S	1KS22EC027	CONGRENCE	
15	KARTHIK D	1KS22EC047	GCD ALGORITHM	
16	CHETHAN A G	1KA22EC025	FIESTAL	
17	AJITH D	1KS22EC005	TOTIENT FUNCTION	
18	MONISHA B N	1KS22EC067	RSA ALGORITHM	
19	MEGHANA S R	1KS22EC063	DIFFIE HELLMANS	
20	HARSHAN M J	1KS22EC042	EUCLIDEAN ALGORITHM	
21	RAHUL	KS22EC022	FERMENT THEOREM	
22	N.HEMA	1KS22EC068	EULERS THEORM	
23	MITHUN	1KS22EC028	AES LAST ROUND	
24	MONIKA.H N	1KS22EC066	HMAC	
25	NISARGA.M	1KS22EC070	VERNAM CIPER	
26	NEHA.M	1KS22EC069	PLAYFAIR	
27	DARSHAN GOWDA	1KS22EC030	ELECTRONIC CODE BOOK	
28	DINESH N	1KS22EC033	ADDITIVE INVERSE	
29	KISHAN V	1KS22EC51	EULERS TOTIENT FUNCTION	
30	C.HARIKA	1KS22EC023	VIGENERE POLYALPHABETIC CYPER	
31	DEEKSHA T S	1KS22EC032	OUTPUT FEEDBACK MODE	
32	LAKSHMI M	1KS22EC052	POLYNOMIAL ARITHMETIC	
33	GAGANA S	1KS22EC035	LONGITUDINAL SIMPLE HASH	
34	MANASA CHOWDARY	1KS22EC061	PRIMITIVE POLYNOMIAL	
35	ANKIT PRAKASH	1KS22EC010	PRIMITIVE ROOTS	
36	GEHENA B S	1KS22EC037	EXTENDED EUCLIDEAN ALGORITHM	
37	ANUPRIYA T	1KS22EC012	CIPHER FEEDBACK MODE	
38	AMULYA M N	1KS22EC008	CIPHER FEEDBACK MODE	
39	ASHOK	1KS22EC017	EUCLIDEAN ALGORITHM	
40	BHOOMIKA D	1KS22EC021	EULERS FERMATES THEOREM	
41	INCHARA C	1KS22EC044	REDUCIBLE OR IRREDUCIBLE POLYNOMIAL	
42	ANUSHA M P	1KS22EC013	CRYPTO HASH WITH SYMMETRICAL ENCRYPTION	
43	HITHA S M	1KS22EC043	DEFFIE HELLMANS ELLIPTIC CURVE	
44	DEEPASREE	1KS22EC038	OUTPUT FEEDBACK MODE	
45	AYYAJI MADHAVA	1KA22EC020	CIPHER BLOCK CHAINING MODE	
46	ANKITA	1KS22EC011	SECURE HASH ALGORITHM	
47	PURUSHOTTAM	1KS22EC057	HASH WRT SYMMETRICAL ENCRYPTION	
48	LEKHANA B H	1KS22EC054	POLY ALPHABETIC CIPHER	
49	C.HARIKA	1KS22EC023	VIGENERE POLYALPHABETIC CYPER WITHOUT REPEATING THE KEY	
50	ARCHANA M	1KS22EC014	ELLIPTICAL CURVE ENCRYPTION	
51	ASHWINI.P	1KS22EC018	ADVANCED ENCRYPTION STANDARD (AES) ALGORITHM	
52	M.SUSHMITHA	1KS22EC059	MODULAR ARITHMETIC	
53	CHIDAMBAR P M	1KS22EC026	EUCLIDEAN ALGORITHM	

	54	KIRAN	1KS22EC050	AES KEY EXPANSION BLOCK	
	55	AVINASH	1KS22EC019	ELECTRONIC CODEBOOK	
	56	MADHU HAROMUCHADI	1KS22EC058	GALOIS FIELD	
	57	GOWTHAM.M	1KS22EC039	GROUPS USING PYTHON	
	58	MEGHARAJ	1KS22EC064	CIPHER BLOCK CHAINING MODE	
	59	K VAMSHI	1KS22EC045	COLUMNAR TRANSPOSITION TECHNIQUE	
	60	MANOJKUMAR N	1KS22EC062	AES DECRYPTION	
	61	TAHA	1KS22EC065	OUTPUT FEEDBACK MODE	
	62	ADHITYA	1KS22EC004	PRINCIPALS OF PUBLIC CRYPTO SYSTEM WITH SECURE	
	63	ARCHANA SK	1KS22EC016	ENCRYPTING BOTH MESSAGE AND HASH VALUE	
	64	ADITHYA.S	1KS22EC004	SECURE HASH ALGORITHM 1	
	65	G DEEKSHITHA	1KS22EC040	FERMENTS THEOREM	
	66	AKASH S	1KS22EC006	DIFFIE HELLMAN ALGORITHM	
	67	ADITH P	1KS22EC003	EUCLEDIN ALGORITHM	
	68	KEERTHANA K	1KS22EC049	COUNTER FEEDBACK MODE	
	69	MALLIKARJUN	1KS22EC060	ELECTRONIC CODEBOOK	
	70	HARISH MV	1KS22EC041	DIFFIE HELLMAN	

Proofs (Photographs/Videos/Reports/Charts/Models)



VISVESVARAYA TECHNOLOGICAL UNIVERSITY
Jnana Sangama, Belgavi-590018

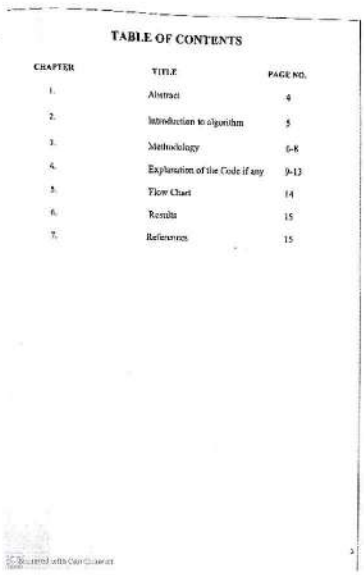
MINI PROJECT REPORT
FOR
COURSE: DATA SECURITY
COURSE CODE: BEC613B

Title: CAESAR CIPHER

Submitted by:
NAME: ABINAY
USN: 1KS22EC001

KSIT

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
K.S. INSTITUTE OF TECHNOLOGY, BENGALURU-560109
2024-2025



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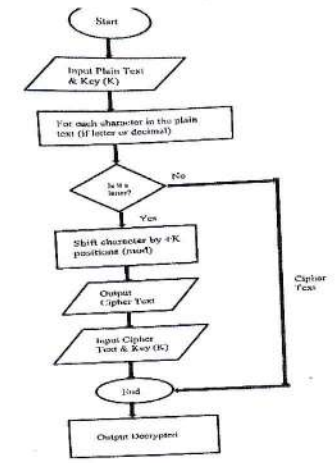
6.	Results	15
7.	References	15



10

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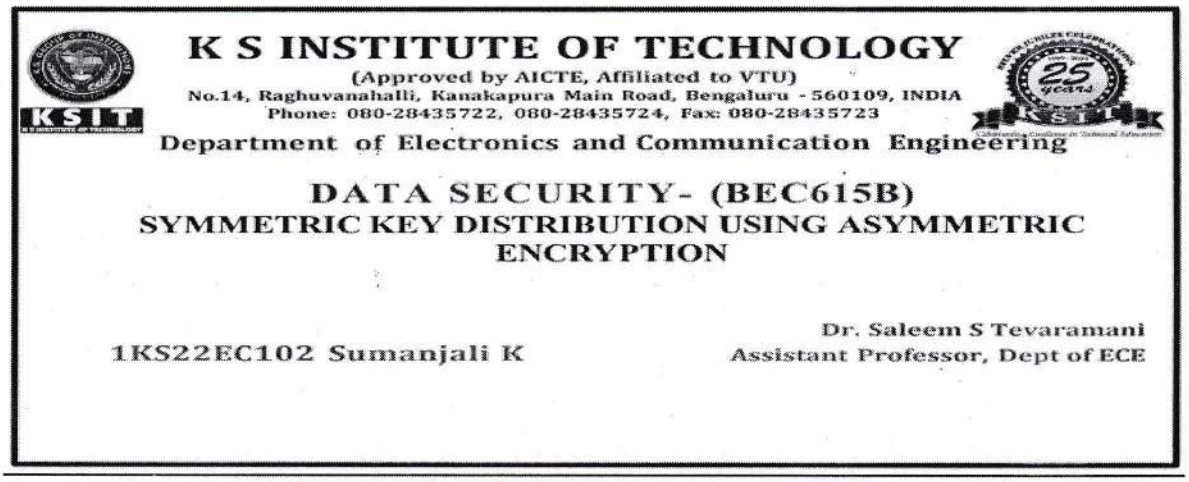
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (Even)
Name of the Faculty	Dr.Saleem S Tevaramani
Course Name/Code	Data Security/BEC613B
Semester/Section	VI/B
Activity Name	Mini Project & Presentation
Topic Covered	All Modules
Date	16/4/2025 to 23/5/2025
No. of Participants	63
Objectives/Goals	• To enhance students' coding skills, report writing, self-learning, and presentation abilities. • To develop and strengthen students' communication skills.
ICT Used	Laptop/Desktop, Simulation and AI Tools
Appropriate Method/Instructional materials/Exam Questions • Initially, lectures on Data Security were delivered. • Students were instructed to select topics related to coding, perform simulations, and prepare a PowerPoint presentation. • Additional resources and reference materials were provided to help students prepare for their presentations.	
Relevant PO's	5,9,10,12
Significance of Results/Outcomes	• Students explored the importance of data security and enhanced their self-learning and communication skills. Each individual made an effort to complete the assigned task. • Activity was submitted, and students delivered their presentations as part of the activity.
Reflective Critique	• The activity enhanced students' self-learning abilities. • It also provided a platform for peer interaction, helping students improve their communication skills and develop a sense of individual responsibility.

Proofs (Photographs/Videos/Reports/Charts/Models)



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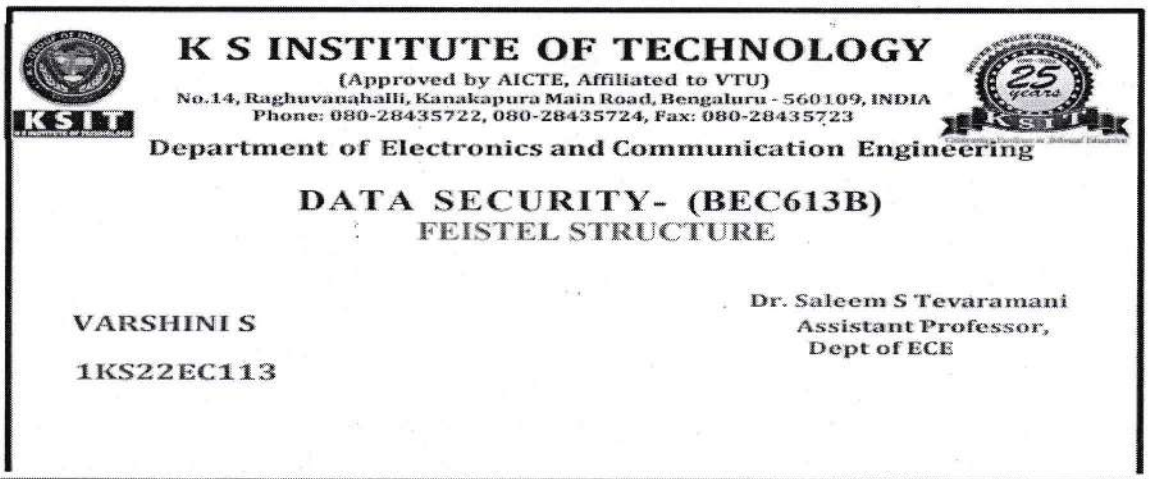
Department of Electronics and Communication Engineering

DATA SECURITY- (BEC615B)
SYMMETRIC KEY DISTRIBUTION USING ASYMMETRIC ENCRYPTION

1KS22EC102 Sumanjali K

Dr. Saleem S Tevaramani
Assistant Professor, Dept of ECE



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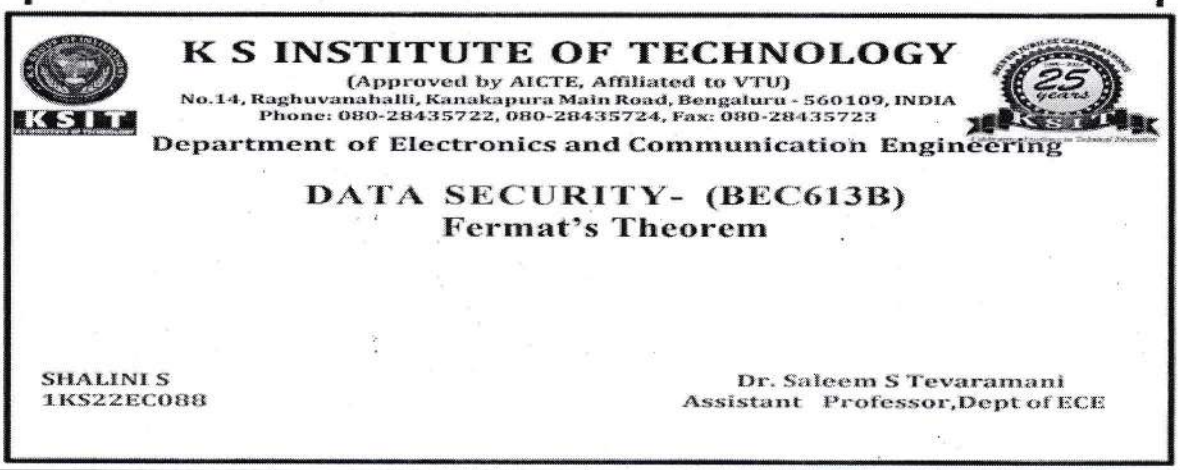
Department of Electronics and Communication Engineering

DATA SECURITY- (BEC613B)
FEISTEL STRUCTURE

VARSHINI S
1KS22EC113

Dr. Saleem S Tevaramani
Assistant Professor,
Dept of ECE



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DATA SECURITY- (BEC613B)
Fermat's Theorem

SHALINI S
1KS22EC088

Dr. Saleem S Tevaramani
Assistant Professor,Dept of ECE

sl.no	USN	Name of the student	Topic name
1	1KS22EC071	NITHYASHREE V L	MAC
2	1KS22EC073	POOJA V	AES Last round
3	1KS22EC074	PRAJWAL P	Multiplicative inverse for real numbers
4	1KS22EC075	PRANAV RAJATH	Cipher feedback mode

5	1KS22EC076	PREKSHITHA S	Two Simple Hash Function
6	1KS22EC077	RACHANA JAGANNATH	Symmetric key distribution using symmetric key encryption
7	1KS22EC078	RAGHU H M	RSA algorithm
8	1KS22EC079	RAKSHITA M B	Security of MACS
9	1KS22EC080	RANJITH GOWDA K	Digital signature standard algorithm
10	1KS22EC081	ROHITH D YADAV	CMAC(MACS based on block cipher
11	1KS22EC082	ROHITH M	Electronic code book
12	1KS22EC083	SACHIN BASAPPA BABANNAVAR	Cipher block chaining mode
13	1KS22EC084	SAHANA K R	AES Algorithm
14	1KS22EC085	SAHANA N R	EULER'S theorem
16	1KS22EC086	SAHANA T BASANAGOUDRA	Auto key system
17	1KS22EC087	SARIKA S	Principles of Public -Key
18	1KS22EC088	SHALINI S	Fermat's theorem
19	1KS22EC089	SHASHANK C	Multiplicative inverse for polynomial
20	1KS22EC090	SHILPA T R	Elliptical curve Cryptography
21	1KS22EC091	SHRAVANI G V	Digital signature standard
22	1KS22EC092	SHREE HARSHITHA S	Elliptic Curve Arithmetic
23	1KS22EC093	SIDDHARTH SHARMA	ECDSA
24	1KS22EC094	SINCHANA S S	Rings and fields in data security
25	1KS22EC095	SNEHA	MACs Based on Has functions : HMAC
26	1KS22EC096	SOUMYASHREE F SARAF	divisibility and the division algorithm
27	1KS22EC097	SOWJANYA RAI	Reducible & irreducible polynomial
29	1KS22EC098	SPOORTHY B	Galois field
30	1KS22EC099	SRUJAN H G	Greatest common divisor algorithm
31	1KS22EC100	SRUJAN KARANTH N	Modular arithmetic
32	1KS22EC101	SULAGNA MONDAL	Play fair algorithm
33	1KS22EC102	SUMANJALI K	Symmetric key distribution using asymmetric key encryption
34	1KS22EC103	SUNITA SHIVASHANKAR SALOTAGI	VIGENERE CIPHER
35	1KS22EC104	SURYA R V	Hash and MAC Generation
36	1KS22EC105	SWATHI S	Block and stream Cipher
37	1KS22EC106	TEJASWINI R	Digital signature
38	1KS22EC107	THANUSHREE M K	Congruence (Date Security)
39	1KS22EC108	TIRUMALA GANESH BHARADWAJ SHARMA	DIFFIE-HELLMAL ELLIPTICAL CURVE(DHEC)
40	1KS22EC109	UMME SARA	AES CIPHER
41	1KS22EC110	V LIKHITH	Encryption & decryption using Caesar Cipher method
42	1KS22EC111	VARDHAN GOWDA K N	Stream Cipher using Bit stream generator
43	1KS22EC112	VARSHA B C	Prime number and primitive roots.
44	1KS22EC113	VARSHINI S	FEISTEL Structure

45	1KS22EC114	VARUN	DIFFIE-HELLMAN key exchange algorithm
46	1KS22EC115	VARUN RAYAPATI R	Vernam Cipher
47	1KS22EC116	VEDASHREE M	Distribution public keys
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51	1KS22EC120	VISHWANATH B S	Euclidean Algorithm
52	1KS22EC121	VISHWANATH VEERAPUR	GCD of polynomial
53	1KS22EC122	VISHWAS M K	DS-RSA
54	1KS22EC123	VIVEK M S	Discrete Logarithm
55	1KS22EC124	VIVEK RAJ B	NIST Digital signature algorithm
56	1KS22EC125	YASHAVANTHA S	RSA DH algorithm
57	1KS23EC400	BHAVAN M	Transposition techniques
58	1KS23EC401	CHETHAN B L	Data encryption standard (DES)
59	1KS23EC403	DEEKSHITH A	Basic uses of message encryption
60	1KS23EC404	HARISH N	Symmetric encryption cipher
61	1KS23EC405	HARSHITH M K	Group, rings and fields
62	1KS23EC406	MANOJ R	SHA-2 Crypto Engine
63	1KS23EC408	NIKHIL M S	Elliptic Curve digital signature algorithm
64	1KS23EC409	VIJAY D S	Arithmetic Additive
65	1KS23EC410	VIKAS GOWDA B S	output feedback mode

Signature of Course In charge

Signature of HOD ECE

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109

DEARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

TEACHING AND LEARNING

Content beyond Syllabus

Academic Year	2024-25 (EVEN)
Name of the Faculty	Dr. Electa Alice Jayarani A
Course Name /Code	Introduction to Artificial Intelligence/BAI654D
Semester/Section	VI/A
Activity Name	Online Course and Case Study
Date	28.04.2025 – 15.05.2025
Topic Covered	Artificial Intelligence from Infosys Springboard Real time Expert Systems
No. of Participants	68
Objectives/Goals	• To provide in-depth understanding of a specific subject, analyze complex issues within a real-life context, and offer insights into problem-solving strategies • To improve the concept of expert system • To improve the communication and ICT usage skills of students
ICT Used	Microsoft Word
Appropriate Method/Instructional materials/Exam Questions • Initially delivered lectures on Case studies topics related to each module • Later students were formed into groups, they only allowed them to select the topics asked to prepare a report. • Students are given additional information/ sources from which they can prepare.	
Relevant PO's	5,8,9,10,12
Significance of Results/Outcomes	• Students explored the real time expert system and performed the analysis, and the use of modern tools, and improve their self-learning, communication, and project management skills as an individual and team member. • 68 students completed the online course and submitted the certificate • Around 68 Students formed 18 teams, prepared and submitted case study report.
Reflective Critique	• The activity received the course completion certificate from Infosys Springboard • The activity improved self-learning of students. • The activity provided a platform for students to interact with peers, improve their communication skills, work as individuals and as team

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

INTRODUCTION TO ARTIFICIAL INTELLIGENCE
(BA1654D)

CASE STUDY TITLE
CONSULTANT: DENDRAL and Meta-DENDRAL roots of knowledge systems and expert system applications

NAME OF THE STUDENT	USN
CHETAN.S.P	1KS22EC024
AJITH.D	1KS22EC005
K.AMARENDRA	1KS22EC046
MADHAM PURUSHOTHAM	1KS22EC057

Sl.No.	Batch	USN	Title
T1	ARCHANA M	1KS22EC014	PUFF: Pulmonary Disease Diagnosis Expert System
	BHOOMIKA D	1KS22EC021	
	HITHA S M	1KS22EC043	
	LEKHANA B H	1KS22EC054	
T2	CHIDAMBAR PRABHAKAR MUNAVALLI	1KS22EC026	MYCIN: An Expert System for Medical Diagnosis of Blood Infections
	CHINMAY SHEELVANT	1KS22EC027	
	D N MITHUN	1KS22EC028	
	KARTHIK D	1KS22EC047	
T3	MEGHARAJ C M	1KS22EC064	XCON (R1): Configuring Computer Systems at Digital Equipment Corporation
	MOHAMMED TAHA	1KS22EC065	
	MALLIKARJUNA SWAMY N	1KS22EC060	
	KEERTHANA K	1KS22EC049	
T4	ABINAY	1KS22EC001	ROGET: Vocabulary Assistance Expert System for Writing
	CHERUKURU HARIKA	1KS22EC023	
	GONUGUNTLA DEEPA SREE	1KS22EC038	
	MALLEMPUTA SUSHMITHA	1KS22EC059	
T5	CHETAN S P	1KS22EC024	DENDRAL: Chemical Analysis and Molecular Structure Prediction
	AJITH D	1KS22EC005	
	KANDRA AMARENDRA	1KS22EC046	
	MADHAM PURUSHOTHAM	1KS22EC057	
T6	MANASA CHOWDARY	1KS22EC061	ACRES: Agricultural Crop Recommendation Expert System
	MONIKA H N	1KS22EC066	
	NALLANI HEMA	1KS22EC068	
	NISARGA M	1KS22EC070	
T7	GOWTHAM M	1KS22EC039	Expert System for Troubleshooting Aircraft Systems
	KIRAN G	1KS22EC050	
	LOHITH YAADAV R	1KS22EC055	
	MANOJKUMAR N	1KS22EC062	
T8	ADEEBA ISMATH	1KS22EC002	AGRIEXPERT: Soil and Fertilizer Recommendation System
	ANAGHA K S	1KS22EC009	
	ARCHANA N	1KS22EC015	
T9	DARAPANENI ARUN CHOWDARY	1KS22EC029	CONSULTANT: Expert System for Troubleshooting Aircraft Systems
	DINESH N	1KS22EC033	
T10	AYYAJI MADHAVA H N	1KS22EC020	FIREDEX: Fire Hazard and Safety Assessment System
	C RAHUL	1KS22EC022	
	CHETHAN A G	1KS22EC025	
	KISHAN V	1KS22EC051	
T11	ADITHYA S	1KS22EC004	EDEX: Expert System for Educational Curriculum Planning
	ARCHANA S K	1KS22EC016	
	ANUSHA MALIPATIL	1KS22EC013	
	ASHWINI P	1KS22EC018	
T12	ANUPRIYA T	1KS22EC012	GENTLE: Expert System for Learning Disabilities Diagnosis
	DEEKSHA T S	1KS22EC032	
	GEHENA B S	1KS22EC037	
	INCHARA C	1KS22EC044	
T13	ASHOK	1KS22EC017	CATS-1: Cargo Allocation and Tracking System
	GAYATHRI DEVI B	1KS22EC036	
	KAVYA G	1KS22EC048	
	LAKSHMI M	1KS22EC052	
T14	AMULYA M N	1KS22EC008	FOODIE: Expert System for Nutritional and Diet Planning
	MEGHANA S R	1KS22EC063	
	MONISHA B N	1KS22EC067	
	DEEKSHA S REDDY	1KS22EC031	

T15	GAGANA S	1KS22EC035	LORE: Legal Reasoning Expert System
	GUNTURU DEEKSHITHA	1KS22EC040	
	MADHU HAROMUCHADI	1KS22EC058	
T16	AMRUTHA P	1KS22EC007	SABRE: Airline Reservation and Scheduling Expert System
	AVINASH	1KS22EC019	
	HARSHAN M J	1KS22EC042	
	NEHA M	1KS22EC069	
T17	ANKIT PRAKASH	1KS22EC010	HOMER: Home Automation Expert System for Energy Savings
	ANKITA BUDNI	1KS22EC011	
	DARSHAN GOWDA M K	1KS22EC030	
	GAGAN V S	1KS22EC034	
T18	ADITH PINNEPALLI	1KS22EC003	VIRTUAL JUDGE: ONLINE LEGAL DISPUTE RESOLUTION EXPERT SYSTEM
	AKASH S	1KS22EC006	
	HARISH M V	1KS22EC041	
	K VAMSHIKRISHNA	1KS22EC045	

Signature of Course In-charge

Signature of HOD

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DEARTMENT OF ELECTRONICS & COMMUNICATION ENGG.

TEACHING AND LEARNING

Content beyond Syllabus

Academic Year	2024-25 (EVEN)
Name of the Faculty	Dr. Bharathi Gururaj
Course Name /Code	Introduction to Artificial Intelligence/BAI654D
Semester/Section	VI/B
Activity Name	Course and Case Study
Date	28.04.2025 – 15.05.2025
Topic Covered	All Modules
No. of Participants	63
Objectives/Goals	• To improve the communication skills of students • Case study on AI can help to understand whether artificial intelligence can truly help humans thrive. • provide in-depth understanding of a specific subject, analyze complex issues within a real-life context, and offer insights into problem-solving strategies
ICT Used	**PC**
Appropriate Method/Instructional materials/Exam Questions • Initially delivered lectures on Case studies topics related to each modules • Later students were formed into groups, They only allowed them to select the topics asked to prepare a report. • Students are given additional information/ sources from which they can prepare.	
Relevant PO's	5,8,9,10,12
Significance of Results/Outcomes	• Students tried to explore the concepts related to case study topics and analyzed
Reflective Critique	• The activity improved self-learning of students. • The activity provided a platform for students to interact with peers, improve their communication skills, work as individuals and as team.

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7. Learning Module

A key strength of CREEK is its ability to learn from new experiences. The learning module allows the system to:

- Store newly solved problems and outcomes as new cases
- Refine similarity measures based on feedback and usage history
- Adjust domain rules and knowledge structures over time

Through continual learning, CREEK becomes more accurate and valuable as it accumulates more cases and adapts to changing business environments.

CASE DESCRIPTION – CREEK Expert System

1. Problem It Solves

The **CREEK expert system** addresses the complex and critical task of **aircraft maintenance scheduling**. Aircraft must adhere to strict maintenance protocols based on metrics like flight hours, engine cycles, and usage conditions. CREEK automates the scheduling process by monitoring key operational data and applying expert rules, ensuring compliance with regulatory standards, maximizing aircraft availability, minimizing unscheduled maintenance, and enhancing overall safety and efficiency.

2. Domain Expertise Captured

CREEK encapsulates the knowledge and experience of aviation maintenance professionals in key areas:

- **Regulatory Compliance**: Adherence to standards set by authorities such as the FAA (Federal Aviation Administration), EASA (European Union Aviation Safety Agency), and other global regulatory bodies.

- **Maintenance Knowledge**: In-depth understanding of maintenance intervals, procedures, and inspection routines specific to various aircraft models.
- **Resource Management**: Efficient allocation of personnel, tools, hangar space, and spare parts to avoid bottlenecks and reduce turnaround time.
- **Predictive Insights**: Utilization of historical maintenance data and aircraft usage trends to forecast upcoming service needs and prevent failures.

3. How the System Was Developed

The development of CREEK followed a structured expert system methodology:

- **Knowledge Acquisition**: Aviation maintenance experts contributed rules, maintenance schedules, procedures, and compliance guidelines.

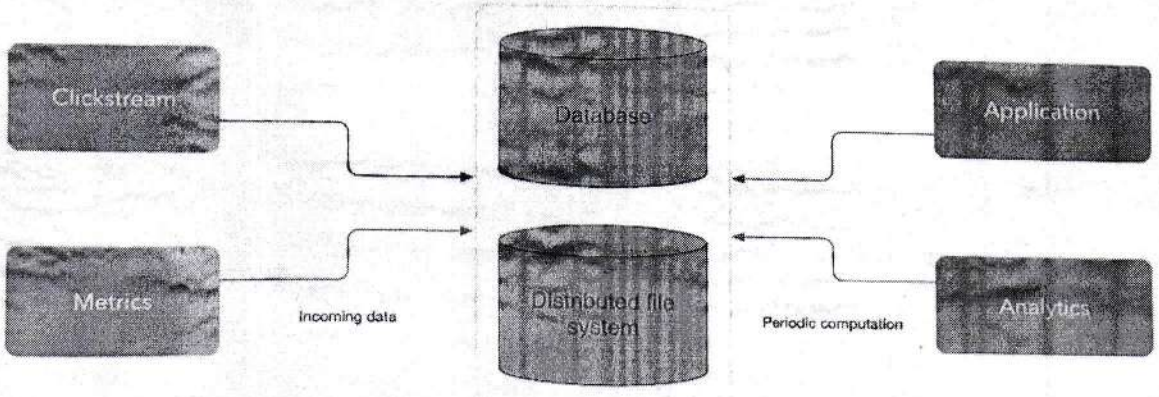
- **Rule-Based Logic Implementation**: Using a knowledge-based approach, rules were encoded to interpret aircraft telemetry (e.g., cycles, hours, wear indicators) and suggest maintenance actions.
- **System Integration**: CREEK interfaces with existing airline operation systems, aircraft data feeds, and maintenance records for seamless and automated data flow.
- **Testing and Validation**: Historical records were used to simulate scenarios and validate the system's accuracy, robustness, and real-world applicability.

4. Technology Used

CREEK is built on a solid technological foundation that ensures performance, scalability, and usability:

- **Expert System Engines**: Rule-based engines such as **CLIPS** or **Prolog** support complex reasoning over maintenance conditions and constraints.
- **Database Management**: Maintenance logs and aircraft data are stored in secure and efficient systems like **PostgreSQL** or **MySQL**.
- **User Interface**: The system provides a modern web-based dashboard developed with **React, Angular,** or similar frameworks, allowing users to monitor schedules and alerts in real-time.
- **Optimization Algorithms**: Utilizes **constraint satisfaction** and **scheduling optimization algorithms** to find the most efficient and compliant maintenance windows.
- **IoT Integration**: Real-time aircraft telemetry from IoT sensors feeds directly into CREEK, enabling dynamic adjustment of maintenance plans based on live data.

System Architecture and Working



CONCLUSION

The implementation of expert systems like **CREEK** represents a significant advancement in the field of aircraft maintenance scheduling. In an industry where safety, efficiency, and regulatory compliance are paramount, CREEK offers a robust solution that brings automation, precision, and reliability to complex maintenance operations. By leveraging rule-based and model-based reasoning, CREEK effectively interprets a wide range of data inputs—including flight hours, component conditions, historical maintenance logs, and real-time sensor data—to produce timely and optimized maintenance plans.

The system not only reduces the risk of in-service failures but also enhances aircraft availability and minimizes costly downtime. Its ability to support predictive maintenance helps operators address potential issues before they escalate, thereby improving overall fleet health and reducing emergency repair costs. Additionally, CREEK ensures strict adherence to aviation regulations, producing transparent and audit-ready outputs that support compliance efforts.

While CREEK offers significant benefits, its performance is closely tied to the quality of input data and requires ongoing updates to remain aligned with evolving aircraft systems and maintenance standards. It also lacks the intuitive problem-solving abilities of human experts in unexpected situations. Nevertheless, its consistency, speed, and ability to handle large volumes of information make it an invaluable tool in structured operational environments.

As aviation continues to embrace digital transformation, systems like CREEK will play an increasingly critical role in enabling smarter, safer, and more cost-effective maintenance strategies. The integration of expert systems with emerging technologies such as machine learning and real-time IoT monitoring promises even greater levels of adaptability and intelligence in future maintenance solutions.

REFERENCES

1) Giarratano, J., & Riley, G. (2005). *Expert Systems: Principles and Programming*. Cengage Learning.

2) Federal Aviation Administration (FAA). (2023). *Maintenance Review Board Report Guidelines*. www.faa.gov

3) Wang, L., & Ma, H. (2019). "Intelligent Aircraft Maintenance Scheduling Using RuleBased Expert Systems." *Journal of Aerospace Engineering*, 32(5).

4) EASA (European Union Aviation Safety Agency). (2022). *Aircraft Maintenance Requirements*. www.easa.europa.eu

5) Krishnaiah, M., & Narsimha, G. (2020). "Artificial Intelligence in Predictive Maintenance for Aircraft Systems." *International Journal of Advanced Science and Technology*, 29(7), 3421–3429.

6) Sajja, P.S. & Akerkar, R. (2016). *Advanced Knowledge-Based Systems: Model, Applications & Research*. Springer

Signature of course incharge

HOD, ECE

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TEACHING AND LEARNING

Details of Content beyond syllabus Activities-2024-25 (EVEN)

4th Semester

Semester/ Section	Course Name	Content beyond syllabus activity conducted	POs Covered	Faculty	Number of Activity
IV/A	Electromagnetics Theory- BEC4OI	Poster presentation	9,10	Mrs. Bhanumathi A	17
IV/B	Electromagnetics Theory- BEC4OI	Poster presentation	9,10	Mrs. Pragati P	65
IV/A	Principles of Communication Systems- BEC402	Schematic Representation and its Application	1,2,3,5,9, 10,12	Mrs.Sangeetha.V	64
IV/B	Principles of Communication Systems- BEC402	Schematic Representation and its Application	1,2,3,5,9, 10,12	Mrs.Bhargavi Ananth	66
IV/A	Control Systems-BEC4O3	Mini Project	4,5,9,10,11, 12	Dr. Rekha N	18
IV/B	Control Systems-BEC4O3	Mini Project	4,5,9,10,11, 12	Dr. Devika B	63
IV/A	Microcontrollers-BEC4O5A	Code Debugging	4,10	Mr. Christo Jain	34
IV/B	Microcontrollers-BEC4O5A	Code Debugging	4,10	Mr. Naveen Kumar S	32
IV/A&B	Biology For Engineers-BBOK4OT	Poster presentation	9,10	Dr. Shobha	131
IV/A&B	Universal human values course-BUHK4OS	Poster presentation	9,10,11,12	Dr. Sangappa.S.B	16

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TEACHING AND LEARNING

Content beyond syllabus

Academic Year	2024-25 (Even)
Name of the Faculty	Bhanumathi A
Course Name /Code	Electromagnetic Theory/BEC401
Semester/Section	IV/A
Activity Name	Poster Presentations
Topic Covered	All Modules
Date	02/05/2025 to 20/05/2025
No. of Participants	62
Objectives/Goals	• To improve the self-learning and presentation skills of students • To improve the communication skills of students.
ICT Used	Posters
Appropriate Method/Instructional materials/Exam Questions • Initially delivered lectures on Electromagnetic waves. • Later students were formed into groups, assigned with a topic, asked to prepare A3 size poster, and give oral presentation. • Students are given with additional information/sources from which they can prepare.	
Relevant PO's	9,10
Significance of Results/Outcomes	• Students tried to explore the importance of Field theory. They understood that Electro magnetic theory is necessary on the basis for understanding the devices and systems used for electrical and magnetic energy. • Around 62 Students formed 17 teams, submitted posters, and delivered their presentation.
Reflective Critique	• The activity improved the self-learning of students. • The activity provided a platform for students to interact with peers, improve their communication skills, work as individuals and as team.

Proofs (Photographs/Videos/Reports/Charts/Models)

Team &Poster Presentation details			
Team Number	**Name**	**USN**	**Topics**
1	LAVANYA C S D GEETHA APOORVA N GOWDA DIVYASHREE S	1KS23EC050 1KS23EC024 1KS23EC011 1KS23EC031	Make a Poster on Electromagnetic wave Spectrum.
2	M RUCHITHA BHUMIKA V L KUSUMA LIKITHA K	1KS23EC053 1KS23EC020 1KS23EC049 1KS23EC052	Make a poster on Different co-ordinate systems and their relationships.
3	H P RAHUL KRISHNA KUSHAL M NAMITH S NAGENDRA M	1KS23EC037 1KS23EC048 1KS23EC068 1KS23EC067	Make a poster on Differential length, Differential surface, Differential Volume in all co-ordinate system.
4	AADITYA S P B ADITHYA ABHISHEK R ABHISHEK S	1KS23EC001 1KS23EC013 1KS23EC002 1KS23EC003	Make a poster on Gauss's law and its applications.
5	GOVINDAN G AKSHAY V B ROHITH	1KS23EC034 1KS23EC007 1KS23EC014	Make a poster on Electric field intensity due to various charge distributions.
6	AKASH S MALLIKARJUN B B AMILINENI BHARATH NAGADARSHAN V	1KS23EC005 1KS23EC058 1KS23EC008 1KS23EC066	Make a poster on Biot savart's law and its applications due to infinitely long straight conductor, straight conductor of finite length and circular conductor.
7	KHUSHI JAGATAP BHAGYASHREE L	1KS23EC044 1KS23EC015	Make a poster on Ampere's circuital law and its applications.
8	A NAVYA SREE G POOJITHA K PAVITHRA D JYOTHI	1KS23EC009 1KS23EC033 1KS23EC042 1KS23EC025	Make a poster on Stroke's theorem and its applications.
9	BI BI MARIYAM H M VARSHITHA KAVYA M MADINENI LAHARI	1KS23EC021 1KS23EC035 1KS23EC043 1KS23EC054	Make a poster on magnetic torque and magnetic dipole moment.
10	DHANUSH B R M AFFAN HUSSAIN M AYUB KANKANWADI MAHESH NAIK S	1KS23EC027 1KS23EC062 1KS23EC055 1KS23EC057	Make a poster on magnetic boundary conditions for both tangential and normal component between two media of different permeabilities.
11	KHUSHI R MEGHANA K BHANU PRIYA D N	1KS23EC045 1KS23EC061 1KS23EC016	Make a poster on Curl, Divergence, Del V, Del^2 V equations on different co-ordinate system.
12	MONISH GOWDA N MOHITH GOWDA R	1KS23EC064 1KS23EC063	Make a poster on Maxwell's equations derived from ampere's law, faraday's law, gauss law for electric and magnetic fields.

	MANIKANTA D K MANISH S	1KS23EC059 1KS23EC060	
13	AKASH A S AVINAV PRASAD BHARATH KUMAR K CHIRANTH C	1KS23EC004 1KS23EC012 1KS23EC017 1KS23EC023	Make a poster on Maxwell's equations for free space and good conductor.
14	DISHA R DHARANIPRIYA T K KRUTHI M	1KS23EC030 1KS23EC029 1KS23EC047	Make a poster on propagation of EM waves in free space, perfect dielectric.
15	HARSHA N BHUSHAN K SHASHANTH NAIDU BHASKAR K HANAMANT	1KS23EC039 1KS23EC041 1KS23EC018 1KS23EC038	Make a poster on analogy between magnetic and electric circuit.
16	NAVANEETH K G LIKITH SHETTY G VINOD KUMAR	1KS23EC069 1KS23EC051 1KS23EC032	Make a poster on force on moving a point charge, Force on a differential current element, Force between differential current element.
17	K DILEEP KUMAR CHANDU M DANESH RAZAK DHANUSH GOWDA K	1KS23EC040 1KS23EC022 1KS23EC026 1KS23EC028	Make a poster on applications of poisson's and laplace's equations.

Signature of Course In charge

Signature of HOD ECE

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (Even)
Name of the Faculty	Pragati P
Course Name /Code	Electromagnetic theory / BEC401
Semester/Section	IV/B
Activity Name	Poster
Topic Covered	All modules
Date	19-05-2025 to 24-05-25
No. of Participants	65
Objectives/Goals	• To develop ideas and identify the related formulae and concepts for solving problems related to electromagnetics. • To improve the self-learning skills of students by applying the necessary formulae. • To improve the thinking ability of the students in solving problems. • To understand the concepts thoroughly.
ICT Used	Internet and online materials
Appropriate Method/Instructional materials/Exam Questions • Initially delivered lecture on given topics of modules and were asked to identify the necessary concepts and formulae related to each module • Later students were instructed to apply and write the necessary formulae for problem solving as a poster and was collectively made as a report for the complete 5 modules. • Students are given with additional information/sources from which they can prepare and write the concepts and formulae.	
Relevant PO's	PO4, PO5, PO9, PO10, PO11, PO12
Significance of Results/Outcomes	☐ Students improved their technical and problem-solving skills. ☐ Each student could express the necessary concepts of formulae and ideas on problem solving as a poster & submitted as a report. ☐ Students also gained knowledge on the applications of electromagnetics & how to apply the concepts.
Reflective Critique	• The activity improved the learning of students in memorizing the formulae and identifying the related formulae for problem solving. • The activity improved the thinking ability and concept clarity of all topics and improve their confidence in applying the necessary formulae for problem solving as individuals.

Proofs

ELECTRIC CHARGES AND FIELDS

Electric Charge
→ Basic property associated with matter
→ Produces and experiences electrical & magnetic effect.

Types of Charge: positive Charge ($e = 1.6\times10^{-19}$ C); Negative Charge ($e = -1.6\times10^{-19}$ C)

- SI unit of charge = Coulomb (C)
- C.G.S unit = Stat coulomb or e.s.u
- Dimension = [AT]

* Properties of Charge

- Total charge in a system is algebraic sum of all charges
- Charge is always associated with mass.
- Charge can neither be created nor be destroyed.
- Charge produces E.F & M.F.
- Like charge repel each other & unlike charges attract each other.
- Quantization : The charge on any body will be some integral multiple of e.

$$q = \pm ne \qquad n = 1, 2, 3, \ldots$$

Coulomb's Law

$F = K\frac{q_1 q_2}{r^2}$ (between q_1 and q_2 at distance r)

$K = \frac{1}{4\pi\varepsilon_0}$; ε_0 = permittivity of free space ; $\varepsilon_0 = 8.854\times10^{-12}\ \frac{C^2}{Nm^2}$; $\frac{1}{4\pi\varepsilon_0} = 9\times10^9\ \frac{Nm^2}{C^2}$

→ Nature of force
Attraction; $q_1 q_2 < 0$
Repulsion ; $q_1 q_2 > 0$

Any medium other than air/vacuum

ε = permittivity of given medium

$\varepsilon_r = \frac{\varepsilon}{\varepsilon_0}$ → relative permittivity

$$F_m = \frac{1}{4\pi\varepsilon\varepsilon_r}\frac{q_1 q_2}{r^2} = \frac{F}{\varepsilon_r}$$

VECTOR FORM

$\vec{r}_{12}$ from q_1 to q_2, $\vec{r}_{21}$ from q_2 to q_1, distance r

$$\vec{F}_{21} = \frac{1}{4\pi\varepsilon_0}\frac{q_1 q_2}{|\vec{r}_2 - \vec{r}_1|^3}(\vec{r}_2 - \vec{r}_1)$$

$$\vec{F}_{12} = \frac{1}{4\pi\varepsilon_0}\frac{q_1 q_2}{|\vec{r}_1 - \vec{r}_2|^3}(\vec{r}_1 - \vec{r}_2)$$

* Principle of Superposition

Net force on Q due to $Q_1, Q_2, \ldots, Q_n$ at distances $r_1, r_2, \ldots, r_n$

$$\vec{F}_{net} = \vec{F}_1 + \vec{F}_2 + \vec{F}_3 + \ldots + \vec{F}_n$$

* Electric field

$\vec{E} = \frac{\vec{F}}{q_0} = \frac{KQ}{r^2}$; $q_0 \to 0$, Small +ve test charge.

+Q ⟶ $\vec{E}$; −Q ⟵ $\vec{E}$

E vs r graph

* SI unit = $\frac{N}{C} = \frac{\text{volt}}{\text{meter}} = \frac{\text{Joule}}{\text{Coulomb} \times \text{meter}}$

* Electric field lines (Electric Lines of forces)

- Electric field lines are a pictorial way of representing electric field around a configuration of charges.
- (i) Electric field lines are continuous curves. They emanate from a positively charged body and ingress into a negatively charged body.
- (ii) Tangent to the electric field line at any point gives the direction of electric field at that point.
- (iii) No two electric field lines of force intersect each other.
- (iv) The electric field lines are always normal to the surface of a conductor, both while starting or ending on the conductor.
- (v) More is the density of electric field lines, more be the strength of electric field at that point.

* Superposition of Electric field : The resultant electric field at any point is equal to the vector sum of electric field at that point due to various charges.

$$\vec{E} = \vec{E}_1 + \vec{E}_2 + \vec{E}_3 + \ldots$$

* Electric dipole : System of two equal and opposite charges separated by a distance '2a'.

Electric dipole moment ($\vec{p}$) = $|\pm q|\,2a$ (−ve → +ve)

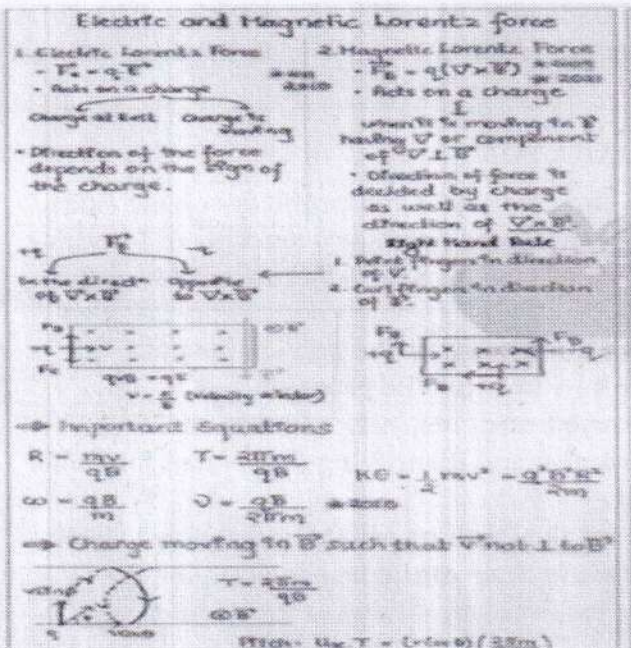
Electric field due to dipole

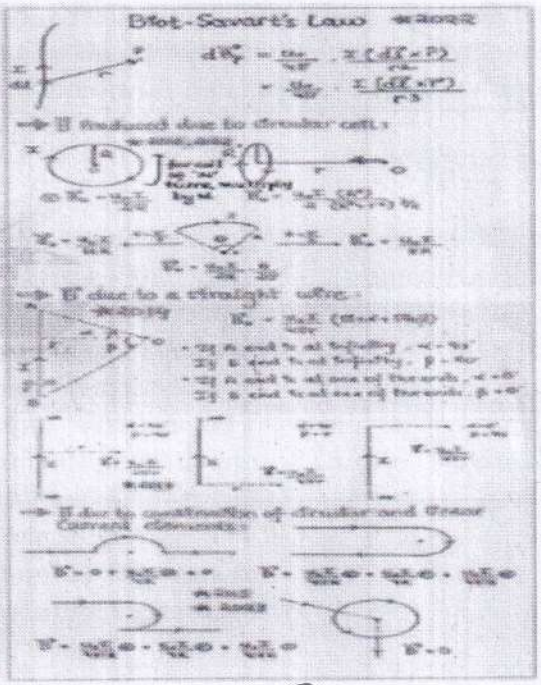
→ Short dipole ($r \gg a$)

$E_{eq} = \frac{Kp}{r^3}$; $\vec{E}_e \uparrow\downarrow \vec{p}$

Equatorial line; Axial line

$E_a = \frac{2Kp}{r^3}$





Signature of Course Incharge

Signature of HOD-ECE

S No	USN	NAME
1	1KS23EC070	NIKITHA T G
2	1KS23EC071	NISHCHITHA NAGARAJU H
3	1KS23EC073	P R PRAJWAL KUMAR
4	1KS23EC074	PATHIPATI KAVYA SHREE
5	1KS23EC075	POOJA CHAVAN
6	1KS23EC076	POOJA RAJENDRAKUMAR MANUR
7	1KS23EC077	POORVI
8	1KS23EC078	PRANATHI P
9	1KS23EC079	PRANEETH N
10	1KS23EC080	PRARTHANA P BHAT
11	1KS23EC082	PURVII P
12	1KS23EC083	R HARI HARA KUMARAN
13	1KS23EC084	RAKSHITH S
14	1KS23EC086	S SARASIJA
15	1KS23EC087	S SUJAN
16	1KS23EC088	SACHIN
17	1KS23EC089	SAHITHYA J
18	1KS23EC090	SANDHYA N
19	1KS23EC091	SANJANA MUNISWAMY SRINIVAS
20	1KS23EC092	SANJANA REDDY S P
21	1KS23EC093	SANTHOSHA G S
22	1KS23EC094	SHAKTHI GANESH H L
23	1KS23EC095	SHALINI S
24	1KS23EC096	SHARANYA S M
25	1KS23EC097	SHIRISHA S
26	1KS23EC098	SHIVAKUMAR S GULGANJI
27	1KS23EC099	SHIVATMAJA
28	1KS23EC100	SHRADDHA E N
29	1KS23EC101	SHREYA BIRADAR
30	1KS23EC102	SHREYA SHETTY
31	1KS23EC103	SWETHA
32	1KS23EC104	SIDDHARTH K

33	1KS23EC105	SINDHU MANJUNATH MOGER
34	1KS23EC106	SIRIVANTH S
35	1KS23EC107	SPOORTHY GOWDA L
36	1KS23EC108	STUTHI SRINATH
37	1KS23EC109	SUDHEER
38	1KS23EC110	SUKANYA D M
39	1KS23EC111	SUSHMITHA S
40	1KS23EC112	SYEDA SUMAIYA FATHIMA
41	1KS23EC113	TANIA
42	1KS23EC114	TEJAS S N
43	1KS23EC115	TEJASHWINI S
44	1KS23EC116	TEJASWINI L YADAV
45	1KS23EC118	THANISHQ D GAIKWAD
46	1KS23EC119	THRISHA P
47	1KS23EC120	THRISHAR RAGHAVENDRA GOWDA
48	1KS23EC121	V CHARISHMA
49	1KS23EC122	VARSHINI V
50	1KS23EC123	VIJAYENDRA SUDHIR HOSUR
51	1KS23EC124	VIJETH SHANUBAUG
52	1KS23EC126	YUVARAJ GOWDA G
53	1KS24EC400	ARPITHA E H
54	1KS24EC401	B S PRUTHVI
55	1KS24EC402	D CHANDRAGOWDA
56	1KS24EC403	D HEMANTHARAJA
57	1KS24EC404	HEMANTH L M
58	1KS24EC405	MAHESH S
59	1KS24EC406	NISHANK B C
60	1KS24EC407	PUNEETH G
61	1KS24EC408	RAGHU Y
62	1KS24EC409	SHASHANK
63	1KS24EC410	SRUJAN A C
64	1KS24EC411	TEJASHWINI M
65	1KS22EC056	M. JAYASURRYA

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	Mrs. V.Sangeetha
Course Name /Code	Principles of Communication Systems (BEC402)
Semester/Section	IV A
Activity Name	Schematic Representation and its Application
Topic Covered	Random Variables, Amplitude Modulation, Frequency Modulation, Sampling, Noise
Date	28/4/2025 – 10/5/2025
No. of Participants	64
Objectives/Goals	• To improve the self learning skills in students • To improve the communication skills of students.
ICT Used	Digital Information
Appropriate Method/Instructional materials/Exam Questions • Students had to write circuit diagram, waveforms and applications for three given questions	
Relevant PO's	1, 2, 3, 5, 9, 10, 12
Significance of Results/Outcomes	• Students put an effort to learn something on their own.
Reflective Critique	• Students improved their understanding skills. Students improved their communication skills by making a report.

Proofs (Photographs/Videos/Reports/Charts/Models)

K. S. INSTITUTE OF TECHNOLOGY
#14, Raghavendra Nagar, Kanakapura Main road,
Bangalore - 560109

Department of Electronics and Communication Engineering

Activity Report
on
Schematic Representation and it's Application

Course : Principles of Communication System
Course Code : BEC402
Name : BHAGYASHREE .M
USN : 1KS20EC018

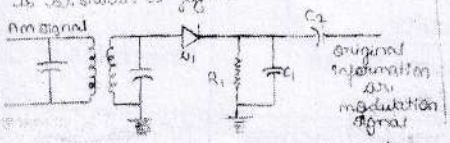
4. DIODE DETECTOR

Diode Detector is a Amplitude Demodulation circuit.

Amplitude demodulators:- Demodulators and detectors are circuit that accept modulated signals and recover the original modulating information.

Diode detector or Envelope detector:-

- The simplest and most widely used amplitude demodulator is the diode detector.
- A diode detector AM demodulator diagram is as shown in figure.



- As shown in figure, the AM signal is usually transformer - coupled and applied to a basic half-wave rectifier circuit consisting of D_1 and R_1.
- The diode conducts when the positive half cycles of the AM signal occurs.
- During the negative half cycle, the diode is reverse biased and no current flows through it.

- As a result, the voltage across R_1 is a series of positive pulses whose amplitude varies with the modulating signal.
- A capacitor C_1 is connected across resistor R_1, effectively filtering out the carrier and thus recovering the original modulating signal.
- A input signal falls below this value, the diode becomes reverse-biased and the capacitor C discharges slowly through the load resistor R_1.
- The discharging process continues until the next positive half-cycle.
- When the input signal becomes greater than the voltage across the capacitor, the diode conducts again and the process is repeated.

Applications:-

- AM radio receivers
- Signal detection in RF circuits
- Envelope detection
- peak detection
- Rectification in low-power circuits.

K. S. INSTITUTE OF TECHNOLOGY

Department of Electronics and Communication Engineering

Activity Report
on
Schematic Representation and it's Application

Course : Principles of Communication System
Course Code : BEC402
Name : APOORVA N GOWDA
USN : 1KS20EC011

Signature of Course In charge

Signature of HOD ECE

SCHEMATIC REPRESENTATION AND ITS APPLICATION

DETAILS: EACH STUDENT IS GIVEN A LIST OF 3 QUESTION. THE CIRCUIT DIAGRAM (IF ANY), EXPLANATION, WAVEFORM (IF ANY), DERIVATION (IF ANY) AND APPLICATION OF THESE HAVE TO BE WRITTEN IN AN A4 SIZE SHEET NEATLY, SOFT BIND THE SAME WITH THE FRONT SHEET AND SUBMIT BY MAY 10TH 2025

Question No.	CIRCUIT NAME
1	DIODE MODULATOR
2	TRANSISTOR MODULATOR
3	COLLECTOR MODULATOR
4	DIODE DETECTOR
5	BALANCED MODULATOR
6	FREQUENCY DIVISION MULTIPLEXING
7	AM WAVEFORM AND ITS SPECTRUM
8	FM AND PM WAVEFORM
9	CONVERTING PM TO FM
10	FM SIGNAL SPECTRA
11	PREEMPHASIS AND DEEMPHASIS
12	VCO
13	SLOPE DETECTOR
14	PLL
15	SUPERHETERODYNE RECEIVER
16	FREQUENCY CONVERSION
17	JFET MIXER
18	PULSE CODE MODULATION WITH COMPANDING
19	REGENERATIVE REPEATER
20	DERIVATION OF SAMPLING THEOREM
21	TIME DIVISION MULTIPLEXING
22	DERIVATION OF SIGNAL TO QUANTIZATION NOISE RATIO

STUDENT LIST

Sl. No	USN	Name of the Student	QUESTION NUMBER
1	1KS23EC001	AADITYA S P	1,9,18
2	1KS23EC002	ABHISHEK R	2,8,19
3	1KS23EC003	ABHISHEK S	3,10,20
4	1KS23EC004	AKASH A S	4,12,21
5	1KS23EC005	AKASH S	1,13,22
6	1KS23EC007	AKSHAY V	3,11,18
7	1KS23EC008	AMILINENI BHARATH V	4,16,19
8	1KS23EC009	AMPABATHINI NAVYA SREE	5,15,20
9	1KS23EC010	ANANDA THIRTHA S ACHARYA	6,17,21
10	1KS23EC011	APOORVA N GOWDA	7,14,22
11	1KS23EC012	AVINAV PRASAD	1,9,18
12	1KS23EC013	B ADITHYA	2,8,19
13	1KS23EC014	B ROHITH	3,10,20
14	1KS23EC015	BHAGYASHREE MADIVALAPPA INACHAGAL	4,12,21
15	1KS23EC016	BHANU PRIYA D N	1,13,22
16	1KS23EC017	BHARATH KUMAR K	3,11,18
17	1KS23EC018	BHASKAR K	4,16,19

18	1KS23EC019	BHEEMASHANKAR	5,15,20
19	1KS23EC020	BHUMIKA V	6,17,21
20	1KS23EC021	BI BI MARIYAM	7,14,22
21	1KS23EC022	CHANDU M	1,9,18
22	1KS23EC023	CHIRANTH C	2,8,19
23	1KS23EC024	D GEETHA	3,10,20
24	1KS23EC025	D JYOTHI	4,12,21
25	1KS23EC026	DANESH RAZAK	1,13,22
26	1KS23EC027	DHANUSH B R	3,11,18
27	1KS23EC028	DHANUSH GOWDA K	4,16,19
28	1KS23EC029	DHARANIPRIYA T K	5,15,20
29	1KS23EC030	DISHA R	6,17,21
30	1KS23EC031	DIVYASHREE S	7,14,22
31	1KS23EC032	G VINOD KUMAR	1,9,18
32	1KS23EC033	GONTUMUKKALA POOJITHA	2,8,19
33	1KS23EC034	GOVINDAN G	3,10,20
34	1KS23EC035	H M VARSHITHA	4,12,21
35	1KS23EC037	H P RAHUL KRISHNA	1,13,22
36	1KS23EC038	HANAMANT AJATARAO	3,11,18
37	1KS23EC039	HARSHA N BHUSHAN	4,16,19
38	1KS23EC040	K DILEEP KUMAR	5,15,20
39	1KS23EC041	K SHASHANTH NAIDU	6,17,21
40	1KS23EC042	KAMASANI PAVITHRA	7,14,22
41	1KS23EC043	KAVYA M	1,9,18
42	1KS23EC044	KHUSHI JAGATAP	2,8,19
43	1KS23EC045	KHUSHI R	3,10,20
44	1KS23EC047	KRUTHI M	4,12,21
45	1KS23EC048	KUSHAL M	1,13,22
46	1KS23EC049	L KUSUMA	3,11,18
47	1KS23EC050	LAVANYA C S	4,16,19
48	1KS23EC051	LIKITH SHETTY	5,15,20
49	1KS23EC052	LIKITHA K	6,17,21
50	1KS23EC053	M RUCHITHA	7,14,22
51	1KS23EC054	MADINENI LAHARI	1,9,18
52	1KS23EC055	MAHAMMAD ARFAT AYUB KANKANWADI	2,8,19
53	1KS23EC057	MAHESH NAIK S	3,10,20
54	1KS23EC058	MALLIKARJUN BASAVARAJ BAILAHONGAL	4,12,21
55	1KS23EC059	MANIKANTA D K	1,13,22
56	1KS23EC060	MANISH S	3,11,18
57	1KS23EC061	MEGHANA K	4,16,19
58	1KS23EC062	MOHAMMED AFFAN HUSSAIN	5,15,20
59	1KS23EC063	MOHITH GOWDA R	6,17,21
60	1KS23EC064	MONISH GOWDA N	7,14,22
61	1KS23EC065	MUDDAPATI VAIBHAV	1,9,18
62	1KS23EC066	NAGADARSHAN V	2,8,19
63	1KS23EC067	NAGENDRA MANJUNATH HEGDE	3,10,20
64	1KS23EC068	NAMITH S	4,12,21
65	1KS23EC069	NAVANEETH K G	1,13,22

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DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	Mrs. Bhargavi Ananth
Course Name /Code	Principles of Communication Systems (BEC402)
Semester/Section	IV B
Activity Name	Schematic Representation and its Application
Topic Covered	Random Variables, Amplitude Modulation, Frequency Modulation, Sampling, Noise
Date	28/4/2025 – 10/5/2025
No. of Participants	66
Objectives/Goals	• To improve the self learning skills in students • To improve the communication skills of students.
ICT Used	Digital Information
Appropriate Method/Instructional materials/Exam Questions • Students had to write circuit diagram, waveforms and applications for three given questions	
Relevant PO's	1, 2, 3, 5, 9, 10, 12
Significance of Results/Outcomes	• Students put an effort to learn something on their own.
Reflective Critique	• Students improved their understanding skills. Students improved their communication skills by making a report.

Proofs (Photographs/Videos/Reports/Charts/Models)

K. S. INSTITUTE OF TECHNOLOGY
#14, Raghuvenahalli, Kanakepura Main road,
Bangalore – 560109

KSIT

Department of Electronics and Communication Engineering

Activity Report
on
Schematic Representation and it's Application

Course : Principles of Communication System
Course Code : BEC402
Name : Shatanya.S.M
USN : 1KS23EC096

Signature of Course In charge

Signature of HOD ECE

ASSIGNMENT-3

SCHEMATIC REPRESENTATION AND ITS APPLICATION

DETAILS: EACH STUDENT IS GIVEN A LIST OF 3 QUESTION. THE CIRCUIT DIAGRAM (IF ANY), EXPLANATION, WAVEFORM (IF ANY), DERIVATION (IF ANY) AND APPLICATION OF THESE HAVE TO BE WRITTEN IN AN A4 SIZE SHEET NEATLY, SOFT BIND THE SAME WITH THE FRONT SHEET AND SUBMIT BY MAY 10TH 2025

SL No.	CIRCUIT NAME
1	DIODE MODULATOR
2	TRANSISTOR MODULATOR
3	COLLECTOR MODULATOR
4	DIODE DETECTOR
5	BALANCED MODULATOR
6	FREQUENCY DIVISION MULTIPLEXING
7	AM WAVEFORM AND ITS SPECTRUM
8	FM AND PM WAVEFORM
9	CONVERTING PM TO FM
10	FM SIGNAL SPECTRA
11	PREEMPHASIS AND DEEMPHASIS
12	VCO
13	SLOPE DETECTOR
14	PLL
15	SUPERHETERODYNE RECEIVER
16	FREQUENCY CONVERSION
17	JFET MIXER
18	PULSE CODE MODULATION WITH COMPANDING
19	REGENERATIVE REPEATER
20	DERIVATION OF SAMPLING THEOREM
21	TIME DIVISION MULTIPLEXING
22	DERIVATION OF SIGNAL TO QUANTIZATION NOISE RATIO

STUDENT LIST

USN NO.	NAME	QUESTION NUMBER
1KS23EC070	NIKITHA T G	1,9,18
1KS23EC071	NISHCHITHA NAGARAJU H	2,8,19
1KS23EC072	NITHIN B N	3,10,20
1KS23EC073	P R PRAJWAL KUMAR	4,12,21
1KS23EC074	PATHIPATI KAVYA SHREE	1,13,22
1KS23EC075	POOJA CHAVAN	3,11,18
1KS23EC076	POOJA RAJENDRAKUMAR MANUR	4,16,19
1KS23EC077	POORVI	5,15,20
1KS23EC078	PRANATHI P	6,17,21
1KS23EC079	PRANEETH N	7,14,22
1KS23EC080	PRARTHANA P BHAT	1,9,18
1KS23EC082	PURVII P	2,8,19
1KS23EC083	R HARI HARA KUMARAN	3,10,20
1KS23EC084	RAKSHITH S	4,12,21
1KS23EC086	S SARASIJA	1,13,22
1KS23EC087	S SUJAN	3,11,18
1KS23EC088	SACHIN	4,16,19
1KS23EC089	SAHITHYA J	5,15,20
1KS23EC090	SANDHYA N	6,17,21
1KS23EC091	SANJANA MUNISWAMY SRINIVAS	7,14,22
1KS23EC092	SANJANA REDDY S P	1,9,18
1KS23EC093	SANTHOSHA G S	2,8,19
1KS23EC094	SHAKTHI GANESH H L	3,10,20
1KS23EC095	SHALINI S	4,12,21

1KS23EC096	SHARANYA S M	1,13,22
1KS23EC097	SHIRISHA S	3,11,18
1KS23EC098	SHIVAKUMAR S GULGANJI	4,16,19
1KS23EC099	SHIVATMAJA	5,15,20
1KS23EC100	SHRADDHA E N	6,17,21
1KS23EC101	SHREYA BIRADAR	7,14,22
1KS23EC102	SHREYA SHETTY	1,9,18
1KS23EC103	SWETHA	2,8,19
1KS23EC104	SIDDHARTH K	3,10,20
1KS23EC105	SINDHU MANJUNATH MOGER	4,12,21
1KS23EC106	SIRIVANTH S	1,13,22
1KS23EC107	SPOORTHY GOWDA L	3,11,18
1KS23EC108	STUTHI SRINATH	4,16,19
1KS23EC109	SUDHEER	5,15,20
1KS23EC110	SUKANYA D M	6,17,21
1KS23EC111	SUSHMITHA S	7,14,22
1KS23EC112	SYEDA SUMAIYA FATHIMA	1,9,18
1KS23EC113	TANIA	2,8,19
1KS23EC114	TEJAS S N	3,10,20
1KS23EC115	TEJASHWINI S	4,12,21
1KS23EC116	TEJASWINI L YADAV	1,13,22
1KS23EC118	THANISHQ D GAIKWAD	3,11,18
1KS23EC119	THRISHA P	4,16,19
1KS23EC120	THRISHAR RAGHAVENDRA GOWDA	5,15,20
1KS23EC121	V CHARISHMA	6,17,21
1KS23EC122	VARSHINI V	7,14,22

1KS23EC123	VIJAYENDRA SUDHIR HOSUR	1,9,18
1KS23EC124	VIJETH SHANUBAUG	2,8,19
1KS23EC126	YUVARAJ GOWDA G	3,10,20
1KS24EC400	ARPITHA E H	4,12,21
1KS24EC401	B S PRUTHVI	1,13,22
1KS24EC402	D CHANDRAGOWDA	3,11,18
1KS24EC403	D HEMANTHARAJA	4,16,19
1KS24EC404	HEMANTH L M	5,15,20
1KS24EC405	MAHESH S	6,17,21
1KS24EC406	NISHANK B C	7,14,22
1KS24EC407	PUNEETH G	1,9,18
1KS24EC408	RAGHU Y	2,8,19
1KS24EC409	SHASHANK	3,10,20
1KS24EC410	SRUJAN A C	4,12,21
1KS24EC411	TEJASHWINI M	1,13,22
1KS22EC056	M. JAYASURRYA	3,11,18

FACULTY INCHARGE

HOD

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (Even)
Name of the Faculty	Dr. Devika B
Course Name /Code	Control Systems /BEC403
Semester/Section	IV/B
Activity Name	Mini Project
Topic Covered	Open loop & closed loop systems, Sensor Usage, Arduino Uno Applications
Date	24-05-2025
No. of Participants	63
Objectives/Goals	• To develop ideas on the usage of electronic components • To improve the self-learning skills of students • To improve the communication skills of students. • To improve the ICT usage skills of students
ICT Used	Mathlab, Arduino, Python
Appropriate Method/Instructional materials/Exam Questions • Initially delivered lecture on given topics. • Later students were instructed to do mini project on topic of their interest& demonstrate the working of it. • Students are given with additional information/sources from which they can prepare innovatively and deliver a seminar on the same.	
Relevant PO's	PO4, PO5, PO9, PO10, PO11, PO12
Significance of Results/Outcomes	Students improved their technical and communication skills. Students were divided into batches containing 5 members. Each of them expressed their ideas on the topic & demonstrated the working of the model developed by them. Students also gained knowledge on the applications of their project & how to improvise it in future
Reflective Critique	• The activity improved the learning, and communication skills of students • The activity provided a platform for students to interact with peers, improve their communication skills and work as individuals.

Proofs (Photographs/Videos/Reports/Charts/Models)

Signature of Course Incharge

Signature of HOD-ECE

K.S.INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGG.

LIST OF STUDENTS STUDYING IN IV SEMESTER

FOR THE ACADEMIC YEAR - 2025 (EVEN SEMESTER)

SECTION : B Attendance for Mini Project of Control Systems BEC 403 2024-2025 Even sem

SLNO	USN	NAME OF THE STUDENT	Signature
1	1KS23EC070	NIKITHA T G	
2	1KS23EC071	NISHCHITHA NAGARAJU H	
3	1KS23EC072	NITHIN B N	
4	1KS23EC073	P R PRAJWAL KUMAR	
5	1KS23EC074	PATHIPATI KAVYA SHREE	
6	1KS23EC075	POOJA CHAVAN	
7	1KS23EC076	POOJA RAJENDRAKUMAR MANUR	
8	1KS23EC077	POORVI	
9	1KS23EC078	PRANATHI P	
10	1KS23EC079	PRANEETH N	
11	1KS23EC080	PRARTHANA P BHAT	
12	1KS23EC082	PURVII P	
13	1KS23EC083	R HARI HARA KUMARAN	
14	1KS23EC084	RAKSHITH S	
15	1KS23EC086	S SARASIJA	
16	1KS23EC087	S SUJAN	
17	1KS23EC088	SACHIN	
18	1KS23EC089	SAHITHYA J	
19	1KS23EC090	SANDHYA N	
20	1KS23EC091	SANJANA MUNISWAMY SRINIVAS	
21	1KS23EC092	SANJANA REDDY S P	
22	1KS23EC093	SANTHOSHA G S	
23	1KS23EC094	SHAKTHI GANESH H L	
24	1KS23EC095	SHALINI S	
25	1KS23EC096	SHARANYA S M	
26	1KS23EC097	SHIRISHA S	
27	1KS23EC098	SHIVAKUMAR S GULGANJI	
28	1KS23EC099	SHIVATMAJA	
29	1KS23EC100	SHRADDHA E N	
30	1KS23EC101	SHREYA BIRADAR	
31	1KS23EC102	SHREYA SHETTY	
32	1KS23EC103	SWETHA	
33	1KS23EC104	SIDDHARTH K	
34	1KS23EC105	SINDHU MANJUNATH MOGER	
35	1KS23EC106	SIRIVANTH S	

SLNO	USN	NAME OF THE STUDENT	Signature
36	1KS23EC107	SPOORTHY GOWDA L	
37	1KS23EC108	STUTHI SRINATH	
38	1KS23EC109	SUDHEER	
39	1KS23EC110	SUKANYA D M	
40	1KS23EC111	SUSHMITHA S	
41	1KS23EC112	SYEDA SUMAIYA FATHIMA	
42	1KS23EC113	TANIA	
43	1KS23EC114	TEJAS S N	
44	1KS23EC115	TEJASHWINI S	
45	1KS23EC116	TEJASWINI L YADAV	
46	1KS23EC118	THANISHQ D GAIKWAD	
47	1KS23EC119	THRISHA P	
48	1KS23EC120	THRISHAR RAGHAVENDRA GOWDA	
49	1KS23EC121	V CHARISHMA	
50	1KS23EC122	VARSHINI V	
51	1KS23EC123	VIJAYENDRA SUDHIR HOSUR	
52	1KS23EC124	VIJETH SHANUBAUG	
53	1KS23EC126	YUVARAJ GOWDA G	
54	1KS24EC400	ARPITHA E H	
55	1KS24EC401	B S PRUTHVI	
56	1KS24EC402	D CHANDRAGOWDA	
57	1KS24EC403	D HEMANTHARAJA	
58	1KS24EC404	HEMANTH L M	
59	1KS24EC405	MAHESH S	
60	1KS24EC406	NISHANK B C	
61	1KS24EC407	PUNEETH G	
62	1KS24EC408	RAGHU Y	
63	1KS24EC409	SHASHANK	
64	1KS24EC410	SRUJAN A C	
65	1KS24EC411	TEJASHWINI M	
66	1KS22EC056	M. JAYASURRYA	

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109

Dept. of Electronics & Communication Engg.

FORMAT & RUBRIC

2024-25

Course Name: Control Systems **Course Code: BEC403**

Content Beyond Syllabus

ASSIGNMENT TYPE: PRESENTATION

Objective: To do a mini Project based on control systems
[Topic allotted must be from the course]

Instruction to be followed:

1. The topic allotted or assigned must be from the course
2. The work given must be from Apply level onwards
3. This will address PO4, PO5,PO9, PO10,PO11, PO12
4. Process to assign and evaluate the assignments steps.

- Divide the students into batches (Max five)
- Officially announce the batches & assignment topic for each batch. The topic selected must be from course.

Batch No.	Students in the batch		Assignment topic
	Roll No.	Name	
1			

Important dates:

Sl.No	Details	Date
1.	**Date of issue of topics for presentation**	
2.	**Last date for the submission of the presentation report OR If it is a poster presentation, the posters should be submitted in person by the batch of students.**	
3	**Presentation date [as per schedule shared]**	
4	**Dates for Appeal/challenge(on or before)**	
Note: Assignments marks will not be given if assignments submitted on later dates and failed to present a seminar.		

Rubrics: Oral Presentation

Note: Plagiarism (≤30%) is a mandatory criteria on to be met

Sl.No	Criteria
1.	Quality of the power point/poster
2.	Technical content
3.	Structuring of the speech
4.	Clarity of speech with respect to the topic
5.	Voice modulation
6.	Body language

Strategy to award marks for presentations based on the criteria

Sl. No.	Criteria	Marks for assignments
1.	Assignment not submitted in time or assignment submitted in time but not presented	No marks
2.	Assignment submitted in time, presented and any 04 or more criteria not met	2mark
3.	Assignment submitted in time, presented and any 03 or more criteria not met	4marks
4.	Assignment submitted in time, presented and any 02 or more criteria not met	6marks
5.	Assignment submitted in time, presented and any 01 or more criteria not met	8marks
6.	Assignment submitted in time, presented and all criteria are met	10marks

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109

Department of Electronics & Communication Engineering

2024-25

Course Name: CONTROL SYSTEMS **Course Code: BEC403**
Semester/sec: IV A

Content Beyond Syllabus

MINI PROJECT

Batch No.	Students in the batch		Title
	USN	Name	
1	1KS23EC050	LAVANYA CS	OBSTALE AVOIDING CAR USING ARDUINO
	1KS23EC024	GEETHA D	
	1KS23EC011	APOORVA N	
	1KS23EC031	DIVYA SHREE	
2	1KS23EC053	M RUCHITHA	LINE FILLOWER USING ARDUINO UNO
	1KS23EC020	BHUMIKA V	
	1KS23EC049	KUSUMA L	
	1KS23EC052	LIKITHA K	
3	1KS23EC037	H P RAHUL KRISHNA	AUTONOMOUS VOICE CONTROLLED CAR
	1KS23EC048	KUSHAL M	
	1KS23EC068	NAMITH S	
	1KS23EC067	NAGENDRA M	
4	1KS23EC001	AADITYA SP	SMART IRRIGATION SYSTEM
	1KS23EC013	B ADITHYA	
	1KS23EC002	ABHISHEK R	
	1KS23EC003	ABHISHEK S	
5	1KS23EC034	GOVINDAN G	WATER EVEL CONTROLLER
	1KS23EC007	AKSHAY V	
	1KS23EC014	B ROHITH	
6	1KS23EC005	AKASH S	TRAFFIC LIGHT CIRCUIT
	1KS23EC058	MALLIKARJUN	
	1KS23EC008	AMUNENI BHARATH	
	1KS23EC066	NAGADARSHAN	
7	1KS23EC044	KHUSHI J	RFID BASED SMART TROLLEY FOR BILLING SYSTEM
	1KS23EC015	BHAGYA SHREE	

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (Even)
Name of the Faculty	Dr. Rekha N
Course Name /Code	Control Systems /BEC403
Semester/Section	IV/A
Activity Name	Mini Project
Topic Covered	Open loop & closed loop systems, Sensor Usage, Arduino Uno Applications
Date	24-05-2025
No. of Participants	63
Objectives/Goals	• To develop ideas on the usage of electronic components • To improve the self-learning skills of students • To improve the communication skills of students. • To improve the ICT usage skills of students
ICT Used	Mathlab, Arduino, Python
Appropriate Method/Instructional materials/Exam Questions • Initially delivered lecture on given topics. • Later students were instructed to do mini project on topic of their interest& demonstrate the working of it. • Students are given with additional information/sources from which they can prepare innovatively and deliver a seminar on the same.	
Relevant PO's	PO4, PO5, PO9, PO10, PO11, PO12
Significance of Results/Outcomes	Students improved their technical and communication skills. Students were divided into batches containing 5 members. Each of them expressed their ideas on the topic & demonstrated the working of the model developed by them. Students also gained knowledge on the applications of their project & how to improvise it in future
Reflective Critique	• The activity improved the learning, and communication skills of students • The activity provided a platform for students to interact with peers, improve their communication skills and work as individuals.

Proofs (Photographs/Videos/Reports/Charts/Models)

Signature of Course Incharge

Signature of HOD-ECE

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	Mr. S.Christo Jain
Course Name /Code	MICROCONTROLLERS (BEC405A)
Semester/Section	IV A
Activity Name	Code Debugging
Topic Covered	8051 ASM and C programs
Date	23/05/2025 to 30/05/2025
No. of Participants	65
Objectives/Goals	• To improve the debugging and analyzing skills in students • To improve the communication skills of students.
Appropriate Method/Instructional materials/Exam Questions • Initially delivered lecture on given topics. • Later students were given to prepare their own 8051 ASM and C programs and debug the same.	
Relevant PO's	4,10
Significance of Results/Outcomes	• Students put an effort to analyze the given topics.
Reflective Critique	• Students improved their analyzing skills. • Students improved their communication skills by making a report.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Jnana Sangama, Belagavi – 590018, Karnataka

ACTIVITY BASED ON CODE DEBUGGING WORK
ON MICROCONTROLLERS(**Coursecode:BEC405A**)
ON
"Code debugging activities on Microcontroller "

MONISH GOWDA N:1KS23EC064
MANIKANTA DK:1KS23EC059

Submitted in partial fulfillment for the award of

BACHELOR OF ENGINEERING
IN
ELECTRONICS AND COMMUNICATION ENGINEERING

Under the guidance of
Mr.S Christo Jeyan
Assistant Professor, Dept of ECE, KSIT

2024-25

K. S. INSTITUTE OF TECHNOLOGY
#14, Raghuvanahalli, Kanakapura Main Road,
Bengaluru – 560109

K.S. GROUP OF INSTITUTIONS

K. S. INSTITUTE OF TECHNOLOGY

Department of Electronics and Communication Engineering

CERTIFICATE

This is to certify that the ACTIVITY BASED **Mini Project Work (Course code: BPLCK105B)** entitled

"Code debugging activities on
Microcontroller"

Carried out by

MONISH GOWDA N: 1KS23EC064
MANIKANTA DK : 1KS23EC059

is a bonafide student of K.S. institute of Technology, Bangalore in partial fulfillmentfor the **award of Bachelor of Engineering** Degree in Electronics and Communication from Visvesvaraya Technological University, Belagavi during the year 2024-25. It is certified that all corrections and suggestions indicated during internal assessment have been incorporated in the report deposited in the department library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for Bachelor of Engineering Degree.

Signature of Guide

Signature of HOD

HEAD OF THE DEPARTMENT
Dept. of Electronics & Communication Engg
K.S. Institute of Technology
Bengaluru - 560 109

PRINCIPAL
K.S. INSTITUTE OF TECHNOLOGY
BENGALURU - 560 109
Signature of Principal

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
Content beyond syllabus- Code Debugging

Sub : Microcontrollers

Sl.no	USN	NAME	TOPIC
1	1KS23EC052	Likitha K	Inverse Of Number
	1KS23EC049	Kusuma L	7 Segment Display
2	1KS23EC024	D Geetha	Ramp Waveform
3	1KS23EC044	Khushi Jagatap	Binary Search
4	1KS23EC012	Avinav Prasad	Area Of Square
5	1KS23EC004	Akash A S	Centimeter To Meter
6	1KS23EC061	Meghana K	Inverse Of Number
7	1KS23EC054	Lahari M	7 Segement Display
8	1KS23EC005	Akash S	Reversing Array Prime Number
9	1KS23EC008	Amlineni Bharath	Inverse Of Number 7 Segment Display
10	1KS23EC014	B Rohith	
11	1KS23EC007	Akshay V	Ramp Waveform Binary Search
12	1KS23EC062	Mohammed Affan	
13	1KS23EC068	Namith S	Temperature Monitoring
14	1KS23EC057	Mahesh Naik S	
15	1KS23EC051	Likith Shetty	Data Coversion
16	1KS23EC039	Harsha N Bhushan	Door Sensor Buzzer
17	1KS23EC038	Hanmanth	Temperature Monitoring
18	1KS23EC016	Bhanu Priya.D.N	Button Interfacing
19	1KS23EC021	Bibi Mariyam	Blink A Sensor
20	1KS23EC001	Aaditya Sp	Buzzer On And Off
21	1KS23EC002	Abhishek R	Cube Of A Number Count Ones And Zeros Separate Prime Numbers
22	1KS23EC064	Monish Gowda	
23	1KS23EC059	Manikanta Dk	Traffic Light Controller
24	1KS23EC060	Manish.S	Fibonacci Sequence
25	1KS33EC063	Mohith Gowda.R	Send Ascii Character
26	1KS23EC013	Adithya B	Binary To Grey
27	1KS23EC003	Abhishek S	Sum And Average
28	1KS23EC050	Lavanya C S	Reverse String
29	1KS23EC053	M Ruchitha	Calculate Vowel
30	1KS23EC025	D.Jyothi	Bubble Sort
31	1KS23EC031	Divyashree	Fibanocci
32	1KS23EC015	Bhagya Shree	Prime Number
33	1KS23EC009	A.Navya Sree	Packed Bcd To Unpacked Bcd
34	1KS23EC030	Disha R	Hex To Ascii
35	1KS23EC047	Kruthi M	Prime Number
36	1KS23EC029	Dharani Priya Tk	Gcd Of Two Numbers
37	1KS23EC045	Khushi R	Binary Search
38	1KS23EC066	Nagadarshan V	Average Of Array

39	1KS23EC058	Mallikarjun	Area And Circumference Of Circle
40	1KS23EC017	Bharath Kumar K	
41	1KS23EC023	Chiranth C	Led Chaser
42	1KS23EC067	Nagendra Manjunath Hegde	Temperature Simulation
43	1KS23EC048	Kushal M	Add Multibyte Numbers
44	1KS23EC033	G. Poojitha	Reverse A Number
45	1KS23EC042	K. Pavithra	Pwm
46	1KS23EC027	Dhanush B R	Upper Case To Lower Case
47	1KS23EC041	Shashanth Naidu	Sum Of Array With Carry
48	1KS23EC020	Bhumika V	Vowel Checker
49	1KS23EC011	Apoorva N Gowda	**Fibonacci Sequence**
50	1KS23EC034	Govindan G	Control Street Light
51	1KS23EC037	Hp Rahul Krishna	
52	1KS23EC018	Bhaskar K	Greatest Integer
53	1KS23EC010	Anandathirtha S A	Led Blinking
54	1KS23EC069	Navaneeth	String Reversion
55	1KS23EC022	Chandu M	Binary To Grey
56	1KS23EC043	Kavya.M	Serial Communication
57	1KS23EC035	Varshitha.M	Temperature Monitoring
58	1KS23EC028	Dhanush Gowda .K	
59	1KS23EC026	Danesh Razzak	Nibble Swaper
60	1KS23EC040	Dileep Kumar	No Of Ones
61	1KS23EC032	G Vinod Kumar	Sum Of Array
62	1KS23EC052	Likitha K	Grey To Binary
63	1KS23EC049	Kusuma L	Traffic Light Controller
			BCD To ASCII
64	1KS23EC024	D Geetha	Add Multibyte Numbers Fibonacci Sequence

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109

DEARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	Mr. Naveen Kumar S
Course Name /Code	MICROCONTROLLERS (BEC405A)
Semester/Section	IV B
Activity Name	Code Debugging
Topic Covered	8051 ASM and C programs
Date	23/05/2025 to 30/05/2025
No. of Participants	66
Objectives/Goals	• To improve the debugging and analyzing skills in students • To improve the communication skills of students.
Appropriate Method/Instructional materials/Exam Questions • Initially delivered lecture on given topics. • Later students were given to prepare their own 8051 ASM and C programs and debug the same.	
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Significance of Results/Outcomes	• Students put an effort to analyze the given topics.
Reflective Critique	• Students improved their analyzing skills. • Students improved their communication skills by making a report.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Jnana Sangama, Belagavi – 590018, Karnataka

ACTIVITY BASED ON CODE DEBUGGING WORK
ON MICROCONTROLLERS (**Coursecode:BEC405A**)
ON
"MICROCONTROLLER 8051 ALP & C PROGRAMMING"
Carried out by

P R Prajwal Kumar	:	1KS23EC073
Kavyashree P	:	1KS23EC074

Submitted in partial fulfillment for the award of

BACHELOR OF ENGINEERING
IN
ELECTRONICS AND COMMUNICATION ENGINEERING

Under the guidance of
Mr. Naveen
Assistant Professor, Dept of ECE, KSIT

2024-25

KSIT

K. S. INSTITUTE OF TECHNOLOGY
#14, Raghuvanahalli, Kanakapura Main Road,
Bengaluru – 560109

MICROCONTROLLER 8051 ALP PROGRAMMING :

AIM OF THE PROJECT

1. Write an 8051 ALP program to generate first N numbers of Fibonacci sequence and storing in internal RAM starting from 30H location.

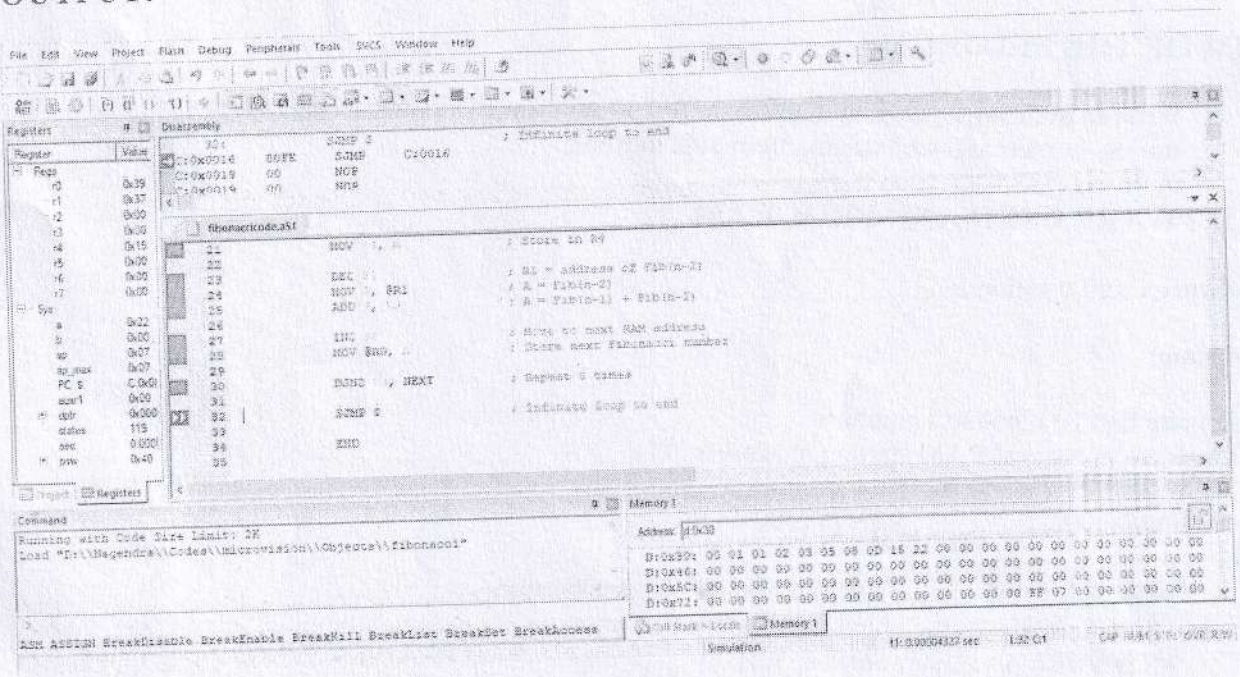
SOFTWARE USED AND PROGRAM

Software - Keil u vision 5

Program:

```
; Generate first 10 Fibonacci numbers
; Store them in internal RAM starting at address 30H

        ORG 0000H           ; Start of code

        MOV R0, #30H        ; R0 = pointer to memory location
        MOV A, #00H         ; First number Fib(0)
        MOV @R0, A          ; Store at 30H

        INC R0              ; R0 = 31H
        MOV A, #01H         ; Second number Fib(1)
        MOV @R0, A          ; Store at 31H

        MOV R3, #08         ; Loop counter for remaining numbers

NEXT:   ; Set up R1 = R0
        MOV A, R0
        MOV R1, A           ; R1 = address of Fib(n-1)

        MOV A, @R1          ; A = Fib(n-1)
        MOV R4, A           ; Store in R4

        DEC R1              ; R1 = address of Fib(n-2)
        MOV A, @R1          ; A = Fib(n-2)
        ADD A, R4           ; A = Fib(n-1) + Fib(n-2)

        INC R0              ; Move to next RAM address
        MOV @R0, A          ; Store next Fibonacci number

        DJNZ R3, NEXT       ; Repeat 8 times

        SJMP $              ; Infinite loop to end

        END
```

OUTPUT:



RESULT

An 8051 ALP program was written to generate first N numbers of Fibonacci sequence and storing in internal RAM starting from 30H location.

MICROCONTROLLER 8051 C PROGRAMMING :

AIM OF THE PROJECT :

3. Write an 8051 C program to automatically control the street lights

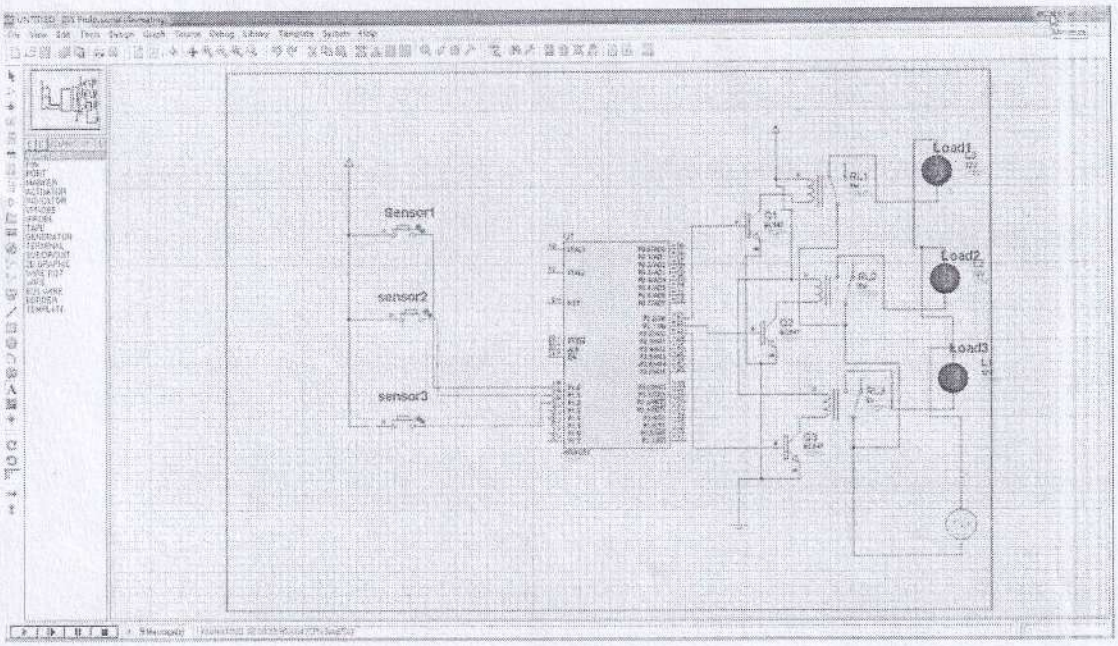
SOFTWARE USED AND PROGRAM

Software - Keil u vision 5

Program:

```
#include<reg51.h>
Sbit sensor1=P1^0;
Sbit sensor2=P1^1;
Sbit sensor3=P1^2; // sensors on street //

Sbit load1=P2^0
Sbit load2=P2^1
Sbit load3=P2^2 // street light connections //

Void main()
{
        Load1=load2=load3=0;
        Sensor1=sensor2=sensor3=0; // optional logic based on input //
While (1)
{
If (sensor1==1)
{
        Load1=1; // street light 1 on //
        Load2=0; // street light 2 off //
        Load3=0; // street light 3 off //
        }
        If(sensor2==1)
{
        Load1=0; // street light 1 off //
        Load2=1; // street light 2 on //
        Load3=0; // street light 3 off //
}
If(sensor3==1)
{
        Load1=0; // street light 1 off //
        Load2=0; // street light 2 off //
        Load3=1; // street light 3 on //
}
}
}
```

OUTPUT:



RESULT

An 8051 C program was written to automatically control the street lights

Signature of Course Incharge

Signature of HOD,ECE

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Content beyond syllabus- Code Debugging

Sub : Microcontrollers

Sl.no	USN	NAME	TOPIC
1	1KS23EC073	P R PRAJWAL KUMAR	**Fibonacci Sequence** Control Street Light
	1KS23EC074	KAVYA SHREE P	
2	1KS23EC076	POOJA R	Greatest Integer Led Blinking
3	1KS23EC077	POORVI	
4	1KS23EC0	PURVII P	String Reversion Binary To Grey
5	1KS23EC080	PRARTHANA P BHAT	
6	1KS23EC082	NISHCHITHA	Serial Communication Temperature Monitoring
7	1KS23EC070	NIKITHA	
8	1KS23EC090	SANDHYA	Sum Of Array With Carry Vowel Checker
9	1KS23EC089	SAHITHYA	Hexadedcimal To Decimal Area Of Rectangle
10	1KS23EC091	SANJANA MUNISWAMY	
11	1KS23EC093	SANTHOSH	Count Character In String Sum Of Even And Odd
12	1KS23EC092	SANJANA REDDY	
13	1KS23EC086	SARASIJA	2 S Compliment Geometric Progression
14	1KS23EC087	SRUJAN	
15	1KS23EC088	SACHIN	Data Coversion Door Sensor Buzzer
16	1KS23EC079	PRANEETH	
17	1KS23EC083	HARI HARA	Temperature Monitoring Button Interfacing
18	1KS23EC084	RAKSHITH	
19	1KS23EC075	POOJA CHAVAN	Blink A Sensor Buzzer On And Off
20	1KS23EC079	PRANATHI	
21	1KS23EC102	SHREYA SHETTY	Cube Of A Number Count Ones And Zeros Separate Prime Numbers
22	1KS23EC096	SHRANAYA	
23	1KS23EC097	SHRISHA	Traffic Light Controller Fibonacci Sequence
24	1KS23EC113	TANIA	
25	1KS23EC108	STUTHI SRINATH	Send Ascii Character Binary To Grey
26	1KS23EC111	SUSHMITHA	
27	1KS23EC095	SHALINI	Sum And Average Reverse String
28	1KS23EC115	TEJASHWINI S	
29	1KS23EC105	SINDHU MANJUNATH	Calculate Vowel Bubble Sort
30	1KS23EC103	SWETHA	
31	1KS23EC112	SUMAIYA FATHIMA	Fibanocci Prime Number
32	1KS23EC100	SHRADDHA	
33	1KS23EC107	SPOORTHY	Packed Bcd To Unpacked Bcd Hex To Ascii
34	1KS23EC110	SUKHANYA	
35	1KS23EC114	TEJAS	Prime Number Gcd Of Two Numbers
36	1KS23EC106	SIRIVANTH	
37	1KS23EC098	SHIVAKUMAR	Binary Search

41	1KS23EC123	VIJAYENDRA	Led Chaser Temperature Simulation
42	1KS23EC124	VIJETH	
43	1KS23EC094	SHAKTHI GANESH H L	Add Multibyte Numbers Reverse A Number
44	1KS23EC099	Shivatmaja	
45	1KS23EC122	VARSHINI	Pwm Upper Case To Lower Case
46	1KS23EC116	TEJASHWINI M	
47	1KS23EC115	TEJASHWINI L	Sum Of Array With Carry Vowel Checker
48	1KS23EC119	THRISHA	
49	1KS23EC126	YUVARAJ	Inverse Of Number 7 Segment Display
50	1KS24EC408	RAGHU	
51	1KS24EC400	ARPITHA	Ramp Waveform Binary Search
52	1KS23EC121	CHARISHMA	
53	1KS24EC405	MAHESH	Area Of Square Centimeter To Meter
54	1KS24EC404	HEMANTH	
55	1KS22EC056	JAYASURYA	Inverse Of Number 7 Segement Display
56	1KS24EC401	PRUTHVI	
57	1KS24EC407	PUNEETH	Reversing Array Prime Number
58	1KS24EC406	NISHANK	
59	1KS24EC402	CHANDRA GOWDA	Nibble Swaper No Of Ones
60	1KS24EC403	HEMANTHRAJA	
61	1KS24EC409	SHASHANK	Sum Of Array Grey To Binary
62	1KS24EC410	SRUJAN	
63	1KS23EC101	SHREYA BIRADAR	Traffic Light Controller BCD To ASCII
64	1KS23EC101	SUDHER RATHOD	Add Multibyte Numbers Fibonacci Sequence

K. S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
DEPARTMENT OF ELECTRONICA AND COMUNICATION ENGINEERING

Content Beyond Syllabus

Academic Year	**2024-2025 (Even)**
Name of the Faculty	Dr. Shobha G
Course Name/Code	Biology for Engineers / BBOK407
Semester/Section	IV/ECE- A & B
Activity Name	POSTER Presentation
Topic Covered	Related to Biology and Application of Biology in engineers
Date	JUNE-2025
No. of Participants	65 & 66
Objectives/Goals	**Objectives** • To improve Engineering knowledge in field of Biology • To improve the self-learning skills of students • To improve the confidence, communication level
ICT Used	-
Appropriate Method/Instructional materials/Exam Questions • Prior information was given to students to select the topics and prepare for the same • Questionnaire and discussion was done during the presentation	
Relevant PO'S	PO1, PO2, PO3, PO5, PO6, PO7, PO10
Significance of outcomes	Students able to Improve their knowledge in biology and its application.
Reflective Critique	The activity improved the learning, communication skills The activity provided a platform for students to work as team
Proof	POSTER

Signature of Course In charge

Signature of HOD

K. S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
DEPARTMENT OF ELECTRONICA AND COMUNICATION ENGINEERING

Branch : **DEPARTMENT OF ELECTRONICA AND COMUNICATION ENGINEERING**

Course Name : Biology for Engineers **Course Code** : BBOK407
Semester/Section : IV-A **Academic year** : 2024-2025

Content Beyond Syllabus

Activity type : **POSTER PRESENTATION** **Marks** : 05

Objective :
1. To improve Engineering knowledge in field of Biology
2. To improve the self-learning skills of students
3. To improve the confidence, communication level

POs Covered : PO 9, PO10

TOPIC & ACTIVITY MARKS

Sl.No	USN	Student Name	POSTER topic	Group no	MARKS
1	1KS23EC001	AADITYA SP	Molecular gastronomy and its techniques	8	5
2	1KS23EC002	ABHISHEK R	Molecular gastronomy and its techniques	8	5
3	1KS23EC003	ABHISHEK S	Molecular gastronomy and its techniques	8	5
4	1KS23EC004	AKASH AS	Artificial Heart	5	5
5	1KS23EC005	AKASH S	Biomimcry	4	5
6	1KS23EC007	AKSHAY V	ECG	7	5
7	1KS23EC008	AMILINENI BHARATH.V	Biomimcry	4	5
8	1KS23EC009	AMPABATHINI NAVYA SREE	Ear and operating Device	14	5
9	1KS23EC010	ANANDA THIRTHA S ACHARYA			5
10	1KS23EC011	APOORVA.N.GOWDA	Brain Computer Interface	16	5
11	1KS23EC012	AVINAV PRASAD	Artificial Heart	5	5
12	1KS23EC013	ADITHYA B	Molecular gastronomy and its	8	5

			techniques		
13	1KS23EC014	B ROHITH	ECG	7	5
14	1KS23EC015	BHAGYASHREE MADIVALAPP INACHAGAL	Contact Lens	15	5
15	1KS23EC016	BHANU PRIYA.D.N	CRISPR Gene editing	11	5
16	1KS23EC017	BHARATH KUMAR K	Artificial Heart	5	5
17	1KS23EC018	BHASKAR.K	Sphygmomanometer	2	5
18	1KS23EC019	BHEEMASHANKAR		-	-
19	1KS23EC020	BHUMIKA.V	Pacemaker	9	5
20	1KS23EC021	BIBI MARIYAM	Deep Brain Stimulators	12	5
21	1KS23EC022	CHANDU.M	Optogenetics	17	5
22	1KS23EC023	CHIRANTH.C	Artificial Heart	5	5
23	1KS23EC024	D GEETHA	Brain Computer Interface	16	5
24	1KS23EC025	D JYOTHI	Deep Brain Stimulators	12	5
25	1KS23EC026	DANESH RAZAK	Optogenetics 17		5
26	1KS23EC027	DHANUSH B R	Ultra violet rays	1	5
27	1KS23EC028	DHANUSH GOWDA K	Optogenetics 17		5
28	1KS23EC029	DHARANI PRIYA T K	Artificial organs	13	5
29	1KS23EC030	DISHA R	Artificial organs	13	5
30	1KS23EC031	DIVYASHREE S	Brain Computer Interface	16	5
31	1KS23EC032	G VINOD KUMAR	Electronic skin	3	5
32	1KS23EC033	G.POOJITHA	Ear and operating Device	14	5
33	1KS23EC034	GOVINDAN G	ECG	7	5
34	1KS23EC035	H.M VARSHITHA		-	-
35	1KS23EC037	HP RAHULKRISHNA	Lasik	6	5
36	1KS23EC038	HANUMANT AJATARAO	Biomimcry	4	5
37	1KS23EC039	HARSHA N BHUSHAN	Electronic skin	3	5
38	1KS23EC040	K. DILEEP KUMAR	Optogenetics	17	5
39	1KS23EC041	K SHASHANTH NAIDU	Sphygmomanometer	2	5
40	1KS23EC042	K PAVITHRA	Ear and operating Device	14	5
41	1KS23EC043	KAVYA.M	Deep Brain Stimulators	12	5
42	1KS23EC044	KHUSHI JAGATAP	Contact Lens	15	5
43	1KS23EC045	KHUSHI .R	CRISPR Gene editing	11	5

44	1KS23EC047	KRUTHI M	Artificial organs	13	5
45	1KS23EC048	KUSHAL M	Lasik	6	5
46	1KS23EC049	L KUSUMA	Pacemaker	9	5
47	1KS23EC050	LAVANYA.CS	Brain Computer Interface	16	5
48	1KS23EC051	LIKITH SHETTY	Electronic skin	3	5
49	1KS23EC052	LIKHITHA	Pacemaker	9	5
50	1KS23EC053	M RUCHITHA	Pacemaker	9	5
51	1KS23EC054	MADENENI LAHARI	Deep Brain Stimulators	12	5
52	1KS23EC055	MAHAMMAD ARFAT KANKANWADI	QUIZ	-	5
53	1KS23EC057	MAHESH NAIK.S	Ultra violet rays	1	5
54	1KS23EC058	MALLIKARJUN B BAILAHONGAL	Biomimcry	4	5
55	1KS23EC059	MANIKANTA D K	Artificial Hearing	10	5
56	1KS23EC060	MANISH. S	Artificial Hearing	10	5
57	1KS23EC061	MEGHANA K	CRISPR Gene editing	11	5
58	1KS23EC062	MOHAMMED AFFAN HUSSAIN	Ultra violet rays	1	5
59	1KS23EC063	MOHITH GOWDA.R	Artificial Hearing	10	5
60	1KS23EC064	MONISH GOWDA N	Artificial Hearing	10	5
61	1KS23EC065	MUDDAPATI VAIBHAV		-	-
62	1KS23EC066	NAGADARSHAN V	Implantable medical Device	18	5
63	1KS23EC067	NAGENDRA MANJUNATH HEGDE	Lasik	6	5
64	1KS23EC068	NAMITH S	Lasik	6	5
65	1KS23EC069	NAVANEETH K G	Electronic skin	3	5

Signature of Course In charge

Signature of HOD

K. S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
DEPARTMENT OF ELECTRONICA AND COMUNICATION ENGINEERING

Branch : **DEPARTMENT OF ELECTRONICA AND COMUNICATION ENGINEERING**

Course Name : Biology for Engineers **Course Code** : BBOK407
Semester/Section : IV-B **Academic year** : 2024-2025

Content Beyond Syllabus

Activity type : **POSTER PRESENTATION** **Marks** : 05

Objective :
4. To improve Engineering knowledge in field of Biology
5. To improve the self-learning skills of students
6. To improve the confidence, communication level

POs Covered : PO 9, PO10

TOPIC & ACTIVITY MARKS

Sl.No	USN	Student Name	POSTER topic	Group no	MARKS
1	1KS23EC070	NIKITHA T G	E-Textiles	8	5
2	1KS23EC071	NISHCHITHA NAGARAJU H	E-Textiles	8	5
3	1KS23EC072	NITHIN B N		-	-
4	1KS23EC073	P R PRAJWAL KUMAR	Microchip implant	3	5
5	1KS23EC074	PATHIPATI KAVYA SHREE	Alcohol Sensor	5	5
6	1KS23EC075	POOJA CHAVAN	Bionic Eye	15	5
7	1KS23EC076	POOJA RAJENDRAKUMAR MANUR	DNA computing Bioelectronics	2	5
8	1KS23EC077	POORVI	DNA computing Bioelectronics	2	5
9	1KS23EC078	PRANATHI P	E-waste using Biology	12	5
10	1KS23EC079	PRANEETH N	Bioinformatics	7	5
11	1KS23EC080	PRARTHANA P BHAT	Augmented Biology Technology	11	5
12	1KS23EC082	PURVII P	E-Textiles	8	5

13	1KS23EC083	R HARI HARA KUMARAN	Bioinformatics	7	5
14	1KS23EC084	RAKSHITH S	Night Vision Technology	16	5
15	1KS23EC086	S SARASIJA	Solar power Irrigation	9	5
16	1KS23EC087	S SUJAN	Night Vision Technology	16	5
17	1KS23EC088	SACHIN	Biosensor	13	5
18	1KS23EC089	SAHITHYA J	Solar power Irrigation	9	-
19	1KS23EC090	SANDHYA N	DNA and Human Genome type	6	5
20	1KS23EC091	SANJANA MUNISWAMY SRINIVAS	E-Textiles	8	5
21	1KS23EC092	SANJANA REDDY S P	E-Textiles	8	5
22	1KS23EC093	SANTHOSHA G S	Biosensor	13	5
23	1KS23EC094	SHAKTHI GANESH H L	Night Vision Technology	16	5
24	1KS23EC095	SHALINI S	Alcohol Sensor	5	5
25	1KS23EC096	SHARANYA S M	Augmented Biology Technology	11	5
26	1KS23EC097	SHIRISHA S	E-waste using Biology	12	5
27	1KS23EC098	SHIVAKUMAR S GULGANJI	Bioinformatics	7	5
28	1KS23EC099	SHIVATMAJA	Night Vision Technology	16	5
29	1KS23EC100	SHRADDHA E N	Augmented Biology Technology	11	5
30	1KS23EC101	SHREYA BIRADAR	Bionic Eye	15	5
31	1KS23EC102	SHREYA SHETTY	Biosensor	1	5
32	1KS23EC103	SWETHA	Alcohol Sensor	5	5
33	1KS23EC104	SIDDHARTH K	Night Vision Technology	16	5
34	1KS23EC105	SINDHU MANJUNATH MOGER	DNA computing Bioelectronics	2	-
35	1KS23EC106	SIRIVANTH S	Artificial Heart	4	5
36	1KS23EC107	SPOORTHY GOWDA L	E-waste using Biology	12	5
37	1KS23EC108	STUTHI SRINATH	Biosensor	1	5
38	1KS23EC109	SUDHEER	Bionic Eye	15	5
39	1KS23EC110	SUKANYA D M	Bionic Eye	15	5
40	1KS23EC111	SUSHMITHA S	Biosensor	1	5

41	1KS23EC112	SYEDA SUMAIYA FATHIMA	Solar power Irrigation	9	5
42	1KS23EC113	TANIA	E-waste using Biology	12	5
43	1KS23EC114	TEJAS S N	Artificial Heart	4	5
44	1KS23EC115	TEJASHWINI S	Alcohol Sensor	5	5
45	1KS23EC116	TEJASWINI L YADAV	Augmented Biology Technology	11	5
46	1KS23EC118	THANISHQ D GAIKWAD	Artificial Heart	4	5
47	1KS23EC119	THRISHA P	DNA and Human Genome type	6	5
48	1KS23EC120	THRISHAR RAGHAVENDRA GOWDA	Solar power Irrigation	9	5
49	1KS23EC121	V CHARISHMA	Nanotechnology in irrigation	10	5
50	1KS23EC122	VARSHINI V	Nanotechnology in irrigation	10	5
51	1KS23EC123	VIJAYENDRA SUDHIR HOSUR	Bioinformatics	7	5
52	1KS23EC124	VIJETH SHANUBAUG	Bioinformatics	7	5
53	1KS23EC126	YUVARAJ GOWDA G	Microchip implant	3	5
54	1KS24EC400	ARPITHA E H	Nanotechnology in irrigation	10	5
55	1KS24EC401	B S PRUTHVI	Semiconductor Disposal	18	5
56	1KS24EC402	D CHANDRAGOWDA	Artificial Heart	14	5
57	1KS24EC403	D HEMANTHARAJA	Artificial Heart	14	5
58	1KS24EC404	HEMANTH L M	Semiconductor Disposal	17	5
59	1KS24EC405	MAHESH S	Artificial Heart	4	5
60	1KS24EC406	NISHANK B C	Semiconductor Disposal	17	5
61	1KS24EC407	PUNEETH G	Semiconductor Disposal	17	-
62	1KS24EC408	RAGHU Y	Microchip implant	3	5
63	1KS24EC409	SHASHANK	Semiconductor Disposal	17	5
64	1KS24EC410	SRUJAN A C	Semiconductor Disposal	18	5
65	1KS24EC411	TEJASHWINI M	Nanotechnology in irrigation	10	5
66	1KS22EC056	M. JAYASURRYA	Biosensor	13	5

Signature of Course In charge

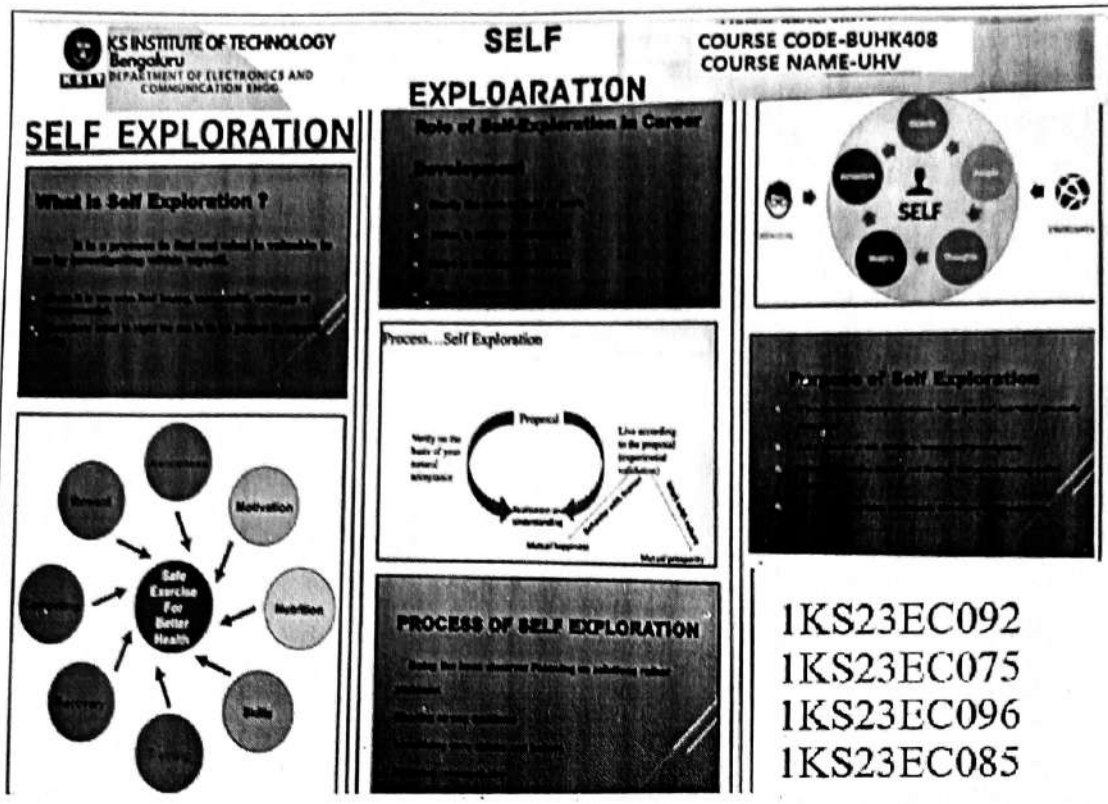
Signature of HOD

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109DEARTMENT OF APPLIED SCIENCE & HUMANITIES

TEACHING AND LEARNING

CONTENT BEYOND SYLLABUS

Academic Year	2024-25 (EVEN)
Name of the Faculty	Dr. Sangappa
Course Name /Code	UNIVERSAL HUMAN VALUES / BUHK408
Semester/Section	IV/A & B
Activity Name	Poster Presentation
Topic Covered	All Modules
No. of Participants	132
Objectives/Goals	• To improve the self-learning and presentation skills of students • To improve the communication skills of students.
ICT Used	Laptop
Appropriate Method/Instructional materials/Exam Questions • Initially delivered lectures on Universal Human Values topics. • Later students were formed into groups, assigned with a topic, asked to prepare A3 size poster, and give oral presentation. • Students are given with additional information/ sources from which they can prepare.	
Relevant PO's	PO9, PO10,PO11,PO12
Significance of Results/Outcomes	• Students tried to explore the concepts related to Universal Human Values, improved their self-learning and team management skills as an individual and team member. • Around 132 Students formed 30 teams, submitted posters, and delivered their presentation.
Reflective Critique	• The activity improved the self-learning skill of students. • The activity provided a platform for students to interact with peers, improve their communication skills, work as individuals and as team.
Proofs (Power point /Videos/Reports / Photographs)	



1KS23EC092
1KS23EC075
1KS23EC096
1KS23EC085

1KS23EC101
1KS23EC105
1KS23EC107
1KS23EC112

Signature of the Course In-charge

Signature of HOD

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
Content beyond syllabus- Poster Presentation

Sub: Universal Human Values

Academic Year	**2024-2025**		
Batch	**2023-2027**		
Year/Semester/section	**IV/II/ A**		
Subject Code-Title	**BUHK409**		
Name of the Instructor	**Dr. Sangappa S.B**	**Dept.**	**ECE**

SL NO	TEAMS	USN	NAME	TOPICS
1	TEAM 1	1KS23EC001	Aaditya S P	Understanding the Human Being
		1KS23EC002	Abhishek R	
		1KS23EC014	B Rohith	
2	TEAM 2	1KS23EC008	Amilineni Bharath V	Harmony in Nature and Existence
		1KS23EC009	Ampabathini Navya Sree	
		1KS23EC031	Divyashree S	
		1KS23EC032	G Vinod Kumar	
3	TEAM 3	1KS23EC005	Akash S	Implications on Professional Ethics
		1KS23EC007	Akshay V	
		1KS23EC029	Dharanipriya T K	
		1KS23EC030	Disha R	
4	TEAM 4	1KS23EC040	K Dileep Kumar	Harmony in Society
		1KS23EC041	K Shashanth Naidu	
		1KS23EC064	Monish Gowda N	
		1KS23EC065	Muddapati Vaibhav	
5	TEAM 5	1KS23EC047	Kruthi M	Harmony in Nature/Existence
		1KS23EC048	Kushal M	
		1KS23EC062	Mohammed Affan Hussain	
		1KS23EC063	Mohith Gowda R	
6	TEAM 6	1KS23EC010	Ananda Thirtha S Acharya	Harmony in Human Being
		1KS23EC011	Apoorva N Gowda	
		1KS23EC042	Kamasani Pavithra	
		1KS23EC043	Kavya M	
7	TEAM 7	1KS23EC012	Avinav Prasad	Individual Transformation
		1KS23EC013	B Adithya	
		1KS23EC059	Manikanta D K	
		1KS23EC060	Manish S	
8	TEAM 8	1KS23EC024	D Geetha	Societal Transformation
		1KS23EC025	D Jyothi	
		1KS23EC026	Danesh Razak	
		1KS23EC033	Gontumukkala Poojitha	

9	TEAM 9	1KS23EC039	Harsha N Bhushan	Harmony in Nature/Existence
		1KS23EC026	Danesh Razak	
		1KS23EC034	Govindan G	
		1KS23EC035	H M Varshitha	
10	TEAM 10	1KS23EC049	L Kusuma	Harmony in Family
		1KS23EC050	Lavanya C S	
		1KS23EC066	Nagadarshan V	
		1KS23EC067	Nagendra Manjunath Hegde	
11	TEAM 11	1KS23EC027	Dhanush B R	Happiness & Prosperity & Leading to Harmony
		1KS23EC028	Dhanush Gowda K	
		1KS23EC051	Likith Shetty	
		1KS23EC052	Likitha K	
12	TEAM 12	1KS23EC003	Abhishek S	Individual Transformation
		1KS23EC004	Akash A S	
		1KS23EC068	Namith S	
		1KS23EC069	Navaneeth K G	
13	TEAM 13	1KS23EC022	Chandu M	Right Understanding
		1KS23EC023	Chiranth C	
		1KS23EC037	H P Rahul Krishna	
		1KS23EC038	Hanamant Ajatarao	
14	TEAM 14	1KS23EC016	Bhanu Priya D N	continuity of happiness and prosperity
		1KS23EC017	Bharath Kumar K	
		1KS23EC053	M Ruchitha	
		1KS23EC054	Madineni Lahari	
15	TEAM 15	1KS23EC055	Mahammadarfat Ayub Kankanwadi	Need for value education & Rational
		1KS23EC057	Mahesh Naik S	
16	TEAM 16	1KS23EC061	Meghana K	Value Education
		1KS23EC044	Khushi Jagatap	
		1KS23EC045	Khushi R	
		1KS23EC058	Mallikarjun Basavaraj Bailahongal	
17	TEAM 17	1KS23EC015	Bhagyashree Madivalappa Inachagal	Skill Development
		1KS23EC018	Bhaskar K	
		1KS23EC020	Bhumika V	
		1KS23EC021	Bi Bi Mariyam	

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
Content beyond syllabus- Poster Presentation

Sub: Universal Human Values

Academic Year	**2024-2025**		
Batch	**2023-2027**		
Year/Semester/section	**IV/II/ B**		
Subject Code-Title	**BUHK409**		
Name of the Instructor	**Dr. Sangappa S.B**	**Dept.**	**ECE**

SL NO	TEAMS	USN	NAME	TOPICS
1	TEAM 1	1KS23EC070	Nikitha T G	Understanding the Human Being
		1KS23EC071	Nishchitha Nagaraju H	
		1KS23EC086	S Sarasija	
2	TEAM 2	1KS23EC099	Shivatmaja	Harmony in Nature and Existence
		1KS23EC100	Shraddha E N	
		1KS23EC072	Nithin B N	
		1KS23EC073	P R Prajwal Kumar	
3	TEAM 3	1KS23EC089	Sahithya J	Implications on Professional Ethics
		1KS23EC090	Sandhya N	
		1KS23EC076	Pooja Rajendrakumar Manur	
		1KS23EC078	Pranathi P	
4	TEAM 4	1KS23EC094	Shakthi Ganesh H L	Harmony in Society
		1KS23EC095	Shalini S	
		1KS23EC107	Spoorthy Gowda L	
		1KS24EC410	Srujan A C	
5	TEAM 5	1KS23EC114	Tejas S N	Harmony in Nature/Existence
		1KS23EC116	Tejaswini L Yadav	
		1KS24EC400	Arpitha E H	
		1KS24EC401	B S Pruthvi	
6	TEAM 6	1KS23EC118	Thanishq D Gaikwad	Harmony in Human Being
		1KS23EC119	Thrisha P	
		1KS24EC402	D Chandragowda	
		1KS24EC403	D Hemantharaja	
7	TEAM 7	1KS23EC122	Varshini V	Individual Transformation
		1KS23EC126	Yuvaraj Gowda G	
		1KS24EC404	Hemanth L M	
		1KS24EC405	Mahesh S	
8	TEAM 8	1KS24EC408	Raghu Y	Societal Transformation
		1KS24EC409	Shashank	
		1KS24EC411	Tejashwini M	
		1KS22EC056	M. Jayasurrya	

9	TEAM 9	1KS23EC120	Thrishar Raghavendra Gowda	Harmony in Nature/Existence
		1KS23EC121	V Charishma	
		1KS24EC406	Nishank B C	
		1KS24EC407	Puneeth G	
10	TEAM 10	1KS23EC092	Sanjana Reddy S P	Harmony in Family
		1KS23EC093	Santhosha G S	
		1KS23EC097	Shirisha S	
		1KS23EC098	Shivakumar S Gulganji	
11	TEAM 11	1KS23EC082	Purvii P	Happiness & Prosperity & Leading to Harmony
		1KS23EC087	S Sujan	
		1KS23EC088	Sachin	
		1KS23EC083	R Hari Hara Kumaran	
12	TEAM 12	1KS23EC110	Sukanya D M	Individual Transformation
		1KS23EC111	Sushmitha S	
		1KS23EC123	Vijayendra Sudhir Hosur	
		1KS23EC124	Vijeth Shanubaug	
13	TEAM 13	1KS23EC084	Rakshith S	Right Understanding
		1KS23EC091	Sanjana Muniswamy Srinivas	
		1KS23EC112	Syeda Sumaiya Fathima	
		1KS23EC113	Tania	
14	TEAM 14	1KS23EC104	Siddharth K	continuity of happiness and prosperity
		1KS23EC105	Sindhu Manjunath Moger	
		1KS23EC103	Swetha	
		1KS23EC106	Sirivanth S	
15	TEAM 15	1KS23EC108	Stuthi Srinath	Need for value education & Rational
		1KS23EC109	Sudheer	
16	TEAM 16	1KS23EC079	Praneeth N	Value Education & Skill Development
		1KS23EC080	Prarthana P Bhat	
		1KS23EC074	Pathipati Kavya Shree	
		1KS23EC075	Pooja Chavan	
		1KS23EC077	Poorvi	